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Bullying Behaviors and Attachment Styles

Kylie Williams

BULLYING BEHAVIORS AND ATTACHMENT STYLES

by

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(Under the Direction of Janice H. Kennedy)

ABSTRACT

Peer victimization has become highly prevalent in Western schools with some studies showing that as many as 50% of high school students report having victimized or been victimized (Gaul, 2010). Past research has shown that several parental factors, such as involvement (Conners-Burrow et al., 2009) and support (Hill et al., 2004) have been linked to many childhood outcomes, such as the presence of aggressive behaviors. Parental involvement has also been linked to the likelihood of becoming a victim of school bullying (Jeynes, 2008). Although some researchers have found correlations between maternal attachment and externalizing behaviors in females and between paternal attachment and externalizing behaviors (e.g., getting into fights) in males (Fagot et al., 1990), researchers have not looked specifically at the relationships between levels of attachment anxiety and avoidance and the likelihood of becoming a school bully or victim. The present study examined these relationships, taking into account specific types of aggressive behavior (physical and relational). Results showed that female participants were more likely to be physically aggressive when they had higher levels of attachment avoidance to their mothers and higher levels of attachment anxiety with their fathers. In addition, female participants were more likely to engage in relational aggression when they experienced higher levels of attachment anxiety to their mothers, while male participants were more likely to engage in this form of aggression when they experienced higher levels of attachment anxiety to their fathers. Also, when examining peer victimization, participants reporting higher levels of anxiety

about their maternal relationships were more likely to report being a victim of peer aggression in childhood. When taking into account gender of the participants, this relationship was only found in female participants. Implications for these findings are discussed.

INDEX WORDS: Bullying, Victimization, Aggression, Parent-child and peer relationships, Attachment

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CHAPTER ONE

Introduction

According to the U.S. Department of Education (2010), 32% of students from ages 12 to 18 state that they have been the victims of bullying at their schools. In addition, an overwhelming 24% of students among 100 polled schools reported feeling unsafe and unhappy in their school (Gaul, 2010). Fifty percent of high school students in this study reported having victimized or been victimized at some point. With this high incidence rate of bullying among students, much more research on this topic is needed in the field of psychology so that we can better understand the driving forces behind this behavior and learn ways to prevent it from occurring.

Dan Olweus (1995), one of the first researchers to investigate bullying, defined school bullying as the repeated exposure over time to harmful actions of one or more students. According to Olweus, school bullying consists of both relational aggression and physical aggression. Relational aggression includes behaviors such as rumor spreading, taunting, and threatening to withdraw friendship (Vitaro, Brendgen, & Barker, 2006), while physical aggression includes behaviors such as hitting and pushing (Houndoumadi & Patraski, 2001).

Bullying can also be categorized as either proactive or reactive aggression (Tuvblad, Raine, Zheng, & Baker, 2009). Proactive aggression is defined as the use of aggression in order to reach a desired outcome. Reactive aggression is due to an angered or frustrated response to a real or imagined threat. Children who are involved in bullying can be placed into one of three categories: bullies, victims, or bully-victims (Andreou, 2001). Bully-victims are those children who both bully and are bullied.

Male and female children tend to have very different experiences with bullying. Research shows that boys are more likely to bully using physical aggression while girls are more likely to use relational aggression (Vaillancourt et al., 2006). This has been demonstrated in children as early as preschool (Crick, Casas, & Ku, 1999). However, the use of relational aggression and physical aggression correlate, with a stronger link between these two types of aggression for girls. In addition, boys are more likely to bully in general and become bully-victims, while boys and girls are equally likely to be victims (Nation et al., 2008). Empirical evidence suggests that as boys age, they tend to experience more bullying, while bullying for girls peaks at age 13. Furthermore, boys report understanding why their peers bully and report a greater liking for bullies than girls (Houndoumadi & Pateraki, 2001).

In addition to sex differences in bullying for middle and high school children, various ethnic groups also experience bullying differently. However, research in this area has mixed results. Some studies examining boys show that African American and Native American children are more likely to bully and be victimized (Carlyle & Steinman, 2007) than other children. Comparable research suggests African American children are more likely to become bullies, but less likely to become victims than white children, while children belonging to other minority groups are more likely to become bully/victims (Bradshaw, O'Brennan, & Sawyer, 2008). In addition, research indicates that African American children are more likely than Hispanic children to become both bullies and victims, with no differences across genders (Peskin, Tortolero, & Markham, 2006).

Correlates of Bullying

Several factors are linked to the participation in bullying behaviors. First, bullies have more positive attitudes toward aggression than do others (Cole, Cornell, & Sheras, 2006). Not

only are their attitudes more positive, but boys involved in bullying also have more normative beliefs about aggressive behaviors than uninvolved boys (Marini et al., 2006). In addition, bullies are more likely than uninvolved children to agree that it is acceptable to retaliate against someone who has already offended them (O'Brennen et al., 2009).

In addition to their differing views of aggression, bullies tend to be impulsive and lack self-control (O'Brennen et al., 2009; Pontzer, 2010; Unnever & Cornell, 2009). They are also more likely to be inattentive and hyperactive (Cho, Henderickson, & Mock, 2009). Children with Attention Deficit Hyperactivity Disorder (ADHD) bully and are victimized more often than children without this disorder (Unnever et al., 2009). Researchers suggest a possible explanation related to self-control exhibited by bullies. Positive attitudes toward aggression combined with impulsivity increases the likelihood that these bullies will behave aggressively (Fite, Goodnight, Bates, Dodge, & Petit, 2008). Unfortunately, aggressive behavior and positive attitudes toward aggression form a cyclical pattern in which aggressive behavior predicts positive attitudes towards aggression while positive attitudes toward aggression predict further aggressive behavior (Fontaine, Tang, Dodge, Bates & Petit, 2008).

Bullies typically react differently than non bullies when experiencing shame (Tofti & Farrington, 2008). While pro-social children are more likely than bullies to experience shame and guilt (Jones, Manstead, & Livingstone, 2009), bullies are more likely to displace feelings of shame than victims and nonbullies (Pontzer, 2010). Instead, they respond to shameful situations with anger and blame. In addition, individuals who often experience shame are more likely than others to become angry and aggressive and externalize blame (Baumeister, Smart, & Boden, 1996).

Another factor that is related to the tendency of bully/victims to attribute blame to others is a deficit in interpreting social cues (Camodeca, Goosens, Schuengel, & Terwogt, 2003). According to Camodeca et al. (2003), bully/victims differ from nonbullies in how they process social information. For example, after provocation, bully/victims are more likely to respond with blame, anger, and retaliation in ambiguous social interactions when the intent of the perpetrator is unknown. These children may not consider the possibility that the perpetrator had no harmful intent.

Another factor related to social information processing is social competence. While higher social competence is a predictor of bullying in 13- to 15-year-olds (Nation, Vieno, Perkins, & Santinello, 2008), lower social competence predicts bullying/victimization in 11- to 13-year-olds. Past researchers show that bullies can be seen as both popular and unpopular members of their peer groups (Vaillancourt et al., 2006). Despite highly aggressive peers being less liked than their less aggressive peers, they are still perceived as being more popular and having more power (Vaillancourt et al., 2006).

