

12-17-2010

Understanding Bullying Participant Roles: Stability across School Years and Personality and Behavioral Correlates

Ann Crapanzano
University of New Orleans

Follow this and additional works at: <https://scholarworks.uno.edu/td>

Recommended Citation

Crapanzano, Ann, "Understanding Bullying Participant Roles: Stability across School Years and Personality and Behavioral Correlates" (2010). *University of New Orleans Theses and Dissertations*. 108.
<https://scholarworks.uno.edu/td/108>

This Dissertation-Restricted is brought to you for free and open access by the Dissertations and Theses at ScholarWorks@UNO. It has been accepted for inclusion in University of New Orleans Theses and Dissertations by an authorized administrator of ScholarWorks@UNO. The author is solely responsible for ensuring compliance with copyright. For more information, please contact scholarworks@uno.edu.

Understanding Bullying Participant Roles: Stability across School Years and Personality and Behavioral Correlates

A Dissertation

Submitted to the Graduate Faculty of the
University of New Orleans
in fulfillment of the
requirements for the degree of

Doctor in Philosophy
in
Applied Developmental Psychology

by

Ann M. Crapanzano

B.A. Loyola University New Orleans, 2005
M.S. University of New Orleans, 2007

December, 2010

Copyright 2010, Ann Crapanzano

Dedication

To my parents,

Kay and Joe Crapanzano

I would have never been able to do this without all of your love and support. I cannot tell you how much I appreciate all that you have given to me. I am looking forward to my chance to “pay it forward”. I love you

and also to,
Ishy, Mary, and Joseph

You are lights in my life. I thank God everyday that I have you. Thanks for being there for me during this journey.

Acknowledgements

First and foremost, I would like to thank Dr. Paul Frick for all of your help and constant guidance throughout the last 5 years. I could not have asked for a better teacher, mentor, and friend. I would not be who I am today without you. I would also like to thank Dr. Drew Terranova for getting me started with this research in the Tangipahoa Parish School System and for all of your useful feedback and commentary along the way. Dr. Daliah Bauer, Dr. Robert Laird, Dr. Monica Marsee, and Dr. Carl Weems thanks for all of your input on this dissertation and all of your help throughout my years in graduate school. Finally, to Jade Salmeron, thanks for all of your hard work with this project and for keeping me organized. I could not have done it without you.

Table of Contents

List of Tables	vi
List of Figures	vii
Abstract	viii
Introduction.....	1
Methods.....	24
Results.....	32
Discussion.....	70
End Note	82
References.....	83
Vita.....	94

List of Tables

Table 1	33
Table 2	34
Table 3	35
Table 4	40
Table 5	41
Table 6	43
Table 7	44
Table 8	45
Table 9	47
Table 10	51
Table 11	65

List of Figures

Figure 1	38
Figure 2	39
Figure 3	51
Figure 4	55
Figure 5	56
Figure 6	57
Figure 7	58
Figure 8	59
Figure 9	60
Figure 10	61
Figure 11	62
Figure 12	63
Figure 13	64
Figure 14	64
Figure 15	68
Figure 16	69

Abstract

This study investigated the factorial validity, stability, and social, behavioral and emotional correlates of several different roles that students can play in the context of bullying. Data were collected from students at two time points across two school years, April and May of 2006 (n=284) and again in November and December of 2006 (n=185). A confirmatory factor analysis provided evidence for the validity of 4 participant roles (i.e. bully, reinforcer, assistant, and defender). However, further analysis revealed that there was a strong degree of intercorrelation between the three bully factors (i.e., bully, reinforcer, and assistant). Analyses found that participant roles are fairly stable across school years and that the greater the percentage of same raters across the time points, the greater the stability. All of the bullying roles (i.e., bully, reinforcer, and assistant) were significantly related to callous unemotional traits, emotional dysregulation, positive expectations for aggression, conduct problems, reactive relational aggression, proactive relational aggression, reactive overt aggression, and proactive overt aggression, but these relationships were stronger in boys. It was also found that the defender role was associated with less aggression and more prosocial behavior. These associations were stronger in girls. Finally, a linear regression analysis of the interaction between participant roles and victimization revealed that at T1, the association between bullying roles and aggression was moderated by victimization. Specifically, the association was stronger in those low on victimization. At T2, the association between defending and lower aggression and greater prosocial behavior was stronger in those low in victimization.

Keywords: Bullying, Relational Aggression, Overt Aggression, Proactive Aggression, Reactive Aggression, Participant Roles

Introduction

Bullying is defined as aggression towards another person who is perceived as weaker and less able to defend him or herself from the aggressor (Olweus, 1991). Olweus (1993) states, “A student is being bullied or victimized when he or she is exposed, repeatedly and over time, to negative actions on the part of one or more students.” Research confirms that bullying is a problem that many children and adolescents face in schools (Olweus, 1993). Nansel (2001) surveyed a group of 15,686 students in grades 6 through 10. In that sample, 10.6% reported bullying others sometimes, 8.8% reported bullying others frequently, 13% reported that they were victims of bullying, and 10% reported both bullying and being a victim of bullying. Overall, 29% individuals reported being a part of bullying, either as a bully or victim (Nansel, 2001).

Thus, bullying behavior seems to involve a significant number of school children. Recently, bullying research has received a great deal of attention because of the findings that bullying can lead to lasting adjustment problems for its victims (Olweus, 1994; Smith & Brain, 2000; Storch et. al., 2005). For example, a study by Sourander and colleagues (2007) reported that being a victim of bullying at 8 years of age predicted the presence of anxiety disorders in young adulthood. Another study also reported that being a victim at age 13 predicted symptoms of depression and anxiety one year later (Bond et al., 2001). Other studies report that victims of bullying are more likely to miss school than other students (Smith et al., 2004). As a result, research on understanding the characteristics of people involved in bullying and what leads to this behavior is quite important.

Bullies, Bully/Victims, and Victims

Bullying behavior can take several forms including, physical (e.g. hitting), verbal (e.g. name calling), and indirect (e.g. gossiping and rumor spreading) aggression (Berkowitz, 1993; Crick, 1996). Much of the research on bullying behavior focuses on the dynamics and distinctions between bullies (i.e., those who directly engage in bullying behavior), victims (i.e., those who are bullied by others) and bully/victims (i.e., those engage in bullying behaviors and who are bullied by others) (Dixon et al., 2004a; Unever, 2005). Research demonstrates that victims, bullies, and bully-victims all report having significant internalizing and externalizing problems (Storch et al., 2005). Specifically, studies have found that victims, bullies, and bully/victims are all more likely to be victims of conventional crime, child maltreatment, and sexual victimization than children who are not involved in bullying (Holt, Finkelhor, & Kaufman, 2007). In addition, studies have found that both bully and victim status predicts poor school adjustment, as measured by grades and standardized test scores, over one and two year periods (Ma et al., 2009; Schwartz et al., 2005).

Although bullies, bully/victims, and victims have a lot of the same adjustment problems, a great deal of the current research has focused on what distinguishes bullies, bully/victims, and victims. Some research has demonstrated that bullies have more leadership skills, higher self-esteem, and more friends than victims (Kokkinos, 2004; Owleus, 1994; Perren & Alsaker, 2006; Unever, 2005). Studies have also suggested that although bullies often had higher social prestige than victims, the same individuals were just as likely to be rejected as victims by their classmates (Sijtsema et al., 2009). Research has found that bullies are less prosocial than victims, indicating that bullies may use aggression against weaker peers as a way to increase their social standing (Perren & Alsaker, 2006; Sijtsema et al., 2009). Indeed, studies have demonstrated that bullies

more often expect positive outcomes for employing aggression and show higher rates of proactive aggression, which is aggression used to obtain some gain or dominance over another individual, and believe that it is easier for them to use verbal persuasion compared to victims (Camodeca & Goossens, 2005; Pellegrini, 1998; Unever, 2005).

In contrast to bullies, research on victims suggests that victims have a tendency to have poor relationships with classmates, are rejected more, and have increased levels of loneliness (Dempsey, Fireman, and Wang, 2006; Olweus, 1993; Smith, Shu & Madsen, 2001). Victims are also more likely to have higher rates of psychological distress and suicidal behaviors than bullies (Vijoen et al., 2005). Victims are likely to have poor self-esteem and lack of self efficacy in social situations (Camodeca & Goossens, 2005; Karatzias et al., 2002). Unlike bullies, who tend to believe that they are effective communicators and that their actions will yield positive consequences (Camodeca & Goossens, 2005; Pellegrini, 1998; Unever, 2005), victims of bullying tend to lack assertiveness skills and tend to have an external locus of control (Smith & Sharp, 1994; Smorti & Ciucci, 2000). More recent research has suggested that as victims increase in age, their self-report levels of victimization decreases, whereas the level reported by teachers and peers tend to stay the same (Salmivalli & Nieminen, 2002) which could indicate that victims become self conscious of their status as victims.

Several studies have attempted to examine the factors that contribute to what makes an individual more susceptible to victimization. One study on a group of high school students reported that the most common reason given by bullies for their bullying behaviors was that the victims had a different appearance, for example they saw the victim as too thin, fat, or ugly (Frisen et al., 2007). Other research has found that children who were overweight were twice as likely to be bullied as children at a healthy weight and those who were thin (Sweeting & West,

2003). Other research has noted that victims tend to have a lack of skills necessary for handling bullying behavior; for example, they respond to bullies in a way that reinforces the bully's behavior (i.e. by taking a submissive position or responding aggressively to the bully) (Dempsey, Fireman, Wang, 2006). Others theorize that victims of bullying behavior are often “scapegoats” or individuals who are labeled without sufficient reason as the persons responsible for problems that arise within the classroom (Madhavi & Smith, 2007). Thus, an individual who is perceived as weaker by others in the group context is held responsible for the failures and disappointments that occur on the group level (Orbio de Castro, 2007).

Recently, research has begun to emerge on a group of individuals who both participate in bullying behaviors and are bullied themselves. These individuals have patterns of maladjustment similar to bullies and victims, but much research has found that children in this category exhibit more severe patterns of psychopathology (Kokkinos & Panayioutou, 2004). Some studies suggest that bully/victims exhibit more impairment in self regulation than individuals who purely bully and are more likely than their peers to fight back as a reaction to some real or perceived attack than peers who are purely victims (Schwartz & Proctor, 2000). Bully/victims are more likely to have higher levels of emotional dysregulation, hyperactivity, lower GPA's, and are more widely disliked by their peers when compared to pure bullies (Nansel, 2001, Salmivalli et al., 2000; Toblin, 2005). Although research suggests that any child involved in bullying is at risk for abuse and victimization, of all the groups, bully/victims tend to have the highest rates of sexual victimization, childhood maltreatment, conventional crime, peer and sibling victimization, and suicide attempts (Holt, 2007, Viljoen, O'Neill, Sidhu, 2005). Some research has also found that a diagnosis of oppositional defiant and conduct disorder was twice as common in

bully/victims than in pure bullies and three times as common compared to victims (Kumpulainen et. al., 2001).

