Master's Thesis
for New York University, Graduate School of Arts and Sciences
May, 2010

EMPATHY AND FAMILY EMOTIONAL CLIMATE:
Clues to cultivating perspective-taking and emotional competence

Stefanie F. Molicki (maiden name)
Stefanie F. Frank (married name)

Empathy and Family Emotional Climate

Stefanie Molicki, Lasana Harris, Elizabeth Phelps
Psychology Department, New York University, Phelps Lab for Neuroscience Research

NEW YORK UNIVERSITY
THE GRADUATE SCHOOL OF ARTS AND SCIENCE

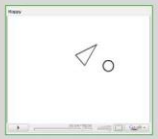
Introduction

- Empathy is associated with adaptive social behavior, self-esteem and peer relations (Huang et al., 2009).
- Empathy requires identifying and understanding emotions and mental states in others, then experiencing the emotion (Valiente et al., 2004).
- Emotional expressiveness within the family has been associated with empathy levels in children (Roberts & Strayer, 1996).
- However, emotions and mental states can be inferred from observing humans in social contexts (Dunning, 1989) and non-human objects in motion (Heider & Simmel, 1948).
- Perhaps family emotional climate affects future empathy because it provides opportunities to observe, infer and experience various emotions. This effect may behold for both human and non-human objects

Hypothesis

Emotional expressiveness within the family affects future empathy as measured by inferred emotion and mental contexts of both humans and non-human objects, and questions about current empathy-related behavior

Methods



(Boraston et al. 2007)


- Pen Drop scenario (Zahn-Waxler,
- Questionnaires:
  - Empathy Quotient (Lawrence et al, 2004)
  - Family Emotional Climate (Halberstadt, A, 1986)
  - Current Behavior questions regarding ability to express emotions to others

Results

FACTOR ANALYSIS

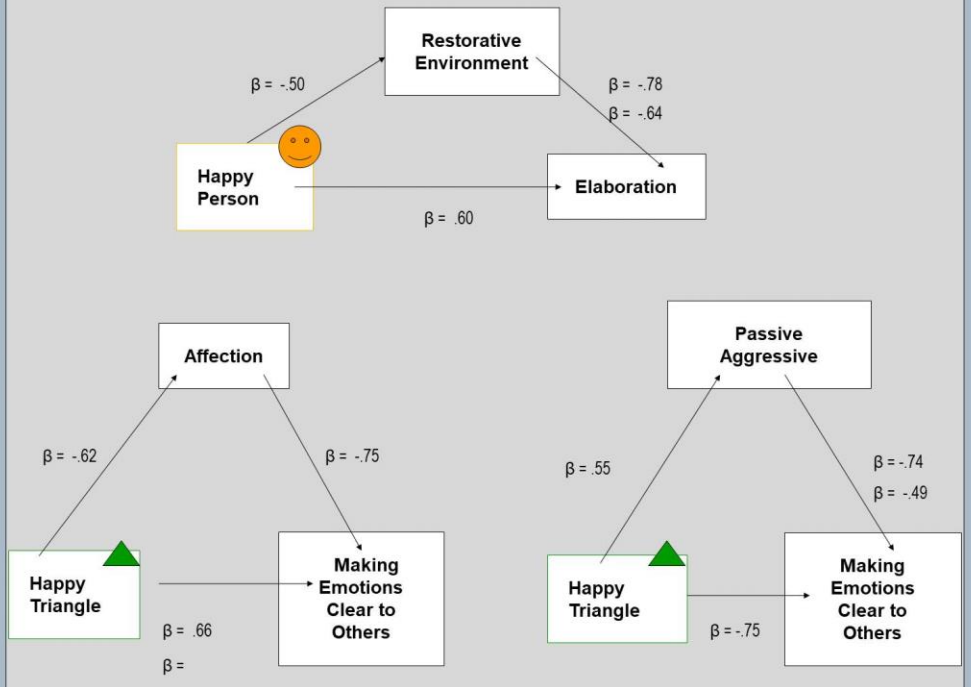
Factor analysis of the Family Emotional Climate (FEC) questionnaire resulted in five subscales:

- Restoration ("Trying to cheer up someone who is sad", "Letting someone know it is ok to be sad")
- Affection ("Hugging a family member", "Saying or hearing "I love you" or other affectionate words")
- Passive Aggressiveness ("Ignoring someone who is throwing a tantrum", "Being afraid of someone's reaction")
- Aggression ("Saying mean things when quarreling with a family member", "Slamming doors")
- Positive Reinforcement ("Being acknowledged for being good", ""Praising someone for their efforts")

RELIABILITY ANALYSIS

Cronbach's alpha for Open Negative, Positive Support, Safe Express and Affection was above .80
Cronbach's alpha for Unsafe Environment was .78

MEDIATION ANALYSIS



Conclusion & Summary

- Identifying emotions in non-human objects did not correlate with identifying emotions in people
- The directions of the relationships between FEC and empathy measures were different than expected
- High accuracy in identifying happiness in both non-human objects and people was linked to more negative family environments
- Accurately identifying emotions in shapes was linked to low levels of making emotions clear to others
- High accuracy in identifying emotions in people was linked to more elaboration in describing emotion
- Perhaps high exposure to certain types of negative emotion within the family creates a defense mechanism to seek out or interpret emotions as happiness rather than other emotions
- Being exposed to negative emotions may make a person less likely to express their emotion, for fear of a negative response; a person may need more words to accurately label an emotion

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Acknowledgements

Thank you: Lasana Harris
Elizabeth Phelps
Jennifer Thorpe
Sarah-Jayne Blakemore

[Submitted September 2010 for New York University Master's in Psychology Program]

There is much effort in educational and psychology research to determine what factors play a role in a child's success in both academic and social settings. While many studies have focused on the importance of cognitive factors such as memory, verbal ability and reasoning ability as crucial for school success, more recent research has pointed to various social emotional competences as essential not only to a child's adaptive social functioning but also to school performance (CASEL). The Collaborative for Academic and Social Emotional Learning lists the five most important of these factors as self-awareness, self-management, social awareness, relationship skills and responsible decision-making . Although empathy is not listed as a specific skill among these, it is associated with effortful control and management of emotions, thus preventing overarousal and diminished attentional capacity for learning and adaptive behavior, and is therefore a factor worth exploring in terms of promoting positive academic behavior (Valiente et al., 2004). This study explores various factors related to empathy in the hopes of shedding light on potential avenues for promoting these skills both in the classroom and in therapeutic settings.

In addition to promoting school performance by allowing a child to focus on learning rather than on his or her emotional arousal, empathy plays an important role in adaptive social relations, self-esteem and other areas of social competence because of its ability to allow a person to control his or her own emotions while interacting with others (Huang et al., 2009). Moreover, some studies have shown that certain types of skills and behaviors associated with empathy such as accuracy in identifying emotions in others, compassion, and prosocial behavior such as helpfulness and altruism also lead to positive social experiences and thus lead children to perpetuate these adaptive social behaviors (Huang et al., 2009; Batson et al, 1981). A study by Batson et al. (1981) comparing altruistic to egoistic motivations indicated that empathy is linked with altruistic motivations to engage in prosocial behaviors, such as helping someone in need. In today's society, social interactions are often conducted via telecommunication, which may mean that opportunities to cultivate empathy and compassion are taking on a different form, or possibly even decreasing. Given the influence of empathy in fostering adaptive social competences and school performance, the investigation of relationships between empathy-related skills and other variables is becoming increasingly important.