Self-perceived popularity is also linked to aggression (Mayeux & Cillessen, 2008). Students who are peer-perceived and self-perceived as popular are more likely to engage in aggressive behaviors than their peers. However, students who perceive themselves as being disliked are also more likely than their peers to engage in aggressive behaviors. Even association with aggressive and perceived popular peers is linked to being seen as a bully (Estell et al., 2009).

In addition to popularity, physical attractiveness is associated with relational aggression (Leenaars, Dane, & Marini, 2008). Specifically, attractive females are more likely to be victimized than their less attractive peers, while attractive males are less likely to be bullied than their less attractive peers. This relationship is stronger for younger adolescents, and eventually

disappears as adolescents age. Evolutionary theory may help to explain these gender differences by emphasizing the increase in female rivalry that takes place when physical appearance is made salient.

Parental Factors and Bullying

In addition to the environmental factors previously discussed, a child's home environment is also an important component in predicting bullying behaviors. Children who are not involved in bullying have more parental support than children who are involved (Conners-Burrow et al., 2009). Parental academic involvement is also related to lower levels of aggressive behavior in children and adolescents (Hill et al., 2004). In fact, Hill et al. (2004) showed that lower parental academic involvement in the seventh grade leads to more behavioral problems in the eighth grade.

While parental support (Conners-Burrow et al., 2009) and involvement (Hill et al., 2004) are associated with more positive outcomes in children when it comes to bullying behaviors, parental divorce (Malone et al., 2004) and maltreatment (Cullerton-Sen et al., 2008) have been linked to negative outcomes. For instance, parental divorce has been linked to more aggressive behaviors in boys (Malone et al., 2004). In both elementary and middle school boys, externalizing behavior, which has been defined as behaviors that are characterized as aggressive, defiant, impulsive, antisocial, and overactive (Hinshaw, 1992), increases in the year after their parents' divorce (Malone, 2004). Fortunately, for middle school boys, these externalizing behaviors return to baseline levels in the following year. However, these externalizing behaviors continue to persist in elementary school boys.

As stated earlier, shame management is directly related to bullying (Ttofi et al., 2008). It is also important to note that parent/child-bonding plays a role in the relationship between shame

management and bullying. Parent-bonding influences the way children expect their parents to shame them. For instance, children experiencing disintegrative shaming (shaming invoking a sense of rejection or a stigma) were more likely to use maladaptive strategies to manage their shame than children not experiencing disintegrative shaming. Children using these maladaptive strategies are at great risk for bullying.

Relational aggression and physical aggression may stem from different factors. For example, parental maltreatment is related to both relational and physical aggression, but in different ways (Cullerton-Sen et al., 2008). For boys, maltreatment is related to physical aggression, and for girls maltreatment is related to relational aggression. In addition, physical abuse is related to physical aggression in both genders, but sexual abuse is only related to relational aggression in girls. Cullerton-Sen et al. suggest that this may be due to the cultural norms associated with male and female behaviors.

Another parental factor linked to the likelihood of children engaging in certain types of aggression is the type of control exerted by their parents (Kuppens, Grietens, Onghena, & Michiels, 2009). For instance, physical punishment is associated with physical aggression in children, while psychological control is associated with relational aggression. These relationships are present in both male and female children. However, the association between physical punishment and physical aggression was stronger for boys than girls.

Children's relational and physical aggressive behaviors change throughout childhood and adolescence (Underwood, Beron, & Rosen, 2009). Six trajectories have been identified: "low stable, low increasers, medium increasers, medium desisters, high desisters, and high increasers" (Underwood et al., 2009; p. 357). Parenting style may influence which trajectory a child or adolescent follows. Permissive parenting predicts being a member of the high increaser and

medium increaser group. In addition, authoritarian parenting predicts an increase in aggression for those who are already rated high in aggression.

Correlates of Peer Victimization

Peer victimization can result in devastating consequences for children and adolescents. Although studies in this area are correlational in nature and therefore causation cannot be established, researchers have shown an association between peer victimization and internalizing symptoms (McLaughlin, Hatzenbuehler, & Hilt, 2009). Specifically, peer victimization has been linked to emotional dysregulation (McLaughlin et al., 2009), loneliness, and anxiety (Bellmore, Witkow, Graham, & Juvonen, 2004). When examining relational aggression in particular, researchers have found that this single type of aggression predicts depression and anxiety in girls (Ellis, Crooks, & Wolfe, 2008). In addition to the increased likelihood of experiencing these internalizing symptoms, both victims and bullies report a reduced sense of life satisfaction (Flaspohler, Elfstrom, Vanderzee, Sink, & Birchmeier, 2009). Fortunately, support from peers and teachers may reduce this association.

Peer victimization is related to school difficulties as well (Thijs & Verkuyten, 2008). Because bullied children have a lower sense of self-efficacy, their academic achievement tends to be lower than their peers. In addition, bullied children are more frequently absent from school (Gastic, 2008). Interestingly, victims are also more likely to get into trouble at school and more likely to receive serious forms of discipline than nonbullied children. These difficulties often result in school transfers.

One of the most devastating consequences of bullying is the higher incidence of suicide attempts and ideation among bullies, victims, bully-victims, and even bystanders (Klomek, Sourander, & Gould, 2010). These relationships have even been found in elementary school

children, with bully-victims being at the highest risk for these problems. In addition, bully-victims who also witness bullying incidents are at an even greater psychological risk for suicide (Rivers et al., 2010) than bully/victims who do not witness bullying instances. Furthermore, girls who are considered to be both victims and bystanders think about suicide more often than uninvolved students and bystanders.

Parental Factors and Victimization

Not only is parental involvement linked to aggression, as stated earlier, but it is also linked to victimization (Jeynes, 2008). Children of less involved parents are more likely to be victimized than children with more involved parents. However, Jeynes (2008) did not find this relationship in 7th to12th graders. These researchers hypothesized that the participants in this study may have had an immature and inaccurate view of their parent's behavior and their own behavior in childhood.

In addition to parental involvement, mother-child interactions are also related to peer victimization (Finnegan, Hodges, & Perry, 1998). However, this relationship is different for boys and girls. Male victimization is associated with perceived maternal over-protectiveness while female victimization is associated with perceived maternal rejection. This is especially the case when boys react with fear during mother-child conflicts and girls cope aggressively during mother-child conflicts. However, maternal relationships are not the only parental relationships that relate to peer victimization. Paternal relationships have been linked to the likelihood of being victimized as well. Specifically, dysfunctional attitudes of the father and paternal rejection are positively correlated with peer victimization (Beran, 2009). Gibb, Abramson, and Alloy (2004) found that bullied children are more likely to experience emotional maltreatment by parents than nonbullied children.

Bullies, victims, and bully-victims all report having more negative family experiences than children not involved in bullying (Mohr, 2006). These experiences include both family conflict and family violence. Victims also report having less affectionate and supportive mothers, while only aggressors report having less affectionate and supportive fathers. Despite all of the research describing the relationships between various parental factors and aggression/bullying, no literature is available to determine the relationship between bullying behaviors and attachment style.

Attachment Theory

Attachment theory states that, as infants, we all form attachments to our primary caregiver (Ainsworth, 1979). This attachment can be secure or insecure depending on the quality of early interactions with the caregiver. Specifically, the quality of early interactions depends on factors such as sensitivity to infant signals, contingent responding, and close bodily contact. Ainsworth classified infants as displaying one of three different styles of attachment: secure, insecure ambivalent, and insecure avoidant. Each of these attachment styles is distinguished based on several behavioral characteristics exhibited by the child.