In summary, much of the research on bullying behaviors has focused on the personality and social characteristics of bullies, victims, and bully/victims. Several of these studies have concluded that being involved in bullying in any capacity, whether it is as a bully, victim, or bully/victim, leads to negative outcomes and is associated with difficulties regulating behavior. Other studies have identified certain personality and social risk factors that are specific to being a bully, victim, or bully-victim. Research on pure bullies has been somewhat mixed, but much of it seems to describe an individual who is both aggressive and dominant (Olweus, 1994). In contrast, victims appear to be more passive and submissive (Smith & Sharp, 1994). Finally, bully/victims demonstrate more severe levels of aggression and psychopathology than pure bullies and victims (Kokkinos, 2004). One important reason to examine the characteristics of individuals who bully and are victimized is so that these individuals can be recognized before their behaviors increase in severity. Thus, another important issue is to determine the level of stability in these behaviors over time and to determine when the stability is great enough to warrant prevention efforts.

Stability in Bullying and Victimization

Research suggests that students report that bullying occurs most frequently in the 6th through 8th grades, with the majority of bullies reporting that most of their bullying behavior occurred when they were early adolescents (Camodeca & Goosens, 2002; Frisen et al., 2007). Research has found that bullying behavior increased over a 4 month period in 6th graders, but remained fairly stable in 7th and 8th graders, suggesting that bullying behaviors increase when individuals enter middle school and then begins to stabilize (Espelage et. al., 2001). Other studies have reported

that bullying tends to be fairly stable even at earlier ages. For example, a study by Camodeca and colleagues (2002) revealed that bullying was quite stable ($r = .69$) over a one year period from ages 7 to 8 years of age. Some research suggests that victimization is not as stable as bullying and that victimization tends to decrease over time for most individuals (Perry, Kusel, Perry, 1988; Young Shin et al., 2009). Some researchers have suggested that the reason for this instability is that before middle school, bullies tend to choose their victims indiscriminately. However, during later elementary school years, bullies tend to selectively direct their aggression toward a minority of victimized children (Perry, Kusel, Perry, 1988). The finding that most children report being victims of bullies at younger ages is supportive of this possibility (Frisen et al., 2007). Thus, victimization status does not appear to stabilize until middle school, when a group of rejected individuals are identified as the victim and regularly become targets of aggression. Also in support of this idea, research has indicated that victims of bullying in middle school were significantly more likely to be rejected by peers than victims of bullying in elementary school (Schafer et al., 2005).

Some research on the stability of both bullying and victimization suggest that stability is related to the formation of hierarchy structures of high and low status individuals in middle school. Once in middle school, bullies are able to select low status individuals (Schafer et al., 2005). Other research, however, disputes the idea that it is individual characteristics that result in increased bullying behavior and suggests that bullying and victimization may be more situation specific. For example, one study found that although school-wide percentages of bullying and victimization were the same as in previous studies, a further examination between classroom indices of bullying behavior showed a high degree of variability. That is, some of the classes in the study had no bullying behaviors at all, while in other classrooms, bullies and victims made up

54% of the classroom (Atria, Strohmeier, & Spiel, 2007). This study suggests that the role of classroom dynamics, in addition to individual differences, is important for understanding bullying behavior. This has led to a newer line of research that has focused more on the group process involved in bullying, not just to the bullies and victims themselves (Salmivalli, 1996; Sutton & Smith, 1999.).

Bullying as a Group Process

Research on aggression in general supports the idea that group dynamic factors influence the behavior of individuals (Pelligrini, 2007). Manipulating the climate of the group can influence the individual members' behaviors (Hawley, Little, & Rodkin, 2007). For example, in a study of 22 lab created groups of 7 to 9 year old African American boys from a community sample, the groups that played well together were more likely to notice aggression and attempt to stop the instigator. In contrast, in groups where aggressive behavior was frequent, aggression was actually encouraged (DeRosier et al., 1994). Similar findings have been reported in research on antisocial behavior, where there appears to be a peer contagion effect (Cohen, 2006; Laird et al., 1999; Laird, Pettit, Dodge, & Bates, 2005). Adolescents who perceived their friends and groups as participating in antisocial behavior had higher self-reported and teacher-reported antisocial ratings. Perceptions of best friend antisocial behavior were correlated with adolescents' own current antisocial behavior, particularly when high levels of help, companionship, and security were characteristic of this friendship (Laird et al., 1999). Other research demonstrates that children tend to interpret even negative aggressive behaviors of peers that they like in a more positive light than they do for peers that they don't like. They were also more confident that friends' aggressive behavior would have more positive outcomes (Peets, Hodges, Salmivalli, 2008). In an experimental study by Cohen (2006), it was reported that

perceiving individual group members as having high peer status influenced public and private beliefs about aggression and health risk attitudes. Specifically, individuals were more likely to agree with more popular student's beliefs about aggression and health risk attitudes than the attitudes and beliefs of a lower status individual or someone the child didn't know.

Like antisocial and aggressive behavior in general, evidence supports the contention that bullying can also be a social phenomenon. Research has demonstrated that bullies and bully/victims both tend to have friends who are also aggressive (Moultapa et al., 2004). Some researchers have also found that bullies have larger groups of friends (Huttunen, Salmivalli, & Lagerspetz, 1996), higher sociometric rankings (Bjoerkqvist et al. 2001), better social skills, and a better understanding of others emotions (Sutton, Smith, Sweetham, 1999) than bully/victims and victims. Other research suggests that individuals who witness bullying incidents are more likely to offer help to victims who are in-group members or friends (Levine, Cassidy, Brazier, & Reicher, 2002).

In summary, research suggests that peer contagion does have an influence on aggressive behavior. Bullying studies have also identified social qualities in bullying behavior. Specifically, children who bully are more likely to associate with other children who bully or who are accepting of bullying behaviors. However many researchers still debate whether it is the qualities of the individual bully and victim that enables them to gain support from peers in bullying contexts or if bullying is more of a group process where group dynamics dictate the level of aggression that is acceptable (Atria, Stromeyer, and Speil, 2007; Mahdavi & Smith, 2007).

Participant Roles

One way that research has begun to explore the group process involved in bullying is by examining the various roles that peers can play in the context of bullying behavior

(Gini, 2006; Gini, 2007, Salmivalli et. al., 1996). Salmivalli and colleagues (1996) used peer nominations to identify 6 specific participant roles that peers play in situations involving bullying. These participant roles include reinforcers, assistants, defenders, outsiders, bullies, and victims. Reinforcers are described as individuals who provide encouragement to the bully by laughing and encouraging people to watch while the peer is being victimized. Assistants are active participants in the bullying behaviors and will catch and hold the victim. Defenders are those individuals who make an effort to stop the bullying behavior by taking up for the victim. Outsiders have a tendency to distance themselves completely from any bullying incident. Much of the research on the prevalence of these participant roles has taken place elementary and middle school age boys and girls in Finland, Italy, and the United Kingdom. The research on these participant roles indicate that around 20-30% of students act as reinforcers or assistants (Menesini et al., 2000; Monks et al. 2003; Sutton & Smith, 1999). Defenders make up another 20% of the population and outsiders make up about 20-30% of the student population (Menesini et al., 2000; Monks, Smith, & Swettenham, 2003; Sutton & Smith, 1999).

Also, research suggests that there are sex differences in the prevalence of these participant roles. Girls are more likely to be defenders and outsiders, while boys are more likely to be assistants, reinforcers, and bullies (Salmivalli, 1996, 1998). Unfortunately, much of this research on participant roles research has taken place in primarily Caucasian samples of European elementary and middle school age children. More research on bullying participant roles needs to be done in the United States with more ethnically diverse populations. However, it is important to refine how best to assess these roles in order to advance this research.

Assessing Participant Roles

Several studies have examined the reliability and validity of various methods for assessing participant roles. Salmivalli (1996) developed the first participant roles scale using both self and peer reports. Each child was given a 50 item questionnaire which consisted of bullying behavioral descriptions. Five subscales were formed using factor analysis that assessed the child's tendency to act as a bully ($\alpha=.93$), reinforcer ($\alpha=.91$), assistant ($\alpha=.81$), defender ($\alpha=.93$) and outsider ($\alpha=.89$). Children were identified within the context of the various participant roles if a) they scored above the mean on the standardized subscale and b) they scored higher on that subscale than any other subscale. If a child scored higher on more than one subscale, the difference between the scores were calculated and if it was less than 0.1 he or she was regarded as not having a clear role. Victims were assessed using different criteria. A child was considered a victim if 30% or more of his or her peers named him or her as a victim.

Using this technique in a sample of 573 Finnish 6th grade children, Salmivalli (1996) was able to assign participant roles to 87% of pupils. Also, peer reports and self reports of the participant roles were significantly correlated, with correlations ranging from .32 to .51. A further analysis of the participant roles revealed that students in each participant role differed on socio-metric status. Victims scored low on social acceptance and high on social rejection, while male bullies, female reinforcers, and female assistants all scored low on social acceptance and high on social rejection. Female bullies had higher than average scores on social rejection and social acceptance. Interestingly, male reinforcers had profiles like popular children, high on social acceptance and low on rejection. However, the group that scored the highest on social acceptance for both boys and girls was the defenders of the victim (Salmivalli, 1996).

In a follow up study, Salmivalli and colleagues (1998) used a shorter version of the Participant Roles Scale (PRS), which included 22 items assessing bullying roles and a victim item. The subscales were again factor analyzed. It was found that the defender and outsider subscales were distinct from one another; however the bully, reinforcer, and assistant items all loaded onto one factor. Thus, this study provides evidence for only one bullying factor, which includes the bully, assistant, and reinforcer dimensions, and two additional factors including outsider and defender subscales.