Before exploring factors associated with empathy, it is important to define the term. Although a variety of definitions exist, a comprehensive delineation of the term includes both cognitive and affective elements. First, on an affective level, a person must experience an emotion upon observing an emotion in someone else; the second element deals with the cognitive side of empathy: the observer has some sort of idea or understanding about the other's emotional state (Valiente et al., 2004). Finally, the emotion experienced by the observer resembles the perceived or expected emotion of the other (Valiente et al., 2004).

Empathy and Early Childhood

In addition to exploring the nature and definition of empathy, many studies have also attempted to identify how it develops over the lifespan and determine the multitude of associated factors that seem to include both innate and external influences. Early childhood studies have shown that empathy-related behaviors occur in children as young as two years old (Thompson, 1998a; Zahn-Waxler and Radke-Yarrow, 1990). According to these studies, children begin to become aware of others' emotions and adjust their behavior accordingly; they will even try to

comfort others, including their dolls and stuffed animals (Thompson, 1998a; Zahn-Waxler and Radke-Yarrow, 1990). Much of the research that has been conducted on emotion and empathy in early infancy has produced interesting results. For example, a study by Fernald (1993) showed that five-month-old infants appeared to have an emotional response to acoustic stimuli: the infants in the study were reported to smile more when they heard messages of approval in comparison to messages indicating a prohibition. Acoustic stimuli does not begin only after a child is born, however: some researchers believe that even while an infant is still in the womb, it will hear and absorb noise levels (such as yelling) and stress hormones (such as those caused when the mother is personally distressed); these prenatal signals then pass through the amniotic fluid and are capable of influencing a child's emotional reactivity or expectations of their social climate (Saarni et al., 1998). These studies indicate that exposure to various emotional states of parents during both prenatal and early infancy may be connected to the child's ability to attune to other emotional states later in life, a skill highly associated with empathy (Saarni et al., 1998).

Other interesting findings on empathy in infants have come from various studies involving newborns' reaction to the sound of crying. According to Saarni and colleagues (1998), there is strong evidence that newborn infants have emotional responses to the sound of crying. One study revealed a decrease in the rate of sucking in newborns and an increase in their facial expressions of distress when they heard other newborns cry (Dondi et al., 1999). Other studies have shown that newborns cry in response to the sound of other newborns' cries, although not to the sound of a chimpanzee or to the sound of an older infant's cries (Saarni et al., 1998). Interestingly, some studies have shown that the phenomena of crying contagion appears to end at around five months of age (Martin & Clark, 1982).

This brings up an entirely new set of questions regarding empathy. Perhaps empathy is strongest when a person detects an emotional state in another person who is similar to the observer, but empathy decreases when no similarity is acknowledged or observed. This type of phenomena could inform studies on racial discrimination and social justice: it would be interesting to investigate if decreases in empathy due to a perceived lack of physical similarity could be attenuated by learned skills in seeking other types of similarities. If this is true, work could be done in developing ways to train the human brain into seeing similarities in others (such as similar core values, the desire for acceptance) even when certain characteristics such as race, socioeconomic background or physical disabilities are dissimilar.

It is worth noting at this point that although research on prenatal and early childhood emotional environments are essential in exploring the concept of empathy, due to time and research constraints, actual emotional climate in the prenatal or early childhood phases of life were not further explored. Rather, the purpose of this study was to explore an adult's *remembered* and *perceived* experience of their family's emotional climate in order to gain some insight into whether these memories – however accurate or inaccurate they may be – have an effect on a person's current empathic abilities. These perceptions, although based on memory, may also shed light on factors from one's childhood that carry over into adulthood. Early childhood studies related to social-emotional environments are thus used as a framework from which to examine adult perceptions and empathy skills.

Emotional Expressiveness

Among childhood factors, emotional expressivity seems to also play a role in a child's ability to empathize, although the results of various studies do not lead to a clear conclusion as to

how these concepts are related. Studies on the variations in children's expressiveness of emotions occur have attempted to shed light on why expressiveness plays a role in empathy. One theory is that the level of emotional expressiveness and communication within a family as well as parental encouragement of emotional expressiveness are predictors of a child's emotional expressiveness (Halberstadt, 1986; Saarni, 1998). Parental expressivity is often defined as the "dominant style of exhibiting nonverbal and verbal expressions within a family" (Halberstadt et al., 1995). Expressivity is sometimes further divided into positive expressiveness, which includes expressing praise, or gratitude (Halberstadt, 1986). Negative expressiveness falls into two types: negative dominant, which includes anger and hostility, and negative submissive, which includes sulking or crying (Halberstadt, 1986). Negative dominant parental expressivity has been hypothesized to have different effects on children's empathy-related responses compared to negative submissive expressivity; however, findings for the effects of expressivity have been mixed. In one study, for example, mothers who were reported to display high levels of negative dominant expressiveness were associated with high levels of distress in girls and low levels of facial concern in boys (Eisenberg et al., 1992). Other studies have shown that high levels of both negative dominant and negative submissive (combined within one family environment) relate to lower levels of sympathy (Eisenberg, Liew, & Pidada 2001). This concept of negative expressiveness and personal distress will be discussed shortly.

It is likely that even one family environment could have various levels of expressiveness from different family members as well as at different times, making it difficult to make clear connections between one type of expressiveness and empathy responses. Moreover, as some researchers hypothesize, environments that have high levels of negative emotion may in fact increase a child's ability to sympathize and empathize, because they are given more opportunities to recognize, learn from and respond to a wider spectrum of emotion (Halberstadt et al., 1999). This is in contrast to other researchers who posit that too much expression of negative emotion can cause over-arousal in children and lead to self-protective or defensive responses (Valiente et al., 2004).

Positive expressiveness from parents, on the other hand, has been shown by some studies to increase empathy-related abilties in children: Eisenberg and McNally (1993) revealed, for example, that mothers who reported using high levels of positive emotion communication had children who rated highly on certain empathy measures such as sympathy and perspective-taking. Another study also showed that women who were exposed to highly positive environments showed higher levels of sadness and sympathy after watching an empathy-inducing film (Eisenberg et al., 1991).

The fact that only women showed higher levels of empathy-related responses and not men in the above-mentioned study brings up another dimension of empathy and is yet another angle worth exploring: differences in gender roles when it comes to empathy and prosocial behavior. A study by Roberts and Strayer (1996) demonstrated that boys' empathy predicted their prosocial behavior among peers, but that girls' empathy only predicted prosocial behavior among friends, but not among peers. While it would be difficult to disentangle hard-wired genetic differences from those that result from socialization practices, simply acknowledging that males and females possibly react differently to emotional stimuli would bring depth to analyses on empathy and prosocial behavior. The added dimension of gender could be useful when considering classroom or parenting practices that are most effective for each individual child, rather than generalizing to all children.