According to Ainsworth (1979), caregivers of secure infants tend to be much more sensitive and respondent to their infants' needs than caregivers of insecurely attached infants. This allows the infant to trust and rely on the caregiver, leading to security. Infants with caregivers who do not respond contingently and sensitively to their infants' needs tend to become insecure ambivalent since they are unsure of what to expect from the caregiver. In addition to a lack of responding, caregivers of avoidant infants also tend to reject and become easily angered with their infant. These caregivers may even try to avoid bodily contact with their infants. Infants learn to avoid their caregivers so that they can lessen their anxiety and anger.

Early attachment patterns have been shown to play a role in predicting future behavior (Thompson, 2000). For example, Warren, Huston, Egeland, and Sroufe (1997) found that those displaying an ambivalent attachment style in infancy were more likely to develop an anxiety disorder later in life. However, research has also shown that attachment may be changed due to new experiences (Thompson, 2000). Because of this, parents should continue to utilize consistent, contingent parenting throughout their children's upbringing.

It is also important to note that security of attachment has been shown to be similarly concordant between both twin and nontwin siblings (Constantino et al., 2006). In addition, this concordance was similar in strength for identical twins. This seems to indicate that attachment is a result of shared environmental influences. As the authors state, this is also evidence that mothers and fathers can change their behaviors in order to affect their child's attachment, as opposed to genetic factors, which are not amenable to change.

The Influence of Early Attachments on Childhood

The quality of infant attachments to their primary caregiver has implications for the infant throughout his or her life (Stams, Juffer, & van IJzendoorn, 2002). For instance, securely attached infants tend to have better outcomes in their cognitive development than insecurely attached infants. Specifically, secure attachment is associated with language competence. Securely attached infants also grow into more curious and persistent children.

In addition to cognitive development, social development can also be influenced by infant attachment. For example, another consequence of early interactions with caregivers is the development of social interests (Peluso, Peluso, White, & Kern, 2004). According to Peluso et al., social interests can be defined as the desire of individuals to fulfill their basic social needs for a sense of belonging and purpose. Lack of social interest can lead to mistrustfulness of others

and self-centeredness, while the presence of social interest leads to higher self-esteem and self-acceptance. In addition, those individuals with social interests are more likely to have an optimistic life philosophy and well-developed coping skills.

Other factors that may influence the likelihood of bullying are the tendency of individuals to engage in social comparison and their desire for emotional support. When examining attachment styles in college students, Schwartz, Lindley, and Buboltz (2007) found that those students considered as having an anxious attachment were more likely to seek attention from others and engage in social comparison. In addition, those considered to have an avoidant attachment were less likely to seek emotional support. Furthermore, Allen, Porter, MacFarland, McElhaney, & Marsh (2007) linked attachment security to a feeling connected to peers. All of these factors may play a role in the likelihood of becoming a bully or a victim.

Attachment and Aggression

Although researchers have not directly studied the link between attachment styles and bullying, they have closely linked attachment with aggression. Specifically, they have found that attachment difficulties are related to antisocial traits (e.g., lack of concern for others' feelings) and predict callous/unemotional characteristics in children (Fite, Greening, & Stoppelbien, 2008). Callous/unemotional traits are positively correlated with direct bullying (Viding, Simmonds, Petrides, & Frederickson, 2009). In addition, higher attachment security is linked to lower levels of aggression (Constantino et al., 2006; Cummings-Robeau, Lopez, & Rice, 2009; Leenars et al., 2008).

Insecure attachment in seventh and eighth graders is related to increased instances of externalizing behavior (Allen et al., 2007) While insecure maternal attachment is correlated with externalizing behaviors in girls, insecure paternal attachment is correlated with externalizing

behavior in boys (Roelofs, Meesters, Huurne, Bamelis, & Muris, 2006). Furthermore, teachers report observing more peer difficulties in insecure/avoidant girls than in securely attached girls (Fagot & Kavanagh, 1990).

Measuring Attachment in Adolescents

Researchers have used various methods for measuring attachment security in adolescents and young adults. One widely used method is through the Adult Attachment Interview (AAI; Allen, Hauser, & Borman-Spurrell, 1996; Branstetter, Furman, & Cottrell, 2009; Feeney, Cassidy, & Ramos-Marcuse, 2008; Main, 1996). Although, the AAI categorizes participants into one of three specific attachment styles, it may take anywhere from 45 minutes to an hour and a half to interview just one participant (van IJzendoorn, 1995). In addition, a researcher must be trained in order to score the interview properly (Main, 1996). Because of this, the AAI was not a practical choice to be used in the present study. In addition, other researchers have used the Parental Attachment Questionnaire (PAQ; Shochet, Homel, Cockshaw, & Montgomery, 2008) and Furman and Wehner's Behavior Systems Questionnaire (BSQ; Theran, Newberg, & Gleason, 2010). However, neither the PAQ nor the BSQ measure attachment anxiety or avoidance specifically. The Experiences in Close Relationships (ECR) has been used to measure security of close relationships including that of significant others, friends, and parents, and provides separate scores for both attachment anxiety and avoidance (Al-Yagon, 2007).

Self-Esteem

Self-esteem is another factor that should be considered when examining the relationship between bullying behaviors and attachment. Researchers have demonstrated the relationship between self-esteem and many internalizing symptoms such as depression, neuroticism (Neiss, Stevenson, Legrand, Iacono, & Sedikides, 2009) and anxiety (Foster, Kernis, & Goldman, 2006).

Specifically, anxiety is positively correlated with unstable self-esteem (Foster et al., 2006). In addition, people with high self-esteem are less likely to be depressed, while high levels of neuroticism are associated with higher levels of depression (Neiss et al., 2009).

For elementary and middle school girls, self-esteem is largely predicted by appearance appraisal and weight related teasing (Kutob, Senf, Crago, & Shisslak, 2010). Girls who are teased about their weight have lower self-esteem than girls who are not teased regardless of whether or not they believed the teasing affected them. In addition, teasing about body weight was a better predictor than actual body weight. However, obese adolescents report more negative self-esteem and higher levels of depression than their peers (Goldfield et al., 2010).

Some individuals may base their self-esteem on the quality of their friendships, referred to as friendship contingent self-esteem (Cambron & Acitelli, 2010). Individuals whose self-esteem is based on the quality of their friendships tend to be more depressed than individuals who do not base their self-esteem upon this. These individuals tend to engage more often in excessive reassurance seeking, negative feedback seeking, and rumination, which may lead to the depressive symptoms.

In addition to internalizing symptoms, self-esteem has also been shown to relate to many parenting behaviors (Luke & Coyne, 2008), such as attachment (Foster et al. 2007). Specifically, higher attachment anxiety is positively correlated with unstable self-esteem. This has been shown for both genders.