Sutton and Smith (1999) conducted a study of participant roles in bullying with children between the ages of 7 and 10 years old. Because of the age of their participants, a modified assessment technique was used that involved an interview. The items were reduced from Salmivalli's original 50 question (including the victim) questionnaire to 21 items (including the victim question). The 20 items related to bullying were selected based on the feedback of 5 raters. An item was included in the scale if at least 4 of the 5 raters rated the item as important for that dimension. Similar to previous findings, Sutton and Smith (1999) also found a high degree of correlation between the bully, reinforcer and assistant subscales. Also, in contrast to Salmivalli's original study, the researchers found that there were considerable differences between self and peer reports of bullying roles. Only 30% of students nominated themselves for the same roles for which their peer nominated them. The use of self-reports led to fewer children reporting themselves as bullies compared to those rated as bullies by peers. This difference in findings across studies could be due to the use of an interview format that did not allow for an anonymous means for children to report their behavior.

In an attempt to clarify the high degree inter-correlation between the bully, reinforcer and assistant roles, a confirmatory factor analysis on an adapted version of the original participant

role scale was conducted in a sample of 242 middle school age boys and girls (mean age at T1=9 years and 9 months) in the Netherlands. (Goosens, Olthof, & Decker, 2006). In this study, a five factor solution fit the data best. The five scales consisted of a leader bully scale, a follower bully scale (which includes assistants and reinforcers), an outsider scale, a defender scale and a victim scale. Goosens et al (2006) tested the validity of the participant role scales that emerged from these analyses over the course of 2 years. He reported that defenders, bullies, and outsiders were the most popular individuals at the first assessment, while victims were the most rejected. Two years later, defenders and outsiders were still popular, victims were still rejected, but bullies became controversial, meaning they were both popular and rejected.

In summary, research has found some evidence for 5 distinct participant roles in bullying and a victimization role in samples of elementary and middle school age children in Finland and the Netherlands (Mensini et al., 2000; Salmivalli, 1996). However, research findings have been mixed on whether or not the participant roles of bully, reinforcer, and assistant should be considered distinct dimensions or whether they are better considered as a single “bullying” dimension, given their high degree of intercorrelation in some studies (Sutton & Smith, 1999). Thus, more research is necessary to further evaluate if there are indeed important and meaningful distinctions between the bully, reinforcer, and assistant subscales. One way to do this would be to examine the stability of these roles and to examine if there are distinct correlates to each of these participant roles.

Stability of Participant Roles

A great deal of the research on participant roles has stressed the importance of examining the stability of these roles. Some researchers argue that higher stability within the context of the participant role scores, particularly within elementary school, are consistent with the view that

bullying behavior is a function of the personality and early socialization of the individual (Loeber, & Hay, 1997). However other researchers argue that much bullying behavior is the result of group processes and therefore may not be as stable because the behavior of the individual will change as group dynamics change (Salmivalli, Huttenen, Lagerspetz, 1997). The limited research that is available on participant roles suggests that at least some roles have a moderate degree of stability (Goossens, Olthof & Decker, 2006; Salmivalli et al., 1998). In a sample of 189 Finnish eight graders, Salmivalli et al. (1998) found evidence that some participant roles remained stable over the course of a two year period, with some gender differences. Specifically, there was stability in the roles of bullying, reinforcing, and assisting particularly in boys from the 6th to the 8th grade, while for girls the participant role of defender and outsider was more stable. The correlation between bullying scores from 6th to 8th grade in boys was .52, while for girls it was .28; the correlation between assistant role scores was .41 in boys and .23 in girls; the correlation for the reinforcer role scores was .33 for boys and for girls .24. In contrast, the defender scales in boys was not stable (.09), whereas it was for girls (.47). Similarly, for boys there was no significant relationship between the outsider scales at T1 and T2 (.03), whereas in girls there was a significant relationship (.38). Victimization remained relatively stable in both genders (boys =.52 and girls= .48).

Interestingly, this study also included analysis of a smaller subset of individuals (N= 29), who had changed into a completely new classroom. These individuals were compared to individuals who did not change classes (N=35). Results indicated that individuals who changed classrooms had slightly lower stability in their peer reports of participant roles. This preliminary finding supports the importance of group factors dynamics (Salmivalli et al., 1998). More recent studies on participant roles have also found considerable variations between classrooms with

regards to participant roles. Salmivalli and Voeten (2004) studied 1220 elementary school children in the 4th, 5th, and 6th grade and found that both individual and group level factors predicted student's bullying behavior. In addition to finding a great deal of variance in participant role behaviors in classrooms at the same grade level, the researchers also found that attitudes toward bullying were related to all participant roles. Specifically defenders and outsiders were more likely to morally disapprove of bullying behavior, while bullies, reinforcers, and assistants were more likely to approve of bullying (Salmivalli & Voeten, 2004). Studies of participant roles in the context of peer networks have also been somewhat suggestive of the influence of both individual and group processes influencing bullying behavior. Studies have found that bullies, reinforcers, and assistants tend to have larger peer networks; while victims, outsiders, and defenders tended to have smaller social networks (Salmivalli, 1998). The victims of bullying tended to group themselves with other victims. Bullies, reinforcers, and assistants tended to group themselves with other children involved in bullying behavior. Interestingly, gender differences have again been exhibited in these participant roles; specifically, only girls are likely belong to networks that had both bullies and victims within them. Researchers suggest that this may be because when girls are aggressive they are more likely to use relational aggression which is more indirect in nature (Crick, 1996). Therefore, the girls in the peer groups may not recognize that they are being victimized or may be more willing to put up with this type of aggression rather than not having friends (Salmivalli, Huttunen, & Lagerspetz, 1997).

In summary, there has some debate as to whether bullying behavior is a result of group processes or individual differences. However, more research is needed in this area, especially in examining the stability of participant roles from one school year to the next. Also, the existing research has suggested that there may be important differences between the ways that boys and girls bully.

As a result, Salmivalli and Voeten (2004) suggest that girls may be more influenced into participating in bullying behavior by social norms, while boy's individual personality characteristics may be more influential in determining whether or not they participate in bullying behaviors. One of the reasons that girl's aggressive behavior may be more likely to be influenced by group norms is because of girl's tendency to use relationally aggressive behavior as their primary means of bullying (Crick & Grotpeter, 1995).

Relational aggression has been defined as aggressive behavior that is used to hurt or harm another's social relationships (Crick & Grotpeter, 1995). Studies on gender differences in bullying behavior have demonstrated that boys report being bullied more by being hit or slapped or pushed, while girls report bullying through rumors or sexual comments (Nansel et al., 2001; Owleus, 1993 a). Recently, researchers have highlighted the need for a closer examination of the social networks of relationally aggressive individuals (Neal, 2007; Vaillancourt & Hymel, 2004). The very definition of relational aggression, attempting to hurt or harm another through the destruction of social relationships (Crick & Grotpeter, 1995), points to the inherently social nature of relationally aggressive behavior. Relational aggression is indirect in nature. Therefore, victims of relational aggression are often not in direct contact with their aggressor (Moretti, Odgers, & Jackson, 2004). Because of this, social networks have to be utilized in order for relational aggression to be effective (Cairns & Cairns, 1994; Green, Richardson, & Lago, 1996; Xie, Swift, Cairns, & Cairns, 2002). To illustrate this point, research has suggested that while most conflicts using physical aggression involved only two individuals (the aggressor and the victim), relationally aggressive behaviors generally consisted of three or more individuals (Xie, Swift, Cairns, & Cairns, 2002). In order to better understand the nature of bullying processes, more research is necessary to further clarify what gender difference exist within the context of

participant roles. It will also be important to identify and examine other individual differences among participant roles, in addition to gender differences, to obtain a greater understanding of the nature of the various participant roles.

Individual Differences in Participant Roles

Research on the individual differences in participant roles has been limited. Much of it focuses on the differing levels of empathy, emotional regulation, and social cognition within these roles. In contrast to bullies, being a defender is correlated with low levels of aggressive behavior, positive attitudes towards the victim, and believing parents and friends expect them to support the victim (Rigby & Johnson, 2006). Defenders are more likely to have higher levels of empathy, emotional regulation, and social cognition than other participant roles (Andreou & Metallidou, 2004; Camodeca & Goosens, 2005; Gini, 2006, 2007; Warden & Mackinnon, 2003). When faced with a hypothetical bullying situation, defenders are more likely to pick strategies aimed at nonchalance and assertiveness (Camodeca & Goosens, 2005). Defenders are more likely than bullies, victims, reinforcers, assistants, and outsiders to display the big five personality trait of agreeableness and are more likely than their peers to exhibit prosocial behaviors such as trust, cooperation, and altruism (Tani, Greenmena, Schneider, Fregoso, 2003). Other research has revealed that children who engage in more prosocial behavior report feeling ashamed and guilty more often than bullies when faced with a situation where their behavior caused harm to another person (Menesini & Camodeca, 2008). In a sample of middle school age children, being a defender was predictive of a secure attachment to mothers and heightened levels of empathy (Nickerson, Mele, & Princiotta, 2008).

The various bullying participant role have also been associated with negative characteristics. Studies report that bullies believe that retaliation is the most effective way of

dealing with other bullies. For example, one study reported that bullies did not feel that assertiveness was an effective strategy when dealing with other bullies (Camodeca and Gossens (2005). Research has also found that bullies have lower levels of empathy, emotional regulation than defenders (Gini, 2007). However, other research has found that bullies have higher levels of emotional insight than victims, reinforcers, and assistants of bullies (Sutton and Smith, 1999). Sutton and Smith (1999c) also report that ringleader bullies have significantly higher theory of mind scores than followers of bullies (i.e. reinforcers and assistants) and victims.

In summary, there is some research to suggest that there are characteristics that distinguish bullies from the reinforcer and assistant participant roles. These include higher levels of emotional insight and theory of mind scores in bullies (Sutton & Smith, 1999). However, much of the research thus far has focused on defenders and has found that defenders are more agreeable, prosocial, securely attached, and have more empathy than other participant roles (Menesini & Camodeca, 2008; Tani, Greenmena, Schneider, Fregoso, 2003). However, this research has been quite limited and more research is needed on what characteristics differentiate among these different roles. In advancing this work, it could be important to consider characteristics that differentiate among subgroups of children with conduct problems and aggression.

Bullying Participant Roles and Antisocial Behavior Processes

One way to further clarify distinctions between the participant roles is to examine differences in the functions of aggression they employ. That is, recently research has begun to distinguish between two types of aggression, reactive and proactive aggression. Reactive aggression is aggression in response to some provocation or frustration (Berkowitz, 1993; Dodge & Coie, 1987). Reactively aggressive individuals have been described by peers as short tempered

and highly sensitive (Coie, Dodge, Terry & Wright., 1991; Dodge & Coie, 1987). Reactively aggressive individuals have more difficulty regulating their emotions. Many studies demonstrate that they have a low frustration tolerance, irritability, and inhibition of impulsive behaviors (Dodge et al., 1997; Shields & Cicchetti, 1998; Vitaro et al., 2002). Research also suggests that individuals who are reactively aggressive are more likely to be rejected by peers (Coie et al., 1991),

On the other hand, proactive aggression is aggression that is instrumental in nature (Dodge & Coie, 1987). It is characterized by premeditation and a goal focus (Dodge & Coie, 1987).