Interestingly, in terms of facial expressions of emotion, some important studies have revealed a universality for human emotional expressiveness, even among preliterate tribes (Elkman, 1973; Elkman, Sorenson & Friesen, 1969;). In this study, Elkman and his colleagues showed some evidence that facial expressions of sadness, anger, happiness and fear were identified equally as well by people from various cultures (Elkman, 1973; Elkman, 1995; Elkman, Sorenson & Friesen, 1969). Some researchers, today, however, have criticized this research, and the quest continues for evidence of universality in the arena of emotion and emotion recognition (Saarni et al., 1998).

How and when people express emotions is also an important part of the empathy process. Emotional expressiveness may be particularly important early in life, when infants are first learning about their social and emotional environment. Before words become a mode of communicating with infants' surroundings, physical changes in a caregiver's facial expressions give clues as to what types of situations and stimuli elicit different facial gestures (Saarni et al., 1998). Studies on attachment have shown that positive emotional signals from a mother are linked with positive responses from the child and that this can often lead to more secure attachment and emotion regulation (Saarni et al., 1998). However, a mismatch of emotion and facial expression may have an opposite effect: for example, if a mother continues to catch her infant's gaze with a smile in order to elicit a smile from the infant, even if the infant has chosen to look away or is distressed in any way, this is in a way demanding the infant to suppress its own emotions in order for the mother to satisfy her desire for a smile (Saarni et al., 1998). This type of insensitivity does not allow an infant to experience its own range of emotions at its own pace, and if this is a regular occurrence in the child's life, psychopathology may result (Gergely & Watson, 1996). Early childhood environments provide information about how and when to express emotions: if facial gestures and expressions do not match true emotions, or are used as a way to force desired reactions and emotions rather than to elicit understanding and honest expression of how one is feeling, this would make it difficult for that child to later understand social cues, and therefore to develop a sense of empathy and emotional understanding.

Emotion Identification

The ability to express emotions is only one part of the empathy process. Empathy also requires an ability to identify emotions in others. Again, family environment seems to play a significant role. A child's skill in identifying emotions has been linked with parents' socialization practices (Denham & Couchoud, 1988). On an extreme end, children with abusive parents have been found to be less able to recognize feelings in others and are less able to understand the connection between different facial expressions and their corresponding emotion (Camras, Grow & Ribordy, 1983). Another study by Pollack et al. (2000) revealed that emotion recognition abilities are even more specifically differentiated depending on the type of negative childhood environment: children from neglectful families were less able to discriminate different emotions, while children from physically abusive households had a tendency to perceive angry facial expressions. This gives further evidence that the type of communication and reactions surrounding emotions within a family have an impact on family members' ability to recognize emotions in others.

While emotion recognition does not necessarily have a causal link to empathy, some studies have shown that the ability to correctly identify emotions in others is linked with social acceptance and approval (Edwards, Manstead & McDonald, 1984). For example, peer ratings for

older children were positively related to their accuracy in identifying facial expressions of emotion (Edwards, Manstead & McDonald, 1984). Interestingly, the link between social competence and emotion recognition extends not only to recognizing human emotion. In a study by Denham, McKinley, Couchoud and Holt (1990), preschoolers were tested on their ability to correctly identify emotions displayed by a puppet. The children who scored highest on the puppet task were also rated by their peers as most likeable (Denham et al., 1990). Similarly, a study by Walden and Knieps (1996) revealed that preschoolers who were rated by their peers as being a preferred play partner were also better at correctly distinguishing various emotional facial expressions. Moreover, these 'preferred' play partners were also better at expressing their own emotions (Walden & Knieps, 1996). As mentioned earlier, emotional expressivity has been found by other researchers to be linked with the ability to empathize (Roberts & Strayer, 2004).

It is important to note, however, that identifying an emotion does not necessarily lead to empathy. As Eisenberg and Fabes (1990) suggest, when the intensity of emotional arousal is overwhelming, this can be an aversive experience and can cause an individual to react in a self-focused way rather than be sympathetic to others. If the intensity of an emotional reaction is at a tolerable level, on the other hand, people have more emotional room to have sympathy for others because their own personal distress is not taking over (Eisenberg & Fabes, 1990). In fact, a study by Wood, Saltzberg, and Goldsamt (1990) showed that emotional overarousal caused by emotionally distressful situations actually lead to self-focused reactions. In line with this, children who are high in effortful control of their emotions, have been reported to show a higher number of sympathy markers than children who showed signs of personal distress caused by their emotional reactions; however, the results have generally been weak and have not shown a negative relationship between personal distress and emotion regulation (Guthrie et al., 1997).

Other researchers have supported this theory with studies on parental expressivity and children's empathy-related responding: according to Valiente and his colleagues (2004), parental expressivity that is dominant and aggressive in nature, such as showing contempt, threatening another person, or showing anger or hostility has a positive relation to personal distress and negative relationship to sympathy; however, this level of sympathy was also linked with the child's level of effortful control over their emotional reactions. Positive expressivity from parents, on the other hand, was theorized to be related to lower levels of personal distress and higher levels of sympathy (Valiente et al., 2004). While sympathy and empathy are not synonymous, they have a central feature in common: other-oriented concern or awareness. Thus, it is clear that both empathy and sympathy are important but also extremely complicated emotional reactions, which involve not only situational stimuli, but also involve a person's own history and ability to navigate their own emotions. It would be impossible in the confines of one study to disentangle these aspects; however, any clues that can provide some insight into various factors that often coincide with empathy are worth pursuing in order to consider the possibility of helping people turn emotional reactions from personal distress and self-centered behavior to a level of emotional arousal that leads to more compassionate action.

Not only is emotion recognition linked with an ability to empathize, but understanding why an emotion occurs can help a person come up with adaptive and proactive strategies to respond to the sources of those emotions, rather than react to the emotion itself with no consideration of the background reasons underlying that emotion. Part of empathy, therefore, is the ability to identify the cause of an emotion. A study by Zahn-Waxler et al. (1979) revealed that families who verbally explained and discussed the causes and consequences of emotions had

children who engaged in prosocial behaviors such as helpfulness and sympathy, which are often associated with high levels of empathy, compared to children whose families did not have high levels of emotional communication (Zahn-Waxler et al., 1979; Batson et al., 1981). As with children who are more skilled at identifying emotions in others, children with an advanced ability to understand and explain the causes and consequences of emotions have also been found to score highly on social likeability and acceptance ratings from their peers (Garner & Estep, 2001).

Moreover, children who have a complex understanding of emotions and the situational clues that predict which emotion might be felt by another also have a lower tendency to resort to anger and aggressiveness in their interactions with peers (Garner & Estep, 2001). While this is different than empathy, it is clear that there are social benefits to minimizing the use of anger and aggression in social interactions, and this type of social skill may also have some connection to an ability to see a situation from someone else's perspective – a skill linked with empathy.