Self-esteem plays a role in the relationship between attachment and depression. Self-esteem mediates the relationship between maternal attachment and depressive symptoms (Kenny & Sirin, 2006). In addition, both anxious and avoidant attachment predict symptoms of anxiety and depression (Lee & Hankin, 2009). The relationship between anxious attachments and

internalizing symptoms is mediated by low self-esteem and dysfunctional attitudes. However, this mediational effect does not exist for avoidant attachment. Anxious attachment also indirectly predicts depression through low self-esteem and chronic anxiety (Riggs & Han, 2009).

Self-esteem has also been shown to moderate the relationship between maternal attachment and aggression (Gomez & McLaren, 2007). In addition, self-esteem acts as a mediator between maternal attachment and aggression, as well as paternal attachment and aggression. In other words, insecure maternal attachment predicts aggression when self-esteem is low. Also, low self-esteem facilitates the link between increased aggression and insecure attachment.

CHAPTER 2

The Present Study

The goal of the present study was to identify some of the parental factors that may predict bullying and victimization. Specifically, the study was designed to investigate how paternal and maternal attachment styles predict both bullying and victimization. In addition, any differences in these relationships were examined taking into account type of aggression (relational aggression versus physical aggression). The role of self-esteem was examined as well, as self-esteem has been shown to mediate the relationship between attachment and aggression (Gomez et al., 2007). The hypotheses were as follows:

- H1: Research suggests there is a relationship between various parental factors, such as parental involvement (Conners-Burrow et al., 2009), parental divorce (Malone et al., 2009), parental stress, and insecure parental attachments (Fite et al., 2008), and aggression. In addition, teacher ratings of insecure avoidant attachment in girls have been linked to externalizing behavior (Fagot et al., 1990). Furthermore, correlations exist between maternal attachment and externalizing behaviors in females and between paternal attachment and externalizing behaviors (e.g., getting into fights) in males. Therefore, it was hypothesized that a history of participation in bullying would be related to one's attachment to his or her parents. Specifically, an avoidant attachment to the mother or the father would be linked to a history of bullying. Past research has not examined specific attachment styles or specific types of aggression. The present study incorporated both.
- H2: Self-esteem has been shown to mediate the relationship between maternal attachment and aggression (Gomez et al., 2007), so it was further hypothesized that self-esteem

would mediate these relationships. Unlike past research, the role of self-esteem in the relationship between paternal attachment and aggression was also examined.

- H3: Although the specific nature of the relationship has not been examined, research suggests that both paternal uninvolvement (Jeynes, 2008) and negative family experiences (Mohr, 2006) correlate with aggression. Specifically, college students reported less peer victimization when parental involvement was high. In addition, victims of bullying report more family conflict and violence than children who are uninvolved in bullying. Thus, it was hypothesized that victimization would be related to attachment to one's parent.

CHAPTER 3

Method

Participants

Participants were a convenience sample of 144 undergraduate Introduction to Psychology students from a rural, southeastern university. The students received course credit in exchange for their participation. Forty percent (n = 58) of this sample consisted of males and 60 percent (n = 86) consisted of females (see Table 1.) The average age of the participants was 19.46 (*SD* = 1.61). Seventy percent (n = 101) of the participants were white/European American, 24 percent (n = 34) were African American, 2 percent (n = 3) were Asian/Pacific Islander, and 4 percent (n = 6) selected other as their ethnicity. In addition, 67 percent (n = 96) of participants' parents were married, 18 percent (n = 26) were divorced, 10 percent (n = 14) were never married, 3 percent (n = 4) were cohabitating, and 1 percent (n = 2) were widowed when the participants were at the ages being studied. Seventeen percent of participants reported having no father figure within their households, while only one percent reported having no mother figure within their households.

Materials

Experiences in Close Relationships Questionnaire - Revised (for mother and father). A slightly modified version of the ECR-R Questionnaire (Fraley, Waller, & Brennan, 2001) was used to measure childhood parental attachments. This scale was divided into two separate subscales, which measure both avoidance and anxiety. Participants rated the items on a 7-point Likert-type scale ranging from 1 = strongly disagree to 7 = strongly agree. Example items include: "I was afraid that I would lose my mother's/father's love," and "I often worried that my mother/father would not want to be around me." There were separate surveys for both maternal

and paternal attachment. In past studies, Cronbach's alpha has been established for the two subscales (.95 and .91 for avoidance and anxiety, respectively; see Eberhart & Hammen, 2010). Scores were determined by reverse keying necessary items and averaging the scores for each scale.

Physical Aggression Scale. A subscale of the Aggression Scale (Buss & Perry, 1992) was used to measure physical aggression. This scale consisted of nine statements in which participants were asked to rate on a 5-point Likert-type scale ranging from 1 = least characteristic to 5 = most characteristic. Sample items include: "If someone hits me, I hit back" and "I have threatened people that I know." Buss and Perry (1992) calculated a Cronbach's alpha of .85 for this scale.

Relational Aggression Scale. The shortened version of the Indirect Aggression Scale for aggressors (IAS-A; Forrest, Eatough, & Shevlin, 2005) was used to measure relational aggression. This scale consisted of three subscales measuring social exclusion, use of malicious humor, and guilt induction. Participants rated how often they engaged in aggressive behaviors on a 5-point Likert-type scale ranging from 1 = never to 5 = regularly. Sample items include how often they "spread rumors about [others]" and "used sarcasm to insult [others]." Forrest, Eatough, and Shevlin (2005) calculated Cronbach's alpha for these subscales (.82, .84, and .81 respectively).

Victimization Survey. A modified version of two subscales of the Social Experiences Questionnaire (Yeung & Leadbeater, 2010) was used to measure victimization. Participants rated the items on a 6-point Likert-type scale. Responses ranged from 1 = never to 6 = always. Example items include: "How often did your peers hit you?" and "How often did your peers call you mean names?" This scale was divided into two subscales measuring both physical and

relational victimization. Crick and Grotpeter (1996) found a Cronbach's alpha of .80 for relational victimization and .78 for physical victimization.

Rosenberg's Self-Esteem Scale. Rosenberg's self-esteem scale (Rosenberg, 1989) was also used for this study. This scale consists of ten items. Sample items include: "On the whole, I was satisfied with myself" and "At times, I thought I was no good at all." Participants indicated the extent to which they endorse each statement using a 4-point Likert type scale (1 = strongly agree, 4 = strongly disagree). After reverse coding appropriate items, a score was created by averaging across items. Robins, Hendin, & Trzesniewski (2001) calculated a Cronbach's alpha of .88 for this scale.

Demographics. Participants completed a brief questionnaire addressing basic demographics such as their gender and ethnicity. This questionnaire included brief open-ended questions about their childhood living arrangements and amount of time spent with both parents.

Procedure

Upon arrival, the experimenter described the procedure and general purpose of the study; however, participants were not made aware of the experimenter's hypotheses. Participants completed the study in small groups of no more than 15 people. First, participants were asked to read and sign the informed consent. Next, the researcher asked participants several questions in order to facilitate better recollection of their childhood memories. Examples included: "Who was your best friend in middle school (around ages 11 to 13)?" and "Who were the popular kids in your middle school class?" Participants were given 15 seconds to answer each question and instructed to jot down their answers on a blank sheet of paper. Afterward, participants filled out the study measures according to how they recalled feeling from ages 11 to 13. The order of the surveys was randomized, and the researcher reiterated the anonymity of the study. The

experiment lasted approximately 30 minutes. Last, the participants were thanked for their participation and dismissed.