Proactive aggression often seems to occur without provocation (Dodge et al., 1987). Proactively aggressive individuals are more likely to be perceived as popular by their peers (Dodge & Coie, 1987). Proactive aggression is associated with callous-unemotional (CU) traits which are characterized by a lack of empathy and guilt (Frick et al., 1999; Frick et al., 2003; Munoz et al., 2008). Individuals with CU traits often exhibit low levels of fearfulness (Eisenberg et al., 2001; Frick et al., 1999; Frick et al., 2003). They seem to show preferences for novel, exciting, and dangerous activities, as well as a decreased sensitivity to punishment and threatening and distressing stimuli (Levenston et al., 1993; Newman, Patterson, & Kosson, 1987). These low levels of fearfulness and sensitivity to punishment could explain why individuals with CU traits exhibit a tendency to emphasize the positive aspects of aggression, such as obtaining rewards and gaining dominance (i.e. proactive aggression), while deemphasizing the negative aspects (see Frick & Morris, 2004 for review).

A few studies have explicitly tied proactive and reactive aggression to bullying behaviors. One study, conducted by Unever (2005), examined 206 pure bullies, 514 pure victims, and 206 bully/victims in middle schools. The adolescents were divided into these groups based on a self-

report questionnaire. Results of this study indicated that bully/victims were less likely to be proactively aggressive than pure bullies and more likely to be reactively aggressive. Another study also found that bully/victims were more reactively aggressive than pure bullies (Camodeca, 2002). Thus, this research seems to suggest that bullies and victims are both likely to more reactively aggressive but that proactive aggression seems to be only a characteristic of bullies (Camodeca & Goossens, 2005). Importantly, these studies measured overt aggression and did not assess relational aggression in relation to bullying.

Although there has been some research to link reactive and proactive aggression to bullying, no research thus far has directly examined participant roles and their association with reactive and proactive aggression and the cognitive and emotional correlates that have been associated with these types of aggressive behaviors. Although there has been no direct research on this topic, some of the available research suggests that examining these correlates may be a useful way to distinguish between bullies and the participant roles of assistant and reinforcer. Specifically, research on bullying participant roles suggests that bullies tend to have higher levels of theory of mind scores and emotional insight than reinforcers and assistants of bullies (Sutton & Smith, 1999). However, these bullies are also likely to be highly aggressive and appear to have low levels of empathy (Gini, 2007). This research seems to describe an individual who is socially sophisticated and has the ability to read others, yet continually uses these abilities to aggress against other individuals and not to show any remorse about it. This combination of traits seems very similar to the traits that are seen in individuals who are proactively aggressive. As illustrated previously, proactively individuals often have the presence of CU traits, thrill and adventure seeking, and positive expectations for aggression (Frick, 1999; Munoz et al, 2006).

In contrast, research on reinforcers and assistants suggest that these individuals may not be as socially sophisticated or show as much premeditation in their aggression (Sutton & Smith, 1999). However, research on these individuals suggests that they are equally as likely to behave aggressively as the bullies themselves. Therefore, one way to distinguish between bullies and reinforcers and assistants is by examining if these reinforcers and assistants have lower levels of proactive aggression, CU traits, thrill and adventure seeking, but comparable levels of reactively aggressive behaviors. Further, these participant roles may show the same emotional (e.g., poor emotional regulation) and social (e.g., lower levels of prosocial behaviors) as other individuals high on reactive aggression.

Much of the research on the individual differences of the participant roles has focused on the role of the defender. Defenders have been shown repeatedly in the research to be well adjusted, agreeable and exhibit more prosocial behaviors than their peers (Tani, Greenman, Schneider, Fregoso, 2003). They also appear to report feeling more ashamed or guilty when they believe that they hurt a peer and display levels of empathy elevated levels of empathy (Gini, 2008; Menesini & Camodeca, 2008). Thus, these findings suggest that individuals in the defender role exhibit more prosocial behavior and less aggressive behavior. Also, defenders are likely to show the lowest levels of CU traits and should have low positive expectations for aggression.

Another important gap in the existing research is the failure to combine the literature on participant roles with that of past research that suggests that there is a specific subgroup of individuals who are both bullies and victims (Owleus, 1993; Salmivalli, 2000). Previous bullying literature suggests that this subgroup of individuals who are both bullies and victims are among the most severe with regards to their level of aggressive behavior and social, emotional, and

behavioral correlates to aggressive behavior (Kokkinos & Panayioutou, 2004). Specifically, this group of individuals tends to have higher levels of emotional dysregulation, conduct problems, and is more widely disliked by peers (Holt, 2007; Nansel, 2001; Salmivalli, 2000). Thus far, existing research has not studied whether reinforcers, assistants, and defenders who are also victims exhibit different social, behavioral, or emotional levels characteristics and levels of aggression.

Purpose of Current Study

Thus, the purpose of the current study was to add to the available literature on the various participant roles involved in bullying behaviors in schools. The current study advanced past research on participant roles in several ways. First, this study tested the factorial validity of a revised peer-report measure of participant roles in a sample of boys and girls ages 9-14. This factor analysis tested whether the distinct participant roles could be identified in an ethnically-diverse school based sample in the United States and in a sample which was somewhat older than the one in which it was originally developed (Sutton & Smith, 1999).

Second, after the factorial validity of the participant roles in this sample was tested, the stability of these roles across school years was examined, as was gender differences in participant roles. Previous research has found that there is a great deal of variation between classrooms in participant role behavior (Salmivalli & Voeten, 2004). This study examined the stability of the participant roles in individuals from one school year to the next. Recent research has also suggested that there are gender differences between individuals who engage bullying and behaviors supportive of bullying (i.e. assisting and reinforcing). This study examined potential gender differences in the various participant roles. This study also examined whether

the stability of the participant role behavior was moderated by the gender of the child, the gender of the rater, or the percentage of same raters at each time point.

Finally, the behavioral, cognitive, and emotional characteristics of individuals within each of these participant roles were examined. Much of the current research has focused on coping strategies, the level of empathy, and social information processing of the various participant roles. This study intends to expand on that literature by examining how reinforcers, assistants, victims, bullies, and defenders compare on the characteristic proven to be important to the broader research literature on developmental pathways to conduct problems and aggression. Specifically, the behavioral characteristics of participants in these roles in terms of their level of conduct problems, the level of prosocial behaviors, and the level and types of aggression they display was tested. Further, cognitive and emotional characteristics that have proven to be important for understanding the development of antisocial and aggressive behavior (i.e. thrill and adventure seeking, emotional regulation, positive expectations for aggression, callous-unemotional traits) were studied in relation to the various participants roles. Additionally, the difference between characteristics of those in the various participant roles, depending on their level of victimization was assessed.

Specific Hypotheses

1. Using a peer report version of Sutton and Smith's (1999) modified Participant Role scales, we tested whether there is evidence for 4 distinct participant scales: bullies, assistants, reinforcers, and defenders. We also tested whether these findings were consistent at both T1 and T2
2. We hypothesized that, as in previous studies, the participant roles would show gender differences and there would be differences in their stability across school years.

- a. We hypothesized that boys would exhibit higher levels of and more stability on the participant role scales of bully, reinforcer and assistant than girls, where as girls would show more higher levels of and greater stability on peer nominations of defender.
 - b. We hypothesized that the participant role scales of bully, reinforcer, assistant, and defender would be relatively stable from T1 to T2. We also tested whether the number of same peers rating the child at T1 and T2 and whether the percentage of peer raters of the same gender influenced the stability of scores.
3. We also hypothesized that different participant roles would be associated with differing characteristics but these characteristics would be somewhat dependent on whether they are also victims of bullying. Specifically, we hypothesized that there would be significant participant role by victimization status interactions on several theoretically important variables.
- a. First, bullying scores would be more strongly correlated with relational aggression in girls but more correlated with overt aggression in boys.
 - b. Bullying scores were predicted to be positively associated with CU traits, positive expectations for aggression, conduct problems, and thrill and adventure seeking. These scores were also predicted to be correlated with proactive aggression and reactive aggression. However, this was predicted only at low levels of victimization (i.e., pure bullies).
 - c. Reinforcer and assister scores were also predicted to be correlated with conduct problems; however these scores were predicted to also be associated with lower levels of emotional regulation and lower levels of prosocial behaviors. These

scores were also predicted to be associated with reactive aggression but not proactive aggression. Also, in contrast to bullying scores, this was predicted only when combined with elevated victimization scores (i.e. follower bullies).

d. Peer nominations of defending were expected to be positively correlated with prosocial behavior and negatively correlated with conduct problems, positive expectation for aggression, and CU traits. This was hypothesized to only be the case at low levels of victimization.

Methods

Participants

Data were collected as part of the School Experiences and Behavior Study in April and May of 2006 and then again in November and December of 2006 when the participants were in different classrooms and at different grade levels. Participants were recruited from the 4th through 7th grades at four schools in a semi-rural public school system in the southeastern United States. All of the schools were Title I schools, meaning that a substantial proportion of students (at least 66%) received free or reduced lunches due to low family incomes. Boys and girls in special education classes were excluded from the study.

During the first wave of data collection, participants were all between the ages of 9 and 14, with a mean age of 11.28 (SD=1.82). Of the participants, 30% were 4th graders, 32% were 5th graders, 23.6% were 6th graders, and 7% were 7th graders. Girls made up 54.2% of the sample and nearly half of the sample reported being Caucasian (49.3%) as their ethnicity and 38.4% as African American, 6% as other, 3% as Hispanic-American, and 1% as Asian-American American. The gender and ethnic composition of the sample was representative of the

participating schools based on data published by the school system. Specifically, data published by the school system indicates that for all school age children in their population (K-12), 51.37% were Caucasian, 46.10% were African American.

Procedures

Institutional Review Board approval was obtained prior to data collection. For the first wave of data collection, students were contacted for the study via letters with consent forms sent home to parents. Once consent was obtained from parents, the questionnaires were administered to small groups of students during portions of the school day that minimized disruptions to instructional time (e.g. study period, guidance counseling time). Students were asked to sign an assent form before participating. Any students who did not wish to participate in the study or whose parents did not sign a consent form were asked to do an alternative activity while the questionnaire was administered. To control for differences in reading ability, the questionnaires were read out loud. During the questionnaire administration, participants were spaced far enough apart to make it difficult to determine other participants' responses. Additionally, participants were provided with a cover sheet to hide their responses.