In addition to expressiveness and understanding emotion, another aspect of the family environment that is linked with empathic understanding is parental warmth and responsiveness (Zahn-Waxler, 1991; Dunn & Brown, 1994). Parental encouragement of emotional expressiveness is associated with children who are more expressive in positive emotions and who experience negative emotions less frequently and less intensely (Bell & Ainsworth, 1972; Halberstadt et al., 1999; Saarni 1998). Moreover, as Dunn and Brown (1994) argue, a child whose family rates high in frequency of expressing negative emotion will be less able to discuss emotion.

Clearly, family environment plays a significant role in a child's level of empathy and emotional understanding. It should be emphasized, however, that a family can be influenced by opposing emotional forces: a father's expression of anger may be balanced by a mother's nurturing touch or soothing response. Parental negativity can be tempered by a teacher's emotional competence. Accordingly, a person who experiences fewer and less intense negative emotions as a child will not necessarily be more empathic compared with someone who experiences the opposite: intense emotions provide opportunities to hone emotion regulation skills (Stein & Levine, 1989). It is not impossible to think that an empathic adult comes from a family environment that expressed a wide spectrum of emotions, from positive to negative. Indeed, some studies have shown that negative emotions produce frustrations that lead to a deeper evaluation of emotion (Schwarz, 1988; Stein & Levine 1990).

What needs to be looked at further is whether this level of emotional understanding happens only if negativity in a child's environment is balanced with a relatively high level of positive affect and emotional competence. In addition, it may be useful to investigate further into the specific types of positive and negative expression of emotion that leads to different outcomes: for example, perhaps a high level of negative emotional expressiveness can still cultivate empathic understanding as long as the negative emotional climate does not include elements such as mocking, sarcasm and condescension. As Valiente et al. (2004) inferred from their study on parental expressiveness, children exposed to derogatory and negative parental emotional expression were less able to regulate their own emotions, which caused them personal distress and a diminished ability to access a sense of sympathy for others. Furthermore, while all of these studies provide valuable information on empathy and emotional competence in children, there is less focus on what happens to these children later in life. Investigating adults' level of empathy

along with their perceived childhood environment may she additional light onto the origins, causes, and consequences of empathy.

Yet another angle worth exploring is how emotions themselves differ in how they evoke various responses and behaviors. One the one hand, emotions can be divided on a more basic level between positive and negative emotions. As Roberts and Strayer (1996) note, negative emotions from someone are a clue that a situation or environment is either unsafe or less than optimal; this would logically give a person observing this emotion a reason to react in a way that ensures their own safety or well-being. In other words, it is possible that empathy is more difficult to access if one feels that one is at risk of falling victim to the source of the negative emotion portrayed by someone nearby. In those cases, perhaps selfish behaviors take priority (Roberts & Strayer, 1996). Contrarily, positive emotions indicate that the environment or situation is potentially positive and fortuitous, thereby by potentially making an observer more at ease to interact with the person expressing this emotion.

Furthermore, within the division between negative and positive emotion, further subdivisions are needed to appropriately separate the types of responses that result from subtle differences in various emotions. Roberts and Strayer (1996) assert that negative emotions should be differentiated into categories such as anger, sadness and fear. While all three of these emotions are considered negative, each of them can evoke very different emotional reactions, and can activate different parts of the brain (Roberts & Strayer, 1996). Fear, for example, is considered by some researchers to be a more primal emotion that is directly linked to survival (Ledoux, 1996). This could mean that if someone observes fear in another person (or animal, for that matter), an instinctual survival response could be triggered. As some research shows, fear responses are related to the amygdala, and these responses are often the most quick to occur and to result in a reactive, and sometimes defensive, behavior or action (Ledoux, 1996). It would be interesting to see if the recognition of fear in another person is related to a person's early environment. For example, if a boy grows up in an abusive household, and sees fear in his mother's eyes before she is beaten, how does this relate to his later responses to fear? Perhaps his brain creates a pathway that sees fear in his mother's eyes, but simultaneously feels anger and aggression towards his father. If so, this type of mixed signal during observations of fear could lead to violent behavior in response to someone who is afraid. Moreover, if his father communicates that somehow she is deserving of physical abuse, perhaps this can create a connection in a child's brain that when he sees fear in someone's eyes, they must deserve physical punishment, thereby justifying acts of aggression towards them.

Emotions are crucial to human survival. Without fear, for example, it is likely that our ancestors would not have been able to react in time to life-threatening dangers. Without happiness, it would be difficult to form relationships and communities. Many of our emotions, however, are not simply tools used to experience a situation in a certain moment, but are reactions that pass through filters from our past and our memories. The same type of image or stimulus can evoke very different emotional reactions from different people: it is not the stimulus itself that is laden with an emotion, rather it is the unique network of brain pathways that are developed through each person's own experiences that lead to meaning-making about external stimuli (Ledoux, 1996). For example, if a child falls and scrapes his knee, there are a multitude of responses that could occur: if the child notices that onlookers look alarmed, this may elicit an anxious response; if no one was watching, perhaps the child would simply brush himself off and continue playing. Even the sight of blood could elicit different emotional responses based on the

child's experience with seeing blood and the meaning he attaches to it.

This ephemeral and indefinable nature of emotion is reflected by the absence of the word in some languages, such as Sanskrit: instead, the concept of mental activity is used to describe the source of either afflictive or adaptive behavior (Ricard, 2003). According to this philosophy, there is no such thing as a negative or positive emotion. The value assigned to mental activity is determined by the resulting action. For example, anger can be the opposite of apathy and can be used as a fuel for action, such as to dismantle oppression; sadness can ignite compassion (Ricard, 2003. Excitement, on the other hand, can trickle into zealousness and dependence.

For these reasons, emotion is a very difficult concept to study: there are infinite combinations of factors that can lead to each person feeling a certain way in response to something they absorb with their senses. Not only that, but each emotional response may appear differently between two people (such as overarousal of certain areas of the brain, or no response at all) and may also result in very different behaviors (even if identical areas of the brain are activated, or even if physiological responses are identical between those people). However complicated and difficult they are to entangle, however, emotions are a driving force of behavior. It is worth asking questions about what leads certain people to harness their emotions, or experience them in a way that still coincides with functional and even prosocial behavior. This type of exploration may only lead to further questions, but perhaps this will nevertheless give some clues of how we can cultivate compassion and empathy.

One potential real-life application of investigating these questions is to help intervention programs decide how to focus their efforts. If children from negative environments can learn how to navigate the world of emotions in an adaptive way, this leaves much room for intervention programs to concentrate on teaching emotion-related communication and perspective-taking skills to children from abusive or dysfunctional families. Moreover, if further studies could examine how empathy skills improve student learning, this would inform school-based intervention and teacher development.