CHAPTER 4

Results

Preliminary Analyses

An independent samples *t*-test was conducted to analyze gender differences in physical and relational aggression. Gender was related to both physical aggression, $t(129) = -.5.05$, $p < .001$, and relational aggression, $t(129) = -2.75$, $p < .01$. Male participants ($M = 2.60$, $SD = .80$; $M = 1.79$, $SD = .54$) reported engaging in more physical and relational aggression than female participants ($M = 1.94$, $SD = .69$; $M = 1.54$, $SD = .50$). Gender was not related to parental relationships.

A one-way ANOVA was used to analyze ethnic differences in parent-child relationships. Ethnicity was related to higher levels of attachment anxiety to the father, $F(3, 127) = 2.90$, $p < .05$, and higher levels of attachment avoidance to the father, $F(3, 127) = 6.59$, $p < .001$. Fisher's LSD test was used to further analyze mean differences. African-American participants ($M = 2.67$, $SD = 1.31$; $M = 4.32$, $SD = 1.61$) were more likely to report higher levels of both anxiety and avoidance to their fathers than Caucasian participants ($M = 2.06$, $SD = .94$; $M = 2.98$, $SD = 1.37$). There were no ethnic differences found for victimization, $F(3, 127) = 1.29$, $p > .05$, and physical, $F(3, 127) = 1.91$, $p > .05$, and relational aggression $F(3, 127) = .71$, $p > .05$.

Because of the higher levels of attachment anxiety and avoidance found in African-Americans, a 2 x 2 (ethnicity x father presence/absence) chi square was conducted to examine the relationship between the ethnicity of participants and the presence of a father figure within the participants' households. Ethnicity of the participant and whether or not a father figure was present in the household were significantly related, $\chi^2(1, N = 143) = 29.35$, $p < .01$. Ninety-three percent of Caucasian participants reported the presence of a father figure (e.g., father, step-

father) in their households, while only 62% of African-American participants reported the presence of a father or step-father in their households.

See Table 2 for correlations among all variables measured.

Hypothesis Testing

Physical and Relational Aggression. Participation in bullying was expected to relate to higher avoidance scores for attachment to one's parents. In the present study, bullying was divided into two subtypes of aggression: physical and relational. Physical aggression was not correlated with higher avoidance scores to the mother $r(128) = .10$, $p > .05$ or father $r(128) = .17$ $p > .05$. However, relational aggression was correlated with higher avoidance scores for attachment to the father, $r(128) = .18$, $p < .05$, but not the mother $r(128) = .07$, $p > .05$.

A multiple regression analysis was also used to analyze the effects of parent-child relationships (avoidance and anxiety) and engagement in bullying. First, physical aggression was entered as the predictor variable and all attachment scores were entered as criterion variables (attachment scores to the mother and father were analyzed separately). Second, relational aggression was entered as the predictor variable and all attachment scores were entered as criterion variables. Parental attachment scores could not significantly predict physical aggression; however, paternal attachment scores did predict relational aggression, $F(1,130) = 9.33$, $p < .01$ (see Table 3). Specifically, participants who reported higher levels of attachment anxiety toward their father were more likely to engage in relational aggression. In addition, when examining the scores of male and female participants separately, higher avoidant attachment scores to the mother and higher anxiety attachment scores to the father predicted physical aggression in female participants, $F(1,77) = 6.53$, $p < .01$ (see Table 4). There were no significant predictors of physical aggression in male participants. Furthermore, when examining

the scores of male and female participants separately, higher anxiety attachment scores to the mother predicted relational aggression in female participants, $F(1,77) = 4.11$, $p < .05$, while higher anxiety attachment scores to the father predicted relational aggression in male participants, $F(1,51) = 13.40$, $p < .01$ (see Tables 5 and 6).

Self-Esteem. Self-esteem was expected to mediate the relationship between aggression (both physical and relational) and measures of avoidance towards the father and/or mother. However, self-esteem was unrelated to both measures of parental avoidance and to measures of aggression (see Table 3); therefore, no meditational analyses were necessary. Self-esteem was predicted by higher levels of attachment anxiety to mothers (see Table 7).

Victimization. Victimization was expected to correlate with parent-child relationships. Victimization was found to correlate with higher rates of anxiety to the mother, $r(128) = .30$ $p < .01$, higher rates of anxiety to the father, $r(128) = .23$, $p = .01$, and higher rates of avoidance to the father, $r(128) = .24$ $p = .006$. A multiple regression was used to analyze the effects of parental relationships on victimization by entering victimization and the predictor variable and all attachment scores as the criterion variables. (Mother and father attachment scores analyzed separately.) Quality of parent-child relationships did predict victimization $F(1,130) = 14.31$, $p < .001$. Specifically, higher levels of attachment anxiety to the mother significantly predicted victimization (see Table 8). However, when examining male and female participants' score separately, this relationship only existed for female participants, $F(1,77) = 13.81$, $p < .001$ (see Table 9).

Attachment Interactions

To further understand the relationship between levels of attachment anxiety and levels of attachment avoidance and bullying behaviors (physical aggression, relational aggression, and

victimization), the interactive effects of attachment anxiety and avoidance levels to the mother and father were examined by conducting eight step-wise multiple regression analyses. In step one of these analyses, gender was presented as a control. In step two, attachment anxiety and avoidance were entered to examine their main effects. In step three, the interaction between attachment anxiety and avoidance was entered to explore possible moderating effects. All predictor variables were centered before being included in these analyses. An examination of these analyses revealed a significant interaction between levels of attachment anxiety to the mother and attachment avoidance to the mother for physical aggression. This interaction was further analyzed using Soper's (2009) *Interaction!* software. To examine the source of the 2-way interaction, the simple effects of attachment avoidance were assessed at high (+1 SD) and at low (-1 SD) levels of attachment anxiety.

There was a marked increase in physical aggression from low to high levels of attachment avoidance toward the mother among individuals high in attachment anxiety toward the mother, $t(137) = .34$, $p < .05$. No such effects were found among individuals relatively low in attachment anxiety. Thus, attachment anxiety to the mother was only related to physical aggression among individuals relatively high on attachment avoidance to the mother.

CHAPTER 5

Discussion

The present study examined the relationships between both bullying and victimization and attachment to one's parents, taking into account specific types of aggressive behavior (physical and relational). The main finding are as follows: female participants were more likely to report engaging in physical aggression when they scored higher on measures of attachment avoidance to their mothers and higher on measures of attachment anxiety to their fathers. In addition, female participants were more likely to report engaging in relational aggression when they scored higher on measures of attachment anxiety to their mothers, while male participants were more likely to report engaging in this form of aggression when they scored higher on measures of attachment anxiety to their fathers. Also, when examining peer victimization, participants scoring higher on measures of anxiety about their relationship with their mothers were more likely to report having been a victim of peer aggression in childhood. However, when taking into account gender of the participants, this relationship was only found in female participants.