At T1 (time 1), parental consent forms were returned for 349 (70%) of approximately 500 eligible students. Students who were currently in special education classes were not eligible for participation in the study. Of this 349, 53 students did not participate in data collection, either due to absences or other activities on data collection days or due to unwillingness to provide assent. Another 14 students did not complete forms or did not complete forms correctly, leading to the final sample of 284. During the second wave of data, an additional form was sent to parents asking their permission for their child's continued participation in this research study. If the parent returned this permission slip and indicated that their child could no longer be a part of

the study, this child was excluded from the study. Approximately 185 of the original sample were included in the study. Approximately 67 of the original participants were excluded from the study because they were either missing peer report data (n=50) or had only one peer rating of their bullying behavior (n= 17). Many of the students with missing peer report data at T2 did not have classmates in their homerooms who were also participating in the study and, as a result, peer nominations could not be collected. 13 of the original T1 sample withdrew from the study at T2. Finally, 19 were absent at the time of data collection. Thus, 65% of the original participants completed the survey in its entirety during the second wave of data collection.

Attrition analyses were conducted to test whether there were differences between participants who completed only the T1 survey and those participants who completed the survey at both T1 and T2. Results indicated that there were no significant differences between these groups on demographic variables, bullying behavior, and on most of the social, emotional, and behavioral correlates of the bullying behaviors. The only significant difference to emerge was on thrill and adventure seeking ($t(282) = 2.12, p=.04$), with participants who completed the survey at T1 only ($M= 36.52, SD=6.59$) showing more thrill seeking than those who took the survey at both T1 and T2 ($M=34.82, SD=6.34$).

Measures

Participant Roles Scale (Sutton & Smith, 1999) A modified peer report version of Sutton and Smith's (1999) Participant Role Scale was used for this study to assess peer reports of actual bullying behavior. This scale contains 15 of the original items from this scale. The items for the outsider scale were excluded from the development of these shortened scales. The scale includes Sutton and Smith's (1999) original bully, assistant, and defender items and the original one victim item. Two items from the original reinforcer scale were excluded; "Is usually there, even

if not doing anything” and “Gets others to watch.” The first item was more representative of the outsider role, while the second was determined to be too similar to the bullying item, “Gets others to join in bullying.” As mentioned previously, the interview version of this scale demonstrated adequate reliability with the Cronbach’s alpha’s for the scales for bully (alpha=.85), reinforcer (alpha=.88), assistant (alpha=.67), and defender (alpha=.80). The reliability was adequate in this sample at T1; bully (alpha=.91), reinforcer (alpha=.93), assistant (alpha=.94), and defender (alpha=.91). The reliability at T2 was also adequate; bully (alpha=.85), reinforcer (alpha=.92), assistant (alpha=.90), and defender (alpha=.87).

Prior to the administration of the participant roles scale, the students were read the definition of bullying based on the one provided by Olweus (2001): “Bullying is when a student is mean to another student over and over again. The student who is being bullied is usually at a disadvantage, such as being smaller, outnumbered, or having fewer friends. Bullying includes hitting, calling people names, telling stories about people, and ignoring people.” After the definition was read, participants were each given survey packets, the students were asked to rate each of the classmates, who were also participating in the study and were in the student’s home room, on a scale of 1 (never) to 3 (often) on the question, “How often does this classmate bully others?” The same procedure was used for administration of the other 15 items on the participant role scale.

Ratings for each individual were only from others who were also participating in the study. After the data were collected, mean scores were calculated for each item from the peer ratings for that item. Items were combined to create the scales of bully, assistant, reinforcer, and defender. The victimization scale was comprised of simply the mean score of the peer rating of the victimization question. “How often does this person get bullied by others”.

Peer Conflict Scale (PCS; Marsee & Frick, 2007; Munoz et al., 2008).

The PCS is a 40-item self-report measure developed to assess the various types of aggressive behaviors. It includes four 10-item scales. The two reactive subscales, Reactive-Physical (e.g., “If others make me mad, I hurt them”; “I have gotten into fights, even over small insults from others”) and Reactive-Relational (e.g., “If others make me mad, I tell their secrets” “When others make me mad, I write mean notes about them and pass them around”) have items worded such that the individual was clearly provoked, and the reaction is either to hurt or fight the other person (physical) or to harm their social relationships (relational). In contrast the Proactive-Physical subscale (e.g., “I carefully plan out how to hurt others”, “I start fights to get what I want”) also involves hurting others or fighting, but in a way that is clearly planned or for gain. Similarly, the Proactive-Relational subscale (e.g., “I deliberately exclude others from my group, even if they haven’t done anything to me”, “I gossip about others to become popular”) involves hurting others socially but again in a way that is clearly not in reaction to a perceived provocation or for gain. Each item was scored either 0 (Not at all true), 1 (Somewhat true), 2 (Very true), or 3 (Definitely true). In the current sample, the internal consistency of the four aggression scales at T1 was adequate: reactive relational aggression $\alpha=.85$; reactive overt aggression $\alpha=.88$; proactive relational aggression $\alpha=.85$; proactive overt aggression $\alpha=.84$. It was also adequate at T2: reactive relational aggression $\alpha=.84$; reactive overt aggression $\alpha=.91$; proactive relational aggression $\alpha=.80$; proactive overt aggression $\alpha=.83$.

The factor structure of the PCS was tested in a sample of juvenile justice involved adolescents (N = 470; age range = 12-18) (Marsee et al., 2006). Confirmatory factor analysis

(CFA) showed that a hierarchical four-factor model fit the data better than a one factor model (i.e., general aggression factor), a two-factor model (i.e., physical and relational factors), and a four-uncorrelated factor model. Similar findings supporting the factor structure were obtained in the current sample of school children at the first assessment point (Crapanzano, Frick, & Terranova, 2009). Also in a detained sample of boys, the reactive and proactive physical aggression scales were positively associated with a self-report of the number of violent acts (Kimonis et al., 2008) and the aggression scales were correlated with a laboratory measure of aggressive behavior, with the reactive and proactive subtypes showing different responses to provocation (e.g., reactive aggression being associated with aggressive responses to low provocation) (Munoz et al., 2008). In a detained sample of girls, the reactive and proactive subscales for both relational and physical aggression showed differential correlations with important external criteria (i.e., reactive being correlated with measures of emotional dysregulation and proactive being correlated with measures of CU traits and positive outcome expectations for aggression) (Marsee & Frick, 2007). Finally, in an ethnically diverse community sample similar in age (range 6-17; $M = 11.09$, $SD = 3.38$) to the current sample, the reactive and proactive subscales for relational aggression again showed differential correlations with anxiety and cognitive errors (Marsee, Weems, & Taylor, 2008).

Antisocial Process Screening Device (APSD, Frick & Hare, 2001).

The APSD is a self-report behavior rating scale with each item scored either 0 (Not at all true), 1 (Sometimes true), or 2 (Definitely true). This scale measures three factors including Impulsivity, Narcissism, and Callous-Unemotional traits. Only the 6-item Callous-Unemotional subscale (e.g., “I feel guilty or bad when I do something wrong”, which is reversed score) was used in this study. Scores from the self-report version of the APSD have been shown to be

relatively stable over 3 years in a non-referred sample (Munoz & Frick, 2007) and have been associated with greater aggression and violence (Kruh, Frick, & Clements, 2005) and with laboratory measures of deficient affective experiences (Loney, Frick, Clements, Ellis, & Kerlin, 2004). The internal consistency of the CU subscale in the current sample was modest but consistent with findings from past samples T1 ($\alpha = .59$) and T2 ($\alpha = .65$) (Munoz & Frick, 2007).

Youth Symptom Inventory-4 (YI-4) (Gadow & Sprafkin, 2000)

To measure conduct problems, 26 items assessing the symptoms of Oppositional Defiant Disorder and Conduct Disorder on the self-report form of the Youth Symptom Inventory-4 were used. This scale demonstrated good reliability and validity when it was evaluated on 239 clinic-referred youth between the ages of 11-18 (Gadow et al., 2002). Specifically, this scale was able to differentiate children with and without conduct disorder, attention-deficit/hyperactivity disorder, generalized anxiety disorder, and major depressive disorder (Gadow et al., 2002). The internal consistency of the combined oppositional defiant disorder and conduct disorder scale in past samples has been adequate ($\alpha = .82$) (Hyderdahl et al., 2003). The internal consistency for our current sample was also adequate T1 ($\alpha = .89$) and T2 ($\alpha = .91$).

Children's Emotion Management Scale (Zeman, Shipman, & Penza-Clyve, 2001).

This questionnaire is a 23-item self-report instrument measuring 6 subscales of anger and sadness. For the purposes of this study, an anger dysregulation scale was formed combining the 3-item anger dysregulation (i.e., I attack whatever it is that makes me mad) and the reverse scored 4-item anger inhibition (i.e., I get mad inside but don't show it) subscales, as suggested by a factor analysis in a community sample of 227 4th and 5th graders (Zeman, Shipman, & Penza-

Clyve, 2001). The internal consistency of this scale in the current sample was T1 ($\alpha=.58$) and T2 ($\alpha=.63$).

Thrill and Adventure Seeking Scale (TAS, Frick et al., 2003).

The TAS is a 12-item subscale of the modified Sensation Seeking Scale for Children (Russo et al., 1993) that measures self-reported preferences for novel and dangerous activities. The participant chooses between a pair of statements to indicate which one was more true of him or her. For each item one statement (e.g., “I enjoy the feeling of riding my bike fast down a big hill”) describes sensation seeking behaviors. The other statement (e.g., “Riding my bike fast down a big hill is scary for me”) describes a preference for avoiding sensation seeking behaviors. To increase the variance in scores, the scale was modified to include a question regarding how well the chosen behavior described the child by selecting either sort of true for me or really true for me. This modification created a four-point scale for each item. Both the original (Frick et al., 1999) and revised (Frick et al., 2003) version of the TAS subscale have been associated with conduct problems, including aggression. In the current sample, the T1 internal consistency of the TAS scale was $\alpha=.59$ and T2 internal consistency was $\alpha=.75$.