This study will investigate whether family emotional climate is associated with various empathy-related skills. Empathy-related skills will include accuracy in identifying emotion in others, prosocial behavior and other behaviors such as compassion and sympathy. It is hypothesized that the level of accuracy in labeling emotions will likely be highest in participants who perceive their family environment as having had a high level of positive emotion, even if the level of negative emotion is also perceived as high. Perceived high levels of positive factors within the family emotional climate are predicted to be associated with high levels of empathy.

Method

Participants

Participants for this study consisted primarily of university students who responded to flyers posted throughout the university. A total of 15 adults participated, aged between 25 and 40 with the majority of participants (87 %) under 25 years of age. The participants consisted of three males and twelve females, all from middle class background. The following ethnicities were represented: 33% Asian, 53 % White, and 13 % Latino.

Variables

Since the study is measuring perceptions and memories from the past, the predictor variable in this study, family emotional climate, is not a true predictor. It is treated as such, however, because it implies that a person's family environment throughout childhood and at present may precede the acquisition of certain empathy skills. The proposed responses to this predictor measured in this study were 1) accuracy in identifying emotions; and 2) prosocial behavior, as detailed below.

Materials

To measure the perceived emotional climate of participants' family environment during childhood, a 40-item Family Emotional Climate (FEC) questionnaire was used (see Appendix). Twenty items were taken directly from Halberstadt's Family Expressiveness Questionnaire (Halberstadt, 1986) and twenty others were modified versions of questions from the same questionnaire. All 40 items were rated using a nine-point Likert scale to describe perceived frequency of items occurring in the home environment during the participants' childhood (1 = not at all frequently, 9 = very frequently). A factor analysis was conducted on the items from this questionnaire, and revealed five subscales: Aggression ("saying mean things when quarreling with a family member"), Passive Aggressiveness ("ignoring someone who is throwing a tantrum"), Restoration (example: "showing forgiveness to someone who broke a favorite possession"), Positive Reinforcement ("being acknowledged for being good"), and Affection ("hugging a family member"). Only items with a factor loading above .59 were included in each subscale. Reliability analysis was then conducted on the five subscales with Cronbach's alphas reaching .91 for Aggression, .88 for Restoration, .84 for Positive Reinforcement, .77 for Passive Aggressiveness, and .77 for Affection.

To assess accuracy in detecting emotions, participants were asked to respond to two sets of images. The first set of images consisted of four 20-second videos downloaded from the College of London's Blakemore Lab website (http://sites.google.com/site/blakemorelab/experimental-stimuli/emotional-contingencies), which consisted of a triangle in motion 'portraying' four basic emotions (happy, sad, angry, and scared). The next set of images was downloaded from the internet and was displayed using PowerPoint slides. These images consisted of four photos with two people in each photo. The person on the left hand side of each photo (Person A) portrayed the target emotion of happy, sad, angry or scared, while the person on the right portrayed a different emotion, the same emotion or a neutral expression. During the viewing of the images, the researcher wrote down the verbal responses of the participants to the following questions: "what emotion is the triangle or circle feeling?" (for the shapes in motion video), and "what emotion is the person on the left and the person on the right feeling?" (for the photos of people). The participants were purposely left to respond in an open and unstructured way to allow them to speak freely and to allow for a wide variety of answers. Since only the triangle and Person A were portraying the target emotions (as opposed to the neutral or more ambiguous emotions portrayed by the circle and Person B), responses were scored according to accuracy in identifying the target emotion of only these two characters. One point was given for each correctly identified emotion, zero points for incorrect emotions or for responses that did not include emotions, such as labeling behavior or personality traits.

Empathy levels (response variable) were measured by having the participants fill out the Empathy Quotient (EQ) questionnaire (Lawrence et al., 2004). The EQ questionnaire presented to the participants carries the title 'Cambridge Behaviour Rating', in order to not immediately

give away the goal of the questionnaire (Lawrence et al., 2004). Participants rated themselves on 40 items, where 1 equals “strongly disagree”, and 9 equals “strongly agree”. In a series of studies conducted by Lawrence and colleagues (2004), the Empathy Quotient was found to be a valid and reliable self-report method of evaluating empathy in both healthy individuals and clinical populations.

Finally, a behavioral measure, adapted from Yarrow and Waxler (1976), was used to assess the prosocial behavior of helpfulness (response variable). The experimenter held a pen while shuffling through papers to find a form for the participant to sign, and while doing so, dropped the pen to the floor. Participants were given a score depending on if they immediately picked up the pen (two points), if they hesitated before picking up the pen (one point), or if they did not pick up or offer to pick up the pen (zero points).

Procedure

The study was conducted in an experiment room, which consisted of a computer, a table and a chair. The experimenter was a female graduate student. Upon entering the room, participants were asked to sit in the chair facing the computer and were told that they would be viewing images portraying a variety of emotions on a computer and then filling out questionnaires. The experimenter then asked the participant to read over and sign the consent form and thanked the participant for participating. Following this, the experimenter explained that the participant would watch four short videos of geometric shapes portraying emotions followed by four photos of people in social situations, also portraying various emotions. The participants would then be asked to identify the emotion portrayed by the triangle in each of the four video clips as well as the emotion portrayed by Person A in each of the four photos. The images were re-arranged in random order before each new participant entered the room. Because the videos of the shapes are normally used with children, it was unsure if adults would understand how to respond to the question of labeling the triangle’s emotion. In order to give additional instruction when needed, the experimenter remained in the room during the viewing of the images and recorded the participants’ responses verbatim on a record sheet.

Following the images, the experimenter minimized the computer program so that the computer screen was blank. She handed the questionnaires and asked the participant to circle a number (1 to 9) for each question, according to the instructions on the sheet. The first questionnaire was the Empathy Quotient (EQ). The EQ, as mentioned earlier, carries the less conspicuous title of ‘Cambridge Behavior Rating’. Because of its more ambiguous title made the EQ slightly less obvious in its objective compared to the FEC questionnaire, the EQ was placed first, as a way to avoid leading participants to guess at the proposed hypothesis of family environment predicting empathy. The participants were asked to answer honestly, but to not analyze each question for too long and to respond with the first answer that came to mind. The experimenter then left the room, shut the door and asked the participants to open the door when they were finished completing the questionnaires.

After the subjects completed all the questionnaires, the experimenter asked them to remain in their seat while she got out the payment sheet for them to sign. She held a notebook and a pile of papers. She handed them the payment receipt form. While they were signing it, she shuffled the papers to get the money and let the pen drop on the floor and then signaled verbally that she had dropped it (e.g., "oh" or "oops", etc.). She finished handing the money to the subject and waited several seconds before bending down to pick up the papers. If the subject did not

offer to help pick up the papers, she picked them up herself, but took a few moments to do so (to see if they would still offer to help). The experimenter then gave a quick debriefing, explaining that the experiment was looking to gain an understanding of how empathy is related to emotion recognition, family climate and prosocial behavior, including helping out during the pen drop scenario. Following this, the experimenter had them exit the room. Once they had left, she wrote down if the participant offered to help immediately (2 points), if they made a gesture to pick up the pen or did pick up the pen but only after hesitation (1 point), or not at all (0 points). The points received on this measure would serve as a response variable (prosocial behavior).