Engagement in Bullying and Parent-Child Attachments

Past research demonstrates that parent-child attachment relationships predict peer aggression (Constantino et al., 2006; Cummings-Robeau et al., 2009; Leenars et al., 2008). The goal of the present study was to expand upon these past research findings and examine the relationship between specific attachment styles and specific patterns of aggression, as well as victimization. Specifically, it was hypothesized that higher avoidant attachment scores would predict higher physical and relational aggression scores. Support for links between parent-child attachment and involvement in peer bullying was found, although not for avoidant attachment

scores as predicted. Participants reporting higher *anxiety* about their attachment relationship with their fathers were more likely to report engaging in relational aggression in childhood. However, gender differences were also found for aggression expression in conjunction with relationships with parents. Specifically, female participants were more likely to be physically aggressive when they had higher levels of attachment avoidance to their mothers and higher levels of attachment anxiety with their fathers. Parental attachments did not predict physical aggression in male participants. In addition, female participants were more likely to engage in relational aggression when they experienced higher levels of attachment anxiety to their mothers, while male participants were more likely to engage in this form of aggression when they experienced higher levels of attachment anxiety to their fathers.

Peer Victimization and Parent-Child Attachments

It was hypothesized that peer victimization would also be predicted by parent-child attachment scores. Participants reporting higher anxiety about their maternal relationships were more likely to report being a victim of peer aggression in childhood. However, when examining gender differences for victimization in conjunction with attachment relationships, females were more likely to become a victim of peer aggression when experiencing higher levels of attachment anxiety about their relationship with their mothers. No parental attachments predicted victimization for male participants.

Present Findings in Relation to Past Research

The present study's findings that attachment anxiety towards the mother predicts victimization and attachment anxiety towards the father predicts relational aggression support Mohr's (2006) findings that children with less affectionate and supportive mothers are more likely to report themselves as being victimized and children with less affection and supportive

fathers are more likely to report aggressing against others. Children who have higher levels of attachment anxiety to their mothers may be more likely to become victimized because victimization is related to maternal over-protectiveness (Ladd & Ladd, 1998), which is in turn related to separation anxiety (Manicavasagar, Silove, Wagner, & Hadzi-Pavlovic, 1998). If this is the case, then bullying inventions should focus more on improving mother-child relationships for victims and building father-child relationships for aggressors.

Because teacher ratings of insecure avoidant attachment in girls have been linked to more peer difficulties (Fagot et al., 1990), it was predicted that higher levels of parental avoidance would be linked to aggressive behavior. However, results of the present study only partially supported this hypothesis. Paternal avoidance was significantly correlated with relational aggression. In addition to paternal avoidance, paternal anxiety was also correlated with relational aggression. On the other hand, attachment avoidance scores toward the mother and attachment anxiety scores towards the father only predicted physical aggression in female participants.

In addition to the past research just discussed, Roelofs et al.'s (2006) study suggests that externalizing behavior is linked with maternal and paternal attachment in children ages nine to 12. However, unlike the present study, attachment styles in Roelof et al.'s study were dichotomized as either secure or insecure due to a lack of variability in specific attachment styles. The present study partially supports Roelof's findings in that externalizing behavior (taking the form of relational aggression) was positively correlated with paternal attachment anxiety and avoidance. In addition to these correlations, regression analyses showed that paternal attachment anxiety predicted relational aggression. Unlike Roelof's study, the present study only found a link between maternal attachment styles and aggression in female participants.

Several explanations may account for this difference in findings. First, different measures of parental attachment were used. In addition, both of these questionnaires were adapted from other attachment questionnaires measuring either romantic attachment or peer attachment. Because of this, one or both of these measures may not have been precise. Also, the ECR-R (used in the present study) included statements with which participants rated how much they agreed or disagreed, while the RQC (used by Roelof et al.) consisted of four paragraphs in which participants chose which one best described them. Continuous data such as that provided by the ECR-R may provide a better picture of attachment styles than categorical data such as that provided by the RQC (Fraley & Spieker, 2003).

Self-esteem has already been shown to mediate the relationships between both maternal and paternal attachments and aggression (Gomez & McLaren, 2007). Therefore, it was predicted that the present study would display similar results with self-esteem mediating the link between parental attachment styles and aggression. However, since parental avoidance did not directly predict physical or relational aggression, no mediation analysis was conducted on these relationships.

Since paternal uninvolvement (Jeynes, 2008) and negative family experiences (Mohr, 2006) have been shown to correlate with victimization, it was predicted that attachment to parents would be linked to victimization. This hypothesis was supported in that higher levels of both attachment anxiety and avoidance towards the father and both avoidance and anxiety towards the mother were correlated with victimization.

Past researchers have also found gender differences related to the likelihood to participate in relational and physical aggression (Vaillancourt et al., 2006). However, results of the present study suggest that male participants are more likely to engage in both physical and relational

aggression. Social desirability may have played a role in this outcome. Males are more likely to engage in extreme responding (the tendency to report extreme ratings on a scale; Becker & Cherny, 1994). In addition, according to Becker et al. (1994), females have been shown to be more sensitive to as many as two-thirds of social desirability items.

Limitations and Future Directions

One limitation of this study was that participants were asked to recall events from their adolescence (ages 11 to 13). Their memories for these events may not have been accurate. The present study attempted to facilitate participant recollections by asking them to remember specific events from their childhood. Although the goal of this activity was to facilitate recollections, this activity may have had adverse effects. For instance, engagement in these thought processes may have created an availability heuristic in which participants may have based their responses on the one particular interaction with their parents or peers that they reported although it may not have truly represented their relationships. Future studies might survey children while they are still presently in middle school rather than college-aged individuals who are asked to look back at their past experiences. Moreover, future research might incorporate behavioral measures of physical and relational aggression rather than, or in addition to, self-report measures. Behavioral measures could provide a more accurate picture of the relationships between bullying behaviors and parental attachments. Social desirability is less likely to convolute data collected by behavioral measures than data collected by self-report.

Despite the limitations discussed above, the present study adds to the present literature in bullying by taking into account specific attachment patterns (avoidance and anxiety) and specific types of aggression (physical and relational). Father-child relationships were examined as well as mother-child relationships. No other studies have examined these variables in relation to each

other. In addition, attachment patterns were analyzed using continuous data, which provides a more accurate depiction than categorical data (Fraley et al., 2003).

In summary, findings of the present study suggest that participants' relationships with their mothers and fathers predict different patterns of relationships with peers. Specifically, higher levels of attachment anxiety towards the father predict relational aggression, while higher levels of attachment anxiety towards the mother predict victimization. No past research has found these relationships specifically, but similar results (discussed above) have been found. A better understanding of these relationships may enable psychologists to create new interventions in order to prevent or counteract bullying and victimization for occurring or to build parent-child relationships. Interventions may consist of raising public awareness of the link between parent-child and peer relationships. Parenting classes for pregnant women or new mothers that help to enhance attachment security may be a possible preventative strategy. In addition, psychologists and therapists may be able to use this information while counseling clients by stressing the importance of the parent-child relationship.

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Appendix A
Demographics Survey

Age: _____

Gender: Male Female

Ethnicity: Caucasian African American Hispanic

Asian/Pacific Islander Other _____

Briefly describe your living arrangements growing up.

Who did you live with from ages 11 to 13?

_____
_____
_____
_____

What was your parents' marital status when you were between the ages of 11 to 13?

never married married divorced widowed cohabitating

Other: _____

Did you ever have a step-parent from the ages of 11 to 13?

Step-Mother: yes no Step-Father: yes no

How often when you were 11 to 13 did you see your mother/mother figure (Circle one)?