Attitudes and Beliefs toward Aggression (Vernberg, Jacobs, & Hershberger, 1999)

This self-report measure assesses social-cognitive styles that have been related to aggressive behavior. Two subscales will be combined in the current study: a 7 item Aggression Legitimate scale indicating the belief that it is okay to be aggressive or that the victims deserve it and a 4 item Aggression Pays scale indicating the belief that aggression gets you what you want (Vernberg et al., 1999). Both subscales and their combination have shown to have strong internal consistency (i.e., $\alpha > .80$) in samples of 3rd through 9th grade students (Biggs, Vernberg, Twemlow, Fonagy, & Dill, 2008; Dill, Vernberg, Fonagy, Twemlow, & Gamm, 2008;

Vernberg et al., 1999). Additionally, these subscales have been associated in expected directions with aggressive behaviors, negative affect, and response to intervention (Biggs et al., 2008, Dill et al., 2008; Vernberg et al., 1999). In this study the T1 combined Aggression Legitimate and the Aggression Pays scales had an internal consistency of $\alpha=.78$ and at T2 had an internal consistency of $\alpha=.80$.

Prosocial Behavior

To measure prosocial behavior, 4 items from the prosocial behavior scale were taken from the Children's Social Behavior Scale (CSBS) (Crick, 1996). Previous research has demonstrated that this scale was reliable ($\alpha=.90$) and was negatively correlated with aggressive behavior in a sample of 245, 3rd through 6th grade children. (Crick & Grotpeter, 2005). Additional analysis revealed that prosocial behavior predicted good social adjustment in the sample of 245 middle school age girls and boys (Crick, 1996). In the current sample, the internal consistency at was adequate at both T1 ($\alpha=.90$) and T2 ($\alpha=.93$).

Results

Preliminary Analyses

The distributions of all study variables are described in Table 1 (Time 1) and 2 (Time 2). The distributions indicate that most variables were relatively normally distributed in this sample, with the exception of the proactive relational and overt aggression variables which were positively skewed. Most of the variables at T1 and T2 had adequate reliability of .70 with the exception of T1 callous-unemotional traits (T1 $\alpha=.59$; T2 $\alpha=.65$) and emotional dysregulation (T1 $\alpha=.67$; T2 $\alpha=.63$).

Table 1
TI Distributions of Study Variables

	<i>Mean(SD)</i>	<i>Min-Max</i>	<i>Skew</i>	<i>Kurtosis</i>	<i>Alpha</i>
Participant Role					
Bully	5.84 (1.40)	4-9.68	.66	-.48	.91
Assistant	2.76 (.69)	2-5.35	1.09	.82	.94
Reinforcer	3.11(.90)	2-5.33	.57	-.84	.93
Defender	7.73 (1.50)	4.89-11.22	.41	-.71	.91
Social/Behavioral/Emotional					
Conduct Problems	41.72 (10.20)	26-88.18	1.28	2.74	.89
Callous-Unemotional Traits	1.84 (1.73)	0-8	1.35	1.99	.59
Thrill and Adventure Seeking	35.41 (6.47)	20-48	-.03	-.77	.79
Emotional Dysregulation	13.68 (2.96)	7-21	.13	-.28	.67
Positive Expectations	29.42 (7.47)	16-64	1.22	2.25	.78
Prosocial Behavior	31.56 (8.11)	9-45	-.19	-.38	.90
Aggression					
Proactive Relational	12.28 (3.49)	10-34	3.07	12.46	.85
Proactive Overt	11.67 (3.33)	10-33	3.30	12.99	.84
Reactive Relational	13.88 (4.43)	10-38	1.86	4.54	.85
Reactive Overt	15.16 (5.63)	10-37	1.32	1.52	.88

Table 2
T2 Distribution of Variables

	<i>Mean(SD)</i>	<i>Min-Max</i>	<i>Skew</i>	<i>Kurtosis</i>	<i>Alpha</i>
Participant Role					
Bully	5.87 (1.43)	4-10.14	.92	-.48	.85
Assistant	2.84 (.74)	2-5.20	.92	.14	.90
Reinforcer	3.07 (.83)	2-5.50	.57	-.35	.92
Defender	7.32(1.32)	4-12	.55	.77	.87
Social/Behavioral/Emotional					
Conduct Problems	43.15 (11.77)	26-86.02	1.02	1.20	.91
Callous-Unemotional Traits	1.92 (1.68)	0-7	.64	-.25	.65
Thrill and Adventure Seeking	31.99 (6.50)	12-43	-.26	-.63	.75
Emotional Dysregulation	14.20 (2.81)	8-21	.081	-.03	.63
Positive Expectations	28.07 (7.77)	16-56	.97	1.01	.80
Prosocial Behavior	31.05 (8.94)	9-45	-.37	-.38	.93
Aggression					
Proactive Relational	12.02 (3.01)	10-26	2.09	4.87	.80
Proactive Overt	11.60 (3.14)	10-28.89	2.59	7.27	.83
Reactive Relational	13.78 (4.37)	10-32	1.68	2.62	.84
Reactive Overt	15.30 (6.17)	10-38	1.54	2.20	.91

Test of Hypothesis 1: Confirmatory Factor Analyses of Bullying Roles

Hypothesis 1 predicted that a Confirmatory Factor Analysis would provide evidence for the four distinct participant roles of bully, reinforcer, assistant, and defender at both T1 and T2. The CFA was conducted using MPlus software (Muthen & Muthen, 2006). The error term MLMV was used because although the scales were distributed normally, the individual scale items were continuous but not distributed normally. The MLMV option produces a mean and variance adjusted chi-square test of model fit (Muthen & Muthen, 2006). An adjusted chi-square cannot be used for chi-square difference testing of nested models, however, because a difference between two scaled chi-squares for nested models is not distributed as chi-square (Satorra, 2000). Chi-square difference tests were hand calculated using Satorra-Bentler Scale chi-square formula as recommended by Muthen and Muthen (2006). The results of the CFA along with these chi-square difference tests are noted in Table 3.

Table 3
Confirmatory Factor Analysis Comparing the 2, 3, and 4 Factor Participant Role Solutions

T1	Chi-Square (df)	CFI	RMSEA	Chi –Square Difference
2 Factor	183.44 (33)**	.90	.13	
3 Factor	177.05(32)*	.90	.13	8.50 (2)*
4 Factor	143.30 (31)**	.93	.11	10.63(3)*
4 Factor (Modified)	55.78 (20)**	.96	.09	
T2				
2 Factor	67.71 (19)**	.89	.12	
3 Factor	67.67 (19)**	.88	.12	.83(2)
4 Factor	57.21 (19)**	.91	.10	5.68 (3)
4 Factor (Modified)	27.30 (13)**	.97	.07	

Note: CFI=Comparative Fit Index; RMSEA= Root Mean Square Error of Approximation

At T1 results of the chi-square difference test comparing the 2 factor model (F1 = bully/reinforcer/assistant and F2=defender) to 3 factor model (F1=bully, F2 =reinforce/assistant, F3 defender) were significant (X^2 difference (2)= 8.50, $p=.01$).¹ This indicates that the 3 factor model provided a significantly better model fit (X^2 (32) =177.05; CFI=.90; RMSEA=.13). A chi-square difference test was then conducted comparing the 3 factor model to the 4 factor (F1=bully, F2=assistant, F3=reinforce, and F4=defender). The results of the chi-square difference test were again significant (X^2 difference (3)= 10.63, $p=.01$) indicating that the 4 factor model (X^2 (31)=143.30; CFI=.93; RMSEA=.11) provided a better fit than the 3 factor model.

Although the original 4 factor solution provided the best model fit, the fit indices for this original model were modest. Further examination of the factor loadings led us to delete items 1 and 11 from the analyses. Once these items were deleted the model fit of the 4 factor model improved substantially (X^2 (20)= 55.78, ; CFI=.96; RMSEA=.09) and showed adequate fit. It is important to note that although the 4 factor solution offered the best model fit, there was still a high degree of inter-correlation between the latent variables. The latent factor of bullying was strongly related to the latent factors of reinforcing ($r=.97$) and assisting ($r=.98$). The reinforcing and assisting factors were also strongly correlated ($r=.93$).

The results for the CFA conducted at T2 did not yield the same results. At T2 results of the chi-square difference test comparing the 2 factor model (F1=bully/reinforcer/assistant and F2=defender) to 3 factor model (F1=bully, F2=reinforce/assistant, F3defender) were not significant (X^2 difference(2)= .83, $p=n.s.$). This indicates that the 3 factor model did not provide a significantly better model fit than the 2 factor model. Next, a chi-square difference test was conducted comparing the 2 factor model (F1=bully/reinforce/assistant, F2=defender) to the 4

factor model (F1=bully, F2=assistant, F3=reinforce, and F4= defender). Again, the 4 factor model did not provide a significantly better model fit than the 2 factor model (χ^2 difference (5)=6.99, $p=n.s.$). Finally, a chi-square difference test was conducted comparing the 3 factor model to the 4 factor (F1=bully, F2=assistant, F3=reinforce, and F4= defender). The results of the chi-square difference test was again non-significant (χ^2 difference (3)= 5.68, $p=n.s.$), indicating that the 4 factor model did not provide a significantly better model fit than the 3 factor model. This lack of improvement in the model could be due to the high degree of inter-correlation between the latent variables at T2. Bullying was strongly related to reinforcing ($r=1.00$) and assisting ($r=.97$). Reinforcing and assisting were also strongly correlated ($r=.87$).

In summary, Figures 1 and 2 summarizes the characteristics of the hypothesized 4 factor model at T1 and T2. From these analyses, there was evidence, at T1, that the peer ratings of the bullying roles of bully, reinforcer, assistant, and defender could be identified in a factor analysis. However, this finding could not be replicated at T2. At both T1 and T2, the bullying factors of bully, reinforcer, and assistant were highly intercorrelated.