It is important to note that since the predictor variable (FEC) is based on participants' current perceptions about their past environments (and also likely their current environment), it is not a true predictor with true responses. As such, it was not deemed necessary to place the FEC questionnaire before the other measures. Rather, it was deemed more important to have the measures in an order that would make it less likely for participants to guess the objective of the study and therefore respond according to what they believed was being tested (i.e., how family environment affects empathy-related behaviors). Although the pen drop measure was placed after the other variables and could therefore have been influenced by the empathy questions, it was hoped that presenting it in a way to make it appear as though it was not part of the study would make the pen drop scenario less obvious as a measure.

Scoring procedures

The responses to the FEC provided a wealth of knowledge to the researcher with regards to the dimensions and variety of emotional environments according to participants' perceptions. For the purpose of this study, as mentioned earlier, the FEC was factor-analyzed into five subscales: Restoration, Aggression, Passive-Aggressiveness, Affection and Positive Reinforcement. The scores for each subscale were as follows: for Restoration, the range went from 3.38 to 9, with a mean of 6.52 and a standard deviation of 1.58. Aggression scores ranged from 1 to 8 with a mean of 5.43 and a standard deviation of 1.84. Passive-Aggressiveness scores ranged from 1.33 to 9, with a mean of 4.44 and a standard deviation of 2.23. For Affection scores, the range went from 4 to 9, with a mean of 7.36 and a standard deviation of 1.55. Positive Reinforcement scores ranged from 3.62 to 9, with a mean of 7.09 and a standard deviation of 1.43 (see Table 1).

Accuracy in identifying emotions

The responses to the images of shapes in motion and of people offered interesting information related to the participants' perceptions of emotions, including their accuracy in identifying emotions in non-human objects and people. A relatively wide variety of answers were given. Some participants correctly identified the target emotion with the same word used in the design of the experiment (happy, sad, angry, and scared), while some used synonyms (content, depressed, furious, frightened). Some participants gave one-word answers, while others gave entire story lines. For example, for the sad triangle video, one participant explained that "it looks like a boy just asked a girl out and got rejected. She is a mean girl rejecting him and now he is humiliated and depressed." Both correct wording and synonyms were given one point, regardless of whether it was a one-word answer or appeared in a story line. Other responses included descriptions that were not emotions, such as "lazy", "bored", and "interested". These were given zero points, as were descriptions of behavior such as "bullying", "trying to get away",

"poking" and incorrect emotions such as happy (for the sad triangle). Due to a technical difficulty with the photo of the person portraying a scared emotion, only happy, angry and sad scores were analyzed for the people photos. All four emotions (happy, sad, angry and scared) were analyzed for the triangle. Overall, 73 percent of the participants correctly identified the target emotion in Person A compared to 39 percent correctly identifying the triangle's emotions. As mentioned earlier, only the triangle and Person A portrayed the target emotion, while the other characters' emotions were more ambiguous or neutral. Further analysis on the non-target emotions may also be done, but are not covered in the scope of this study.

The emotion accuracy scores were then divided into each emotion portrayed by the triangle and Person A to see if participants were better at identifying certain emotions over others. For the triangle, 53 % of the participants accurately identified angry, 47 % identified scared, compared to 27 % for happy and 27 % for sad. For Person A, 87 % correctly identified angry, with 60 % of participants identifying happy and 73 % identifying sad (see Table 2).

Empathy Quotient

The measurement tool for empathy assessed participants' reactions and behaviors to various situations. Participants rated how they behave in situations ranging from "I can pick up quickly when someone says one thing but means another" to "I usually stay emotionally detached when watching a film" and "seeing people cry doesn't really upset me". The only score generated from this questionnaire was the Empathy Quotient (EQ), which uses a scoring procedure devised by Lawrence and colleagues (2004). The range of EQ scores went from 20 to 71, with a mean total score of 42.93 and a standard deviation of 14.53.

Helping behavior

The helping behavior variable measured whether participants pick up the pen dropped by the experimenter. The range of scores was from 0 to 2, with an average of 1.33 and a standard deviation of .89. A majority of the participants (60 %) scored 2 points for immediately picking up the pen, while 13 % scored 1 point for leaning in to help or helping after some hesitation, and 27 % received 0 points for not picking up the pen or making any gesture or attempt to pick it up.

Results

Positive FEC and empathy-related skills

To test the main part of the hypothesis that positive family emotional climate is related to higher empathy-related skills such as EQ, accuracy in identifying emotions in others and helping behavior, the scores from the positive subscales of Affection, Restoration and Positive Reinforcement were grouped together to form a Positive FEC group. A median split was used to divide and then recode the scores into high positive and low positive. Independent t-tests were then conducted to compare the high positive group's scores on EQ (as measured by the Cambridge Behavior Rating), emotion accuracy (as measured by accuracy scores for sad, happy, scared and angry triangle as well as for the happy, sad and angry person) and helping behavior (Pen Drop scores). No significant differences were found in EQ scores between the high positive ($M = 37.29$, $SD = 15.49$) and low positive ($M = 47.88$, $SD = 12.53$) groups, $t(13) = 1.46$, $p > .1$. The high positive group did not pick up the pen more frequently ($M = 1.29$, $SD = .95$) than did the low positive group ($M = 1.38$, $SD = .92$), $t(13) = .19$, $p > .1$. Accuracy scores in the high positive group for detecting the four emotions in the triangle were not significantly different than

the low positive groups for those emotions. Similarly, for accurately identifying Person A's emotion in the three images, there were no significant differences between the high positive and the low positive group. Comparing the low negative group to the high negative group did not yield any significant findings.

Subscales of FEC

To test the hypothesis that specific positive factors in the FEC would be associated with higher empathy related skills, as well as to get an overall view of whether specific aspects of the family environment are linked with empathy-related skills, an overall correlation was also conducted on each of the five FEC subscales (Affection, Aggression, Restoration, Passive Aggressiveness and Positive Reinforcement) and the empathy skills (EQ, emotion accuracy for the four emotions of the triangle and the three emotions for Person A and Pen Drop). A significant correlation was found between Passive Aggressiveness and identifying the happy triangle, $r(13) = .55$, $p < .05$.

Interestingly, although t-tests between the high and low positive groups did not reveal any significant differences, a significant negative relationship was found between the positive subscale of Affection and identifying the happy triangle, $r(13)$ -.62, $p < .05$. Moreover, another positive FEC subscale, Restoration, showed a significant negative relationship with identifying happiness in Person A, $r(13) = -.56$, $p < .05$. Positive Reinforcement also showed a significant negative relationship with EQ scores, $r(13) = -.634$, $p < .01$.