Daily Several times per week Weekly Monthly

Only during school vacations Other: _____

How often when you were 11 to 13 did you see your father/father figure?

Daily Several times per week Weekly Monthly

Only during school vacations Other: _____

How often when you were 11 to 13 did see your step-mother? (if applicable)

Daily Several times per week Weekly Monthly

Only during school vacations Other: _____

How often when you were 11 to 13 did you see your step-father? (if applicable)

Daily Several times per week Weekly Monthly

Only during school vacations Other: _____

How often when you were 11 to 13 did you and your mother/mother figure spend time doing something together that you remember as meaningful to you?

Daily Several times per week Weekly Monthly

Only during school vacations Other: _____

How often when you were 11 to 13 did you and your father/father figure spend time doing something together that you remember as meaningful to you?

Daily Several times per week Weekly Monthly

Only during school vacations Other: _____

Did you consider any other caregivers to be like a parent? If so, who?

_____
_____
_____

Who did you consider your mother when filling out the previous surveys (e.g., mother, step-mother)?

Who did you consider your father when filling out the previous surveys (e.g., father, step-father)?

Appendix B
ECR-R for Fathers

Directions: Think back to when you were in middle school, about 11-13 years of age. Then answer the following questions about your relationship with your father during that time.

	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
1. I often worried that my father would not want to be around me.	1	2	3	4	5	6	7
2. I found that my father didn't want to get as close as I would have liked.	1	2	3	4	5	6	7
3. It was easy for me to be affectionate with my father.	1	2	3	4	5	6	7
4. I preferred not to be too close to my father.	1	2	3	4	5	6	7
5. I rarely worried about my father leaving me.	1	2	3	4	5	6	7
6. My father made me doubt myself.	1	2	3	4	5	6	7
7. I usually discussed my problems and concerns with my father.	1	2	3	4	5	6	7
8. I preferred not to show my father how I felt deep down.	1	2	3	4	5	6	7
9. I found it easy to depend on my father.	1	2	3	4	5	6	7
10. I worried that I wouldn't measure up to other people.	1	2	3	4	5	6	7
11. I didn't feel comfortable opening up to my father.	1	2	3	4	5	6	7
12. Sometimes my father changed his feelings about me for no apparent reason.	1	2	3	4	5	6	7
13. I often wished that my father's feelings for me were as strong as my feelings for him	1	2	3	4	5	6	7
14. I found it relatively easy to get close to my father.	1	2	3	4	5	6	7
15. I told my father just about everything.	1	2	3	4	5	6	7
16. It was not difficult for me to get close to my father.	1	2	3	4	5	6	7
17. I worried a lot about my relationship with my father.	1	2	3	4	5	6	7
18. My father only seemed to notice me when I was angry.	1	2	3	4	5	6	7
19. I talked things over with my father.	1	2	3	4	5	6	7

Directions: Think back to when you were in middle school, about 11-13 years of age. Then answer the following questions about your relationship with your father during that time.

	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
20. I was very comfortable being close to my father.	1	2	3	4	5	6	7
21. It helped to turn to my father in times of need.	1	2	3	4	5	6	7
22. I found it difficult to allow myself to depend on my father.	1	2	3	4	5	6	7
23. I worried that my father wouldn't care about me as much as I cared about him.	1	2	3	4	5	6	7
24. I felt comfortable sharing my private thoughts and feelings with my father.	1	2	3	4	5	6	7
25. My desire to be very close sometimes scared my father away.	1	2	3	4	5	6	7
26. I was afraid that I would lose my father's love.	1	2	3	4	5	6	7
27. I got uncomfortable when my father wanted to be very close.	1	2	3	4	5	6	7
28. My father really understood me and my needs.	1	2	3	4	5	6	7
29. When I showed my feelings for my father, I was afraid he would not feel the same about me.	1	2	3	4	5	6	7
30. I was afraid that once my father got to know me, he wouldn't like who I really was.	1	2	3	4	5	6	7
31. I often worried that my father didn't really love me.	1	2	3	4	5	6	7
32. I was nervous when father got too close to me.	1	2	3	4	5	6	7
33. It made me mad that I didn't get the affection and support I needed from my father.	1	2	3	4	5	6	7
34. I felt comfortable depending on my father.	1	2	3	4	5	6	7
35. I did not often worry about being abandoned.	1	2	3	4	5	6	7

Appendix C
ECR-R for Mothers

Directions: Think back to when you were in middle school, about 11-13 years of age. Then answer the following questions about your relationship with your mother during that time.

	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
1. I often worried that my mother would not want to be around me.	1	2	3	4	5	6	7
2. I found that my mother didn't want to get as close as I would have liked.	1	2	3	4	5	6	7
3. It was easy for me to be affectionate with my mother.	1	2	3	4	5	6	7
4. I preferred not to be too close to my mother.	1	2	3	4	5	6	7
5. I rarely worried about my mother leaving me.	1	2	3	4	5	6	7
6. My mother made me doubt myself.	1	2	3	4	5	6	7
7. I usually discussed my problems and concerns with my mother.	1	2	3	4	5	6	7
8. I preferred not to show my mother how I felt deep down.	1	2	3	4	5	6	7
9. I found it easy to depend on my mother.	1	2	3	4	5	6	7
10. I worried that I wouldn't measure up to other people.	1	2	3	4	5	6	7
11. I didn't feel comfortable opening up to my mother.	1	2	3	4	5	6	7
12. Sometimes my mother changed her feelings about me for no apparent reason.	1	2	3	4	5	6	7
13. I often wished that my mother's feelings for me were as strong as my feelings for her.	1	2	3	4	5	6	7
14. I found it relatively easy to get close to my mother.	1	2	3	4	5	6	7
15. I told my mother just about everything.	1	2	3	4	5	6	7
16. It was not difficult for me to get close to my mother.	1	2	3	4	5	6	7
17. I worried a lot about my relationship with my mother.	1	2	3	4	5	6	7
18. My mother only seemed to notice me when I was angry.	1	2	3	4	5	6	7

Directions: Think back to when you were in middle school, about 11-13 years of age. Then answer the following questions about your relationship with your mother during that time.

	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
19. I talked things over with my mother.	1	2	3	4	5	6	7
20. I was very comfortable being close to my mother.	1	2	3	4	5	6	7
21. It helped to turn to my mother in times of need.	1	2	3	4	5	6	7
22. I found it difficult to allow myself to depend on my mother.	1	2	3	4	5	6	7
23. I worried that my mother wouldn't care about me as much as I cared about her.	1	2	3	4	5	6	7
24. I felt comfortable sharing my private thoughts and feelings with my mother.	1	2	3	4	5	6	7
25. My desire to be very close sometimes scared my mother away.	1	2	3	4	5	6	7
26. I was afraid that I would lose my mother's love.	1	2	3	4	5	6	7
27. I got uncomfortable when my mother wanted to be very close.	1	2	3	4	5	6	7
28. My mother really understood me and my needs.	1	2	3	4	5	6	7
29. When I showed my feelings for my mother, I was afraid she would not feel the same about me.	1	2	3	4	5	6	7
30. I was afraid that once my mother got to know me, she wouldn't like who I really was.	1	2	3	4	5	6	7
31. I often worried that my mother didn't really love me.	1	2	3	4	5	6	7
32. I was nervous when mother got too close to me.	1	2	3	4	5	6	7
33. It made me mad that I didn't get the affection and support I needed from my mother.	1	2	3	4	5	6	7
34. I felt comfortable depending on my mother.	1	2	3	4	5	6	7
35. I did not often worry about being abandoned.	1	2	3	4	5	6	7

Appendix D
Physical Aggression Scale

Directions: Think back to when you were in middle school, about 11-13 years of age. Then answer the following questions about your relationship with your peers during that time.