Figure 1
TI Final 4 Factor Model

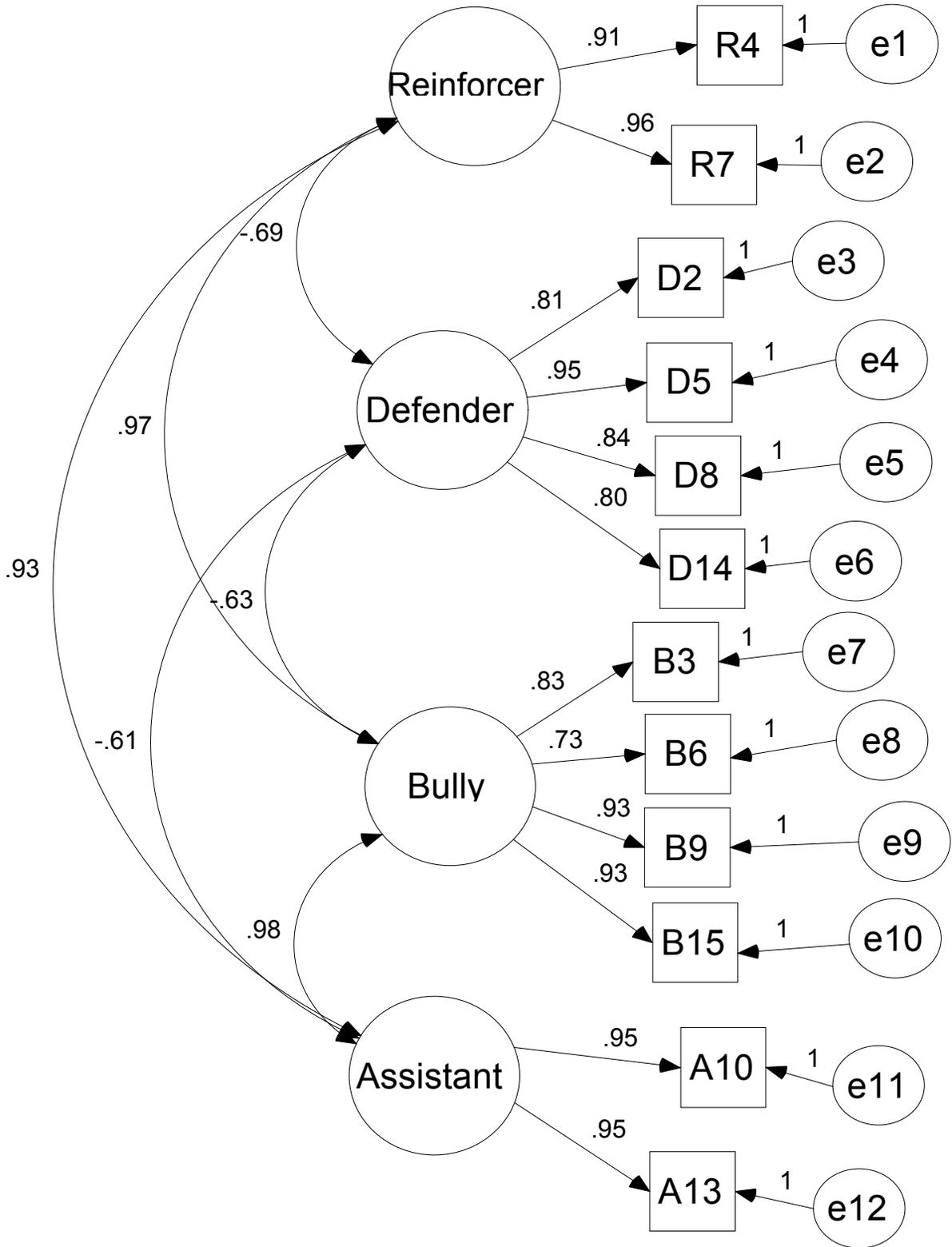
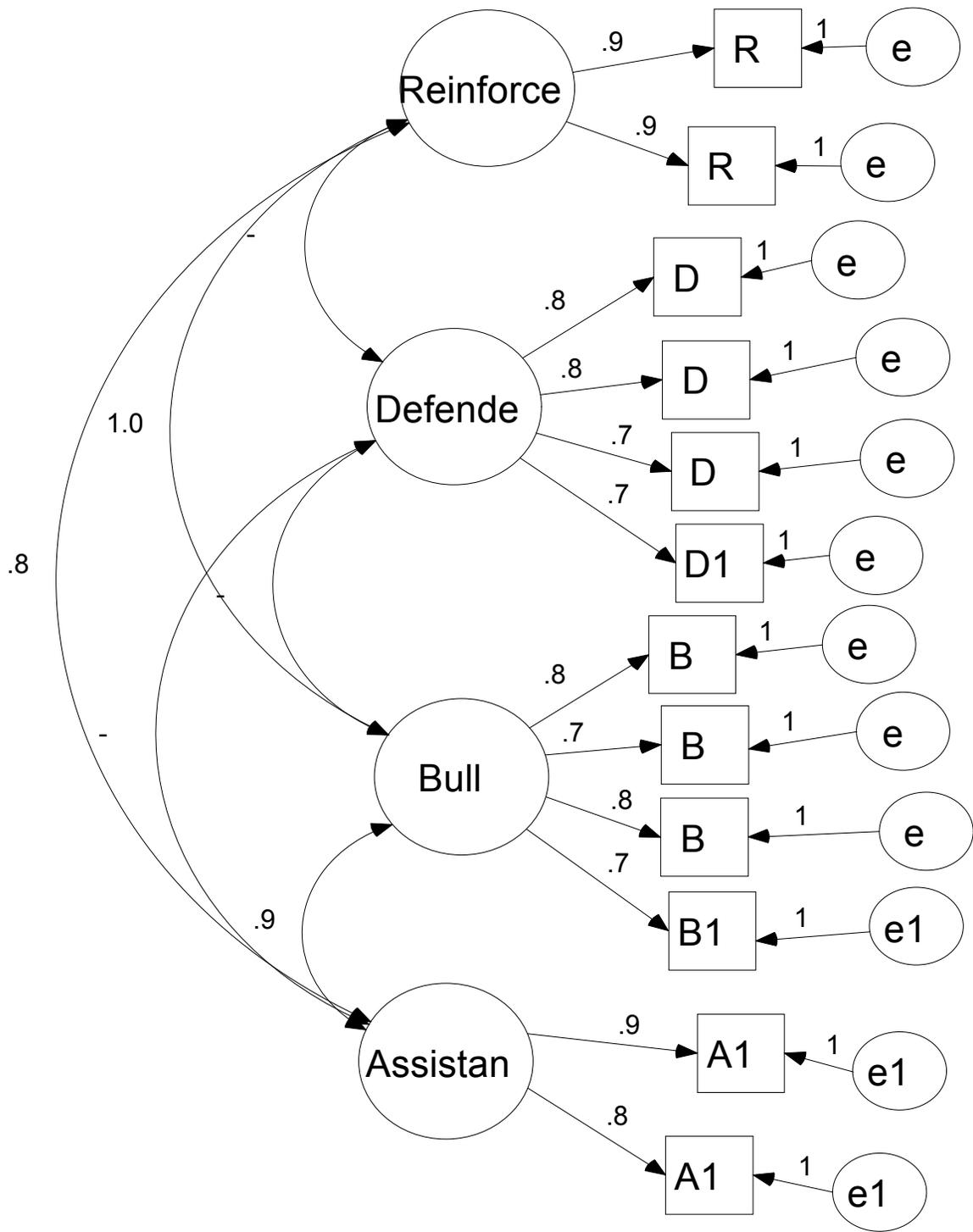


Figure 2
T2 Final 4 Factor Model



Hypothesis 2 Gender Differences and Stability

Our second hypothesis predicted that there would be gender differences within the participant roles and their stability. Specifically, we predicted that boys would be more likely to have higher and more stable peer nominated bully, reinforcer, and assistant scores. In contrast, girls were predicted to have higher and more stable, peer nominated scores of defending.

First, a series of t-tests were conducted to examine if there were significant differences between boys and girls on their levels of bullying behaviors. The results of these analyses are presented in Table 4.

Table 4
T-test Examining Differences Between Boys and Girls at T1 and T2 on the Participant Role Scales

	<i>T1 Boys</i> (<i>n</i> =130)	<i>T1 Girls</i> (<i>n</i> =154)	<i>t</i> (<i>df</i> =282)	<i>T2 Boys</i> (<i>n</i> =81)	<i>T2 Girls</i> (<i>n</i> =104)	<i>t</i> (<i>df</i> =183)
			(η^2)			(η^2)
Bully	6.03 (1.39)	5.69 (1.40)	2.04* (.02)	6.02 (1.60)	5.75 (1.27)	1.26 (.01)
Assistant	2.81 (.67)	2.72 (.70)	1.08 (.004)	2.97 (.84)	2.74 (.64)	2.19* (.02)
Reinforcer	3.26 (.88)	2.98 (.89)	2.66*** (.02)	3.18 (.89)	2.99 (.78)	1.53 (.01)
Defender	7.50 (1.51)	7.92 (1.46)	-2.38** (.02)	7.20 (1.26)	7.42 (1.36)	-1.14 (.01)

At T1 there was a significant difference between boys and girls on the peer reported bullying ($t(282)=2.04, p<.05$), with boys ($M=6.03, SD=1.39$) exhibiting more bullying behavior than girls ($M=5.69, SD=1.40$). There was no significant difference between girls and boy on the assistant scale at T1. However, there were significant differences between girls and boys on the reinforcer ($t(282)=2.66, p<.001$) and defender scales ($t(282)=-2.38, p<.001$). As hypothesized, boys tended to score significantly higher on reinforcing ($M=3.26, SD=.88$) than girls ($M=2.98, SD=.89$) and girls ($M=7.92, SD=1.46$) were more likely to exhibit defending behaviors than boys ($M=7.50,$

SD=1.51). Results of t-test at T2 did not reveal the same significant differences. At T2 there were no significant differences on boys and girls on bullying, reinforcing, or defending. However, there were significant differences between boys and girls on the assistant scale ($t(183)=2.19, p<.05$), with boys ($M=2.97, SD=.84$) exhibiting more assisting behavior than girls ($M=2.74, SD=.64$). In summary, this analysis offers some support for the prediction that boys exhibit more bullying, reinforcing, and assisting behaviors than girls, whereas girls exhibit more defending behaviors.

Next, the stability of the participant roles was assessed. It was predicted that the participant roles, regardless of gender, would be relatively stable across time. In order to test this hypothesis, a series of correlations were performed and these are provided in Table 5. As predicted, there was a relatively high degree of stability among the participant roles. T1 bullying was significantly related to T2 bullying ($r=.53, p<.01$), T1 assisting was significantly related to T2 assisting ($r=.38, p<.01$), T1 reinforcing was significantly related to T2 scores ($r=.53, p<.01$) and T1 defending was significantly related to T2 defending ($r=.42; p<.01$).