Additional analyses

Further analyses also looked at differences among the various proposed 'response' variables, including comparing the EQ and Pen Drop scores of participants who had high scores in identifying emotions with the EQ and Pen Drop scores of those who scored low on emotion accuracy. A t-test between participants who accurately identified the happy triangle ("Identifiers") and those who did not ("Non-Identifiers") revealed a significant difference in Pen Drop scores. Identifiers were significantly more likely to pick up the pen ($M = 2$, $SD = 0$) than Non-Identifiers ($M = 1.09$, $SD = .94$), $t(10) = 3.19$, $p < .01$.

Discussion

Our results suggest that perceiving one's family emotional climate (FEC) as highly positive does not have a significant relationship with certain skills that could be related to empathy such as identifying emotions, prosocial behaviors and Empathy Quotient (EQ) scores. As such, these results do not support part of the original hypothesis, namely that a highly positive family environment is linked with higher levels of empathy-related skills regardless of negative components within the same environment.

It is important to note, however, that the lack of significant findings related to each participant's general view of having had either a positive or negative family environment led us to look more closely at the specific components of the family environment. These findings do suggest that certain aspects of the family climate have a relationship with current empathy skills in adults, such as identifying emotions in both non-human objects and people. Therefore, the overall hypothesis that family emotional climate may be related to current empathy-related behaviors was supported. Moreover, although prosocial behavior such as helping (as measured by the pen drop scenario) is not a measure of empathy, it is a behavior that may require empathy-related skills. The fact that accuracy scores in identifying emotions in the non-human object had

a highly significant relationship with the helping behavior measure is in itself an interesting finding.

The major components of family emotional climate that showed a relationship to the ability to identify emotions in people and non-human objects were factors such as affection, positive reinforcement, and restoration. The surprising feature of these findings was the direction of the relationship: contrary to what was expected, lower levels of affection and restoration were associated with higher emotion accuracy, while lower levels of positive reinforcement were associated with higher EQ.

Also interesting was that only one emotion was shown to be more accurately identified than others: happiness. The possible explanation for these findings has two levels. First, it is possible that a family environment with high levels of negative emotions may be more volatile and unpredictable than one that has low levels of negative emotions. This could mean that the family members who are recipients or observers of family members displaying high levels of negative emotion would need to be more attuned to the subtleties of other's emotions, in order to interact with those family members according to their emotion at different times, or avoid them altogether. This however, would better explain the accurate identification of various emotions, not just happiness.

The role of identifying happiness may nevertheless still make sense in a family climate dominated by negative emotions. In a highly negative emotional environment, it may be crucial to be able to detect even subtle levels of happiness in family members in order to obtain desired goals. For example, if a mother generally displays highly negative emotions, but occasionally shows signs of happiness, it would be important for a child to capitalize on those moments to ask for things such as permission to do something, or to obtain something, like a new pair of shoes, or even to try and fulfill the emotional need of getting affection or approval from the mother. Although the association between identifying happiness in the triangle video and the increased likelihood of engaging in helping behavior during the pen drop scenario did not show a significant relationship with any of the family emotional climate factors, perhaps there is still a connection: it would be logical to guess that if someone identified happiness more accurately and came from a negative environment, perhaps they also tend to help others, as this may have been a way to avoid negative responses within their environment. Without that connection, perhaps simply seeing happiness more easily means that a person sees other people as more positive in general, regardless of family emotional environment, and this creates an increased willingness to help. This explanation somewhat contradicts the notion of empathy, however, and would need to be studied further, since one would expect that high levels of empathy would lead a person to want to help those in distress.

Moreover, it is important to note that the presence of empathy-related skills does not imply the presence of empathy. A person who can easily identify certain emotions in others, such as fear or anger, for example, may not necessarily feel compassion or understanding of that emotion. Someone who engages in helping behavior may also not be experiencing empathy to someone in need, but perhaps a need for approval and attention. This study aims to look at skills that are related to empathy, in order to open up possibilities for future investigation into connections between those skills and empathy itself.

Limitations

Although a few significant relationships were found between family emotional climate and current empathy-related skills, there were several limitations to the study. The first limitation was related to the sample and sample size. The sample size of fifteen participants was very small. A second limitation was that all except two of the participants were university students aged between 18 and 25 (the other two were aged 40 and 45). Although socioeconomic background was not assessed, the fact that the majority of the participants were students at New York University makes it likely that they were also from middle to upper class backgrounds. Therefore, the limitations of this sample have an impact on external validity and make the results difficult to generalize to other adults in general.

Other limitations were related to the implementation of the intervention. First, there was the issue of the experimenter also taking on the role of setting up each participant to view the images on the computer and then record their responses on paper. As objective as the experimenter may have tried to be, she may have unintentionally and unknowingly interacted differently with each participant, which would have in turn caused the participants to act differently as well. In terms of writing responses, however, each word was recorded verbatim, so this would hopefully not be skewed by any of the experimenter's interactions. Another related issue was that participants verbally described the emotion images to the experimenter who remained in the room, which may have significantly altered their responses in various ways, such as making participants more shy, or causing them to give answers they thought would be acceptable to the experimenter. Interestingly, these same limitations would also be avenues for further exploration: a future study could look at a control group that is left to respond on their own to see if the social interaction changes their responses, which would be another element to explore in looking at empathy and prosocial behavior (for example, what factors show a relationship to whether participants try to please the experimenter or not). Moreover, the purpose of having the experimenter in the room to write down responses was to obtain as much information as possible about the participants' descriptions. If they had been left alone to write down their answers, they may have kept their answers much shorter and with less variation, or occasionally not responding.

One final, but obvious limitation was the use of questionnaires to assess family emotional climate. While questionnaires of this type are clearly subjective, it would have been impossible for the scope of this study to observe family interactions throughout childhood, for example. The intention of the questionnaire was not to define the actual emotional environment, but rather to assess participants' overall perception as adults. For this purpose, the questionnaire turned out to both interesting and informative.

Recommendations for Future Research

Based on the results of the study, there are several recommendations for future research. First, some of the limitations outlined in this study may be minimized by having the subjects respond to the emotion images without the experimenter in the room. In order to obtain as much information as possible about the responses, a recording device could be left in the room in addition to a pen and paper. Another important change could be to assess the participants' mood before the study as well as if they are in a rush in order to examine how this may affect their willingness to pick up the pen. It would also be important to try to obtain a much more diverse sample in order to increase chances of being able to generalize the results to more than university

students. Future studies should also expand on the findings that happiness had stronger associations with other variables than any of the other emotions.

It is important to mention that the link between higher accuracy scores for identifying happiness and a highly negative perception of family environment does not in any way imply that negative family environments are good. These results merely suggest that perhaps certain negative aspects within a family lead to the development of certain skills (or defense mechanisms) that allow family members to function as best they can within that environment. Perhaps those same skills actually have detrimental outcomes in other areas of life. Detecting happiness more easily than other emotions may also lead a person to experience more intense disappointment, especially if this person is inaccurately detecting happiness. If a person overestimates the frequency or intensity of other people's happiness, for example, they may interact with those people according to this perception, only to find out that this perception is wrong - or exaggerated. Future studies should examine these possibilities by including other measurements such as images of 'fake' emotions, as well as measurements of social functioning in various contexts, such as romantic relationships, to see if perceiving happiness may actually lead to dysfunctional interactions in certain situations.