1 extremely uncharacteristic of me	**2**	**3**	**4**	**5 extremely characteristic of me**
1. Once in a while I couldn't control the urge to strike another person.	1	2	3	4	5
2. Given enough provocation, I may have hit another person.	1	2	3	4	5
3. If somebody hit me, I hit back.	1	2	3	4	5
4. I got into fights a little more than the average person.	1	2	3	4	5
5. If I had to resort to violence to protect my rights, I would have.	1	2	3	4	5
6. There are people who pushed me so far that we came to blows.	1	2	3	4	5
7. I could think of no good reason for ever hitting a person.	1	2	3	4	5
8. I threatened people knew.	1	2	3	4	5
9. I became so mad that I broke things.	1	2	3	4	5

Appendix E
Relational Aggression Scale

Directions: Think back to when you were in middle school, about 11-13 years of age. Then answer the following questions about your relationship with your peers during that time.

	Never	Once or twice	Some-times	Often	Regularly
1. I used my relationship with them to try and get them to change a decision.	1	2	3	4	5
2. I used sarcasm to insult them	1	2	3	4	5
3. I tried to influence them by making them feel guilty.	1	2	3	4	5
4. I withheld information from them that the rest of the group was let in on.	1	2	3	4	5
5. I purposefully left them out of activities.	1	2	3	4	5
6. I made other people not talk to them.	1	2	3	4	5
7. I excluded them from a group.	1	2	3	4	5
8. I used their feelings to coerce them.	1	2	3	4	5
9. I made negative comments about their physical appearance.	1	2	3	4	5
10. I used private in-jokes to exclude them.	1	2	3	4	5
11. I used emotional blackmail on them.	1	2	3	4	5
12. I imitated them in front of others.	1	2	3	4	5
13. I spread rumors about them.	1	2	3	4	5
14. I played a nasty practical joke on them.	1	2	3	4	5
15. I did something to try and make them look stupid.	1	2	3	4	5
16. I pretended to be hurt and/or angry with them to make them feel bad about themselves.	1	2	3	4	5
17. I made them feel that they didn't fit in.	1	2	3	4	5
18. I intentionally embarrassed them around others.	1	2	3	4	5

Never Once or twice Some-times Often Regularly

19. I stopped talking to them.	1	2	3	4	5
20. I put undue pressure on them.	1	2	3	4	5
21. I omitted them from conversations on purpose.	1	2	3	4	5
22. I made fun of them in public.	1	2	3	4	5
23. I called them names.	1	2	3	4	5
24. I criticized them in public.	1	2	3	4	5
25. I turned other people against them.	1	2	3	4	5

Appendix F
Victimization Scale

Directions: Think back to when you were in middle school, about 11-13 years of age. Then answer the following questions about your relationship with your peers during that time.

	Never	Rarely	Occasionally	Often	Very Often	Always
1. How often did your peers hit you?	1	2	3	4	5	6
2. How often did your peers call you mean names?	1	2	3	4	5	6
3. How often did your peers push or shove you?	1	2	3	4	5	6
4. How often did your peers kick you or pulled your hair?	1	2	3	4	5	6
5. How often did your peers threatened to beat you?	1	2	3	4	5	6
6. How often did your peers leave you out on purpose?	1	2	3	4	5	6
7. How often did your peers exclude you because other peers were mad at you?	1	2	3	4	5	6
8. How often did your peers tell lies about you?	1	2	3	4	5	6
9. How often did your peers not like you if you didn't do what they wanted?	1	2	3	4	5	6
10. How often did your peers say mean things about you?	1	2	3	4	5	6

Appendix G
Rosenberg's Self-Esteem Scale

Directions: Think back to when you were in middle school, about 11-13 years of age. Then answer the following questions according to how you felt about yourself at that time.

SA = strongly agree
A = agree
D = disagree
SD = strongly disagree

	SA	A	D	SD
1. On the whole, I was satisfied with myself.	1	2	3	4
2. At times, I thought I was no good at all.	1	2	3	4
3. I felt that I had a number of good qualities.	1	2	3	4
4. I felt I was able to do things as well as most other people.	1	2	3	4
5. I felt I did not have much to be proud of.	1	2	3	4
6. I certainly felt useless at times.	1	2	3	4
7. I felt that I was a person of worth, at least on an equal plane with others.	1	2	3	4
8. I wished I could have more respect for myself.	1	2	3	4
9. All in all, I was inclined to feel that I was a failure.	1	2	3	4
10. I took a positive attitude toward myself.	1	2	3	4

Table 1

Demographics of Participants

	N	%
Sex		
Male	58	40
Female	86	60
Ethnicity		
Caucasian	101	70
African American	34	24
Hispanic	0	0
Asian/Pacific Islander	3	2
Other	6	4

Table 2

Correlations of Participant Variables

Participant Variables	1	2	3	4	5	6	7	8
1. Physical Aggression	-	.44**	.26**	-.02	.09	.10	.16	.17
2. Relational Aggression		-	.34**	-.18*	.17	.07	.25**	.18*
3. Victimization			-	-.37**	.30**	.09	.23*	.24**
4. Self-Esteem				-	-.40**	-.29**	-.25**	-.22**
5. Maternal Anxiety					-	.66**	.38**	.22*
6. Maternal Avoidance						-	.20*	.27**
7. Paternal Anxiety							-	.77**
8. Paternal Avoidance								-

**. Correlation is significant at the 0.01 level (two-tailed).
*. Correlation is significant at the 0.05 level (two-tailed).

Table 3

Relational Aggression Regression

	B	SE B	β
Model 1			
Paternal Anxiety	.13	.04	.26

$R^2 = .06$, $p < .01$

Table 4

Physical Aggression Regression for Female Participants

	B	SE B	β
Model 1			
Mother Avoidance	.14	.05	.31
Model 2			
Mother Avoidance	.13	.05	.28
Father Anxiety	.13	.06	.22

$R^2 = .15$, $p < .05$

Table 5

Relational Aggression Regression for Male Participants

	B	SE B	β
Model 1			
Father Anxiety	.28	.08	.46

$R^2 = .21$, $p < .01$

Table 6

Relational Aggression Regression for Female Participants

	B	SE B	β
Model 1			
Mother Anxiety	.11	.06	.23

$R^2 = .05$, $p < .05$

Table 7

Self-Esteem Regression

	B	SE B	β
Model 1			
Maternal Anxiety	-.24	.05	-.38

$R^2 = .15$, $p < .01$

Table 8

Victimization Regression

	B	SE B	β
Model 1			
Maternal Anxiety	.24	.06	.32

$R^2 = .10$, $p < .01$

Table 9

Victimization Regression for Female Participants

	B	SE B	β
Model 1			
Mother Anxiety	.29	.08	.39

$R^2 = .15$, $p < .05$