Further analysis of negative family emotional climate factors such as comparing participants' scoring differently in each of the five subscales (for example, a participants whose FEC scores are high on aggression but low on passive aggressiveness compared with participants who have high scores on passive aggressiveness but low on aggression) would provide valuable information and could be looked at in later studies. While this type of analysis could have been done within the current study, the purpose of this study was to examine positive and negative aspects of family emotional climate on a relatively basic level in order to open up further avenues for exploration. Therefore, analysis of FEC was limited to overall levels of positive and negative aspects rather than looking at more specific and complex combinations.

Conclusion

The present study illuminated some interesting findings within the area of empathy-related skills such as identifying emotion and helping behavior. First, the impact of having high levels of perceived negative emotional expressiveness within the family environment seemed to be linked to the ability to accurately identify happiness in both people and non-human shapes. Second, higher accuracy in detecting happiness was associated with increased likelihood to engage in helping behavior. The greater implications of these findings are twofold: in terms of research, it is clear that the ability to detect happiness should be further be explored to determine what other possible factors are involved in its connection with both helping behavior and negative emotional environments, as well as to see if high accuracy actually translates into overestimation of happiness. In applied psychology settings (such as schools or intervention programs) that serve people who have negative family environments, this finding could be a useful tool in emotional learning: a person's ability to detect happiness may have both adaptive and maladaptive consequences. Teaching them about a range of emotions may help capitalize on the positive features of this skill (such as being optimistic about social interactions) as well as the negative (such as being overly optimistic about social interactions). Finally, this study also suggests that it is important to investigate behaviors and perceptions that have potentially both negative *and* positive consequences in real-life settings. Perhaps deepening our research and

understanding of negative environments could shed as much light on empathy as positive environments.

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Tables

Table 1

	Minimum	Maximum	Mean	SD
Restoration	3.38	9	6.52	1.58
Aggression	1	8	5.43	1.84
Passive-Aggressiveness	1.33	9	4.44	2.23
Affection	4	9	7.36	1.55
Positive Reinforcement	3.62	9	7.09	1.43

Table 2

Accuracy in identifying triangle's emotions (%)				Accuracy in identifying Person A emotions (%)		
Happy	Sad	Angry	Scared	Happy	Sad	Angry
27	27	47	53	60	73	87

Appendix

The Cambridge Behaviour Scale

Below are a list of statements. Please read each statement very carefully and rate how strongly you agree or disagree with it by circling your answer. There are no right or wrong answers, or trick questions.
Circle 1 if you strongly disagree and 9 if you strongly agree.

1. I can easily tell if someone else wants to enter a conversation	1 2 3 4 5 6 7 8 9
2. I find it difficult to explain to others things that I understand easily, whey they don't understand it the first time.	1 2 3 4 5 6 7 8 9
3. I really enjoy caring for other people.	1 2 3 4 5 6 7 8 9
4. I find it hard to know what to do in a social situation	1 2 3 4 5 6 7 8 9
5. People often tell me that I went too far in driving my point home in a discussion.	1 2 3 4 5 6 7 8 9
6. It doesn't bother me too much if I am late meeting a friend.	1 2 3 4 5 6 7 8 9
7. Friendships and relationships are just too difficult, so I tend not to bother with them.	1 2 3 4 5 6 7 8 9
8. I often find it difficult to judge if something is rude or polite.	1 2 3 4 5 6 7 8 9
9. In a conversation, I tend to focus on my own thoughts rather than on what my listener might be thinking.	1 2 3 4 5 6 7 8 9
10. When I was a child, I enjoyed cutting up worms to see what would happen.	1 2 3 4 5 6 7 8 9
11. I can pick up quickly if someone says one things but means another.	1 2 3 4 5 6 7 8 9
12. It is hard for me to see why some things upset people so much.	1 2 3 4 5 6 7 8 9
13. I find it easy to put myself in somebody else's shoes.	1 2 3 4 5 6 7 8 9
14. I am good at predicting how someone will feel.	1 2 3 4 5 6 7 8 9
15. I am quick to spot when someone in a group is feeling awkward or uncomfortable.	1 2 3 4 5 6 7 8 9
16. If I say something that someone else is offended by, I think that that's their problem, not mine.	1 2 3 4 5 6 7 8 9
17. If anyone asked me if I liked their haircut, I would reply truthfully, even if I didn't like it.	1 2 3 4 5 6 7 8 9
18. I can't always see why someone should have felt offended by a remark.	
19. Seeing people cry doesn't really upset me.	1 2 3 4 5 6 7 8 9
20. I am very blunt, which some people take to be rudeness, even though it is unintentional and I am simply being straightforward.	1 2 3 4 5 6 7 8 9

21. I don't tend to find social situations confusing.	1 2 3 4 5 6 7 8 9
22. Other people tell me I am good at understanding how they are feeling and what they are thinking.	1 2 3 4 5 6 7 8 9
23. When I talk to people, I tend to talk about their experiences rather than my own.	1 2 3 4 5 6 7 8 9
24. It upsets me to see an animal in pain.	1 2 3 4 5 6 7 8 9
25. I am able to make decisions without being influenced by people's feelings.	1 2 3 4 5 6 7 8 9
26. I can easily tell if someone else is interested or bored with what I am saying.	1 2 3 4 5 6 7 8 9
27. I get upset if I see people suffering on news programmes.	1 2 3 4 5 6 7 8 9
28. Friends usually talk to me about their problems as they say that I am very understanding.	1 2 3 4 5 6 7 8 9
29. I can sense if I am intruding, even if the other person doesn't tell me.	1 2 3 4 5 6 7 8 9
30. People sometimes tell me that I have gone too far with teasing, even when it is clear that I am just having fun and not meaning to hurt anyone's feelings.	1 2 3 4 5 6 7 8 9
31. Other people often say that I am sensitive, though I don't always see why.	1 2 3 4 5 6 7 8 9
32. If I see a stranger in a group, I think that it is up to them to make an effort to join in.	1 2 3 4 5 6 7 8 9
33. I usually stay emotionally detached when watching a film.	1 2 3 4 5 6 7 8 9
34. I can tune into how someone else feels rapidly and intuitively.	1 2 3 4 5 6 7 8 9
35. I can easily work out what another person might want to talk about.	1 2 3 4 5 6 7 8 9
36. I can tell if someone is masking their true emotion.	1 2 3 4 5 6 7 8 9
37. I don't consciously work out rules of social situations.	1 2 3 4 5 6 7 8 9
38. I am good at predicting what someone will do.	1 2 3 4 5 6 7 8 9
39. I tend to get emotionally involved with a friend's problems.	1 2 3 4 5 6 7 8 9
40. I can usually appreciate the other person's viewpoint, even if I don't agree with it.	1 2 3 4 5 6 7 8 9