Table 5
Stability of Participant Roles; T1 by T2 Participant Role Correlation Matrix

	T1 Defender	T1 Reinforcer	T1 Assistant	T2 Defender	T2 Reinforcer	T2 Assistant	T2 Bully
T1 Bully	-.56**	.91**	.90**	-.13	.52**	.50**	.53**
T1 Assistant	-.55**	.86**		-.103	.40**	.38**	.40**
T1 Reinforcer	-.63**			-.18*	.53**	.48**	.49**
T1 Defender				.42**	-.38**	-.35**	-.34**
T2 Bully				-.08	.87**	.87**	
T2 Assistant				-.07	.78**		
T2 Reinforcer				-.11			
T2 Defender							

** $p<.01$; * $p<.05$

We also tested whether gender, number of same raters, and number of raters of the same gender as the participant moderated these stability estimates. For these tests, a series of linear multiple regressions were performed, testing the whether the T1 variable showed a significant interaction with the moderator in predicting the T2 variable. For the participant role scales of bully (R^2 change= .03, $p=.01$), reinforcer (R^2 change=.02, $p=.05$) and defender (R^2 change=.03, $p=.02$) there were significant interactions between the scales and the number of same peers rating that individual at T1 and T2. As would be expected, the greater the number of same raters at T1 and T2, the greater their stability on the peer nominated participant roles. The average number of same raters was 1.16 (SD=1.29). If the child had more than 1 same rater, than the stability of bullying was ($r=.67$). If the child had 1 or no same rater, the stability was ($r=.41$).

Importantly, the percentage of same gender raters did not moderate the stability of the participant roles for any variable. It was hypothesized that boys would exhibit more stability on the bully, reinforcer, and assistant scales, while girls would exhibit more stability on the defender scales. Several interactions with gender emerged; specifically, there was a significant interaction between bullying and gender predicting stability (R^2 change= .02, $p=.02$) and between assisting and gender in predicting stability (R^2 change=.03, $p=.01$). To illustrate the moderating role of gender, a correlation matrix showing the stability of each bullying role for boys and girls separately is provided in Table 6. For boys, bullying at T1 was significantly related to bullying at T2 ($r=.61$; $p<.01$); in girls it was also stable but the correlation was not as strong ($r=.44$; $p<.01$). The results were similar for assisting. In boys T1 assisting was significantly related to T2 assisting ($r=.49$; $p<.01$), whereas for girls T1 assisting was also stable but this was less strong ($r=.27$; $p<.01$). Contrary, to our initial hypotheses, girl's defending scores ($r =.43$, $p<.01$) was not significantly more stable than boy's defending scores ($r=.39$, $p<.01$).

Table 6
Correlation Matrix Examining the Stability of Bullying Roles Separated for Boys and Girls

	Bully T2	Assistant T2	Reinforcer T2	Defender T2
Boys				
Bully T1	.61**	.56**	.55**	-.03
Assistant T1	.55**	.49**	.50**	-.05
Reinforcer T1	.58**	.56**	.55**	-.12
Defender T1	-.42*	-.38**	-.41**	.39**
Girls				
Bully T1	.44**	.43**	.48**	-.13
Assistant T1	.27**	.27**	.32**	-.13
Reinforcer T1	.39**	.39**	.51**	-.22*
Defender T1	-.25*	-.30**	-.33**	.43**

In summary, the participant roles showed a moderate degree of stability across school years. Also, the number of same raters across time did appear to moderate the level of stability in many of the participant roles and there also were some gender differences in the stability of the participant roles; specifically, boy's bullying and assisting scores were more stable than girls. However, the percentage of same gender raters (e.g., percentage of raters who were boys if the participant was a boy) did not moderate the stability.

Hypothesis 3: Differing Characteristics Associated with the Participant Role Scales

Zero Order Correlations. Hypothesis 3 predicted that the participant roles would be associated with different characteristics but that these characteristics would be somewhat dependent on level of victimization. To test this hypothesis, first a series of Pearson correlation coefficients were conducted on the participant roles and the social, behavioral, and emotional correlates. The results of these correlations can be observed in Tables 7 (T1) and 8 (T2). Contrary to our initial hypotheses, the participant roles did not show much differentiation among the individual predictors. T1 bullying was positively related CU traits ($r=.18$; $p<.01$), emotional dysregulation ($r=.19$; $p<.01$), positive expectations for aggression ($r=.36$; $p<.01$), conduct

problems ($r=.44$; $p<.01$), reactive relational aggression ($r=.43$; $p<.01$), proactive relational aggression ($r=.44$; $p<.01$), reactive overt aggression ($r=.48$; $p<.01$), and proactive overt aggression ($r=.45$; $p<.01$). T1 bullying was negatively associated with prosocial behavior ($r=-.28$; $p<.01$). Similar correlations were observed for the T1 reinforcing and T1 assisting scales. In contrast, the defender scale was, as expected, negatively related to CU traits ($r=-.20$; $p<.01$), emotional dysregulation ($r=-.20$; $p<.01$), positive expectations for aggression ($r=-.24$; $p<.01$), conduct problems ($r=-.23$; $p<.01$), reactive relational aggression ($r=-.22$; $p<.01$), proactive relational aggression ($r=-.22$; $p<.01$).

Table 7
Correlation Matrix Examining the Associations Among Bullying Roles and Social, Emotional, and Behavioral Characteristics at T1

	<i>CU</i>	<i>E. Dys</i>	<i>Thrill</i>	<i>Pos.</i>	<i>Con</i>	<i>Pro</i>	<i>RR</i>	<i>PR</i>	<i>RO</i>	<i>PO</i>
Participant										
Bully	.18**	.19**	.05	.36**	.44**	-.28**	.43**	.44**	.48**	.45**
Assistant	.18**	.19**	.05	.36**	.41**	-.27**	.35**	.35**	.41**	.37**
Reinforcer	.21**	.23**	.10	.39**	.45**	-.34**	.42**	.42**	.48**	.44**
Defender	-.20**	-.20**	-.04	-.24**	-.23**	.37**	-.22**	-.20**	-.28**	-.27**
Soc/Beh./Emot										
CU		.21**	.12*	.01	.21**	-.31**	.23**	.26**	.24**	.30**
Emotional Dys.			.16**	.29**	.36**	-.20**	.31**	.26**	.47**	.26**
Thrill				.78**	.24**	-.15*	.13*	.13*	.21**	.15*
Pos. Exp					.56**	-.15*	.54**	.51**	.54**	.54**
Conduct							.68**	.64**	.71**	.64**
Prosocial								-.28**	-.34**	-.32**
Reactive Rel.									.67**	.71**
Proactive Rel.										.84**

Note: CU= Callous Unemotional Traits; E. Dys.=Emotional Dysregulation; Thrill= Thrill and Adventure Seeking; Pos= Positive Expectations for Aggression; Pro= Prosocial Behavior; Con= Conduct Problems; Pro=Prosocial; RR=Reactive Relational Aggression;; PR=Proactive Relational Aggression; RO=Reactive Overt Aggression; PO=Proactive Overt Aggression;

Similar results were observed at T2. Once again, bullying was significantly positively related to CU traits ($r=.19$; $p<.05$), emotional dysregulation ($r=.20$; $p<.01$), positive expectations for aggression ($r=.34$; $p<.01$), conduct problems ($r=.24$; $p<.01$), reactive relational aggression

($r=.30$; $p<.01$), proactive relational aggression ($r=.33$; $p<.01$), reactive overt aggression ($r=.40$; $p<.01$) and proactive overt aggression ($r=.40$; $p<.01$). It was negatively related to prosocial behavior ($r=-.21$; $p<.05$). Again, correlations were similar for both assistant and reinforcer scores. The defender scale at T2 was significantly correlated with the prosocial behavior scale ($r=.16$; $p<.05$) and negatively related to emotional dysregulation ($r=-.15$; $p<.05$). Thus, these analyses suggest that individuals involved in bullying behavior, irrespective of their participant role, had similar cognitive, behavior, emotional, and aggressive correlates. However, as expected, the defender role was associated with more prosocial correlates.

Table 8
Correlation Matrix examining the Associations Among Bullying Roles and Social, Emotional, and Cognitive Characteristics at T2

	<i>CU</i>	<i>E. Dys</i>	<i>Thrill</i>	<i>Pos.</i>	<i>Con</i>	<i>Pro</i>	<i>RR</i>	<i>PR</i>	<i>RO</i>	<i>PO</i>
Participant										
Bully	.19*	.20**	-.16*	.34**	.24**	-.15*	.30**	.33**	.40**	.40**
Assistant	.19**	.17*	-.11	.33**	.27**	-.21**	.29**	.31**	.35**	.38**
Reinforcer	.20**	.17*	-.14	.40**	.27**	-.14	.31**	.32**	.43**	.36
Defender	-.08	-.15*	-.07	-.00	-.07	.16*	.01	-.01	-.09	-.04
Soc/Beh./Emot										
CU		.23**	-.04	.32**	.36**	-.36**	.34**	.44**	.37**	.45**
Emotional Dys.			.03	.38**	.46**	-.17*	.40**	.36**	.55**	.36**
Thrill				.06	.09	-.002	.07	.05	.10	.05
Pos. Exp					.54**	-.14	.48**	.55**	.65**	.60**
Conduct						-.26**	.60**	.71**	.74**	.70**
Prosocial							-.19**	-.27**	-.23**	-.21**
Reactive Rel.								.79**	.59**	.63**
Proactive Rel.									.66**	.81**
Reactive Overt										.74**
Proactive Overt										

Note: CU= Callous Unemotional Traits; E. Dys.=Emotional Dysregulation; Thrill= Thrill and Adventure Seeking; Pos= Positive Expectations for Aggression; Pro= Prosocial Behavior; Con= Conduct Problems; Pro=Prosocial; RR=Reactive Relational Aggression;; PR=Proactive Relational Aggression; RO=Reactive Overt Aggression; PO=Proactive Overt Aggression;

Partial Correlations. As noted in previous analyses, the three bullying roles (i.e., bully, assistant, reinforcer) were highly correlated and showed similar correlations with the main study

variables. To test whether any of the roles show unique associations with the study variables, a series of partial correlations were conducted with each bullying role correlated with the study variables controlling for the other two bullying roles. Results for these correlations at T1 are provided in Table 9. The first series of partial correlations examined bullying while controlling for reinforcing and assisting.

Results of the partial correlations indicate that bullying was uniquely associated with positive expectations for aggression (partial $r=.14$; $p<.05$), reactive relational aggression (partial $r=.17$; $p<.01$), proactive relational aggression (partial $r=.21$; $p<.01$), reactive overt aggression (partial $r=.21$; $p<.01$), and proactive overt aggression (partial $r=.17$; $p<.01$) when controlling for assisting and reinforcing. In contrast, assisting was only correlated with the proactive relational aggression (partial $r=-.12$; $p<.05$) when controlling for the other bullying roles, but this was in the negative direction. For the reinforcer scale, conduct problems (partial $r=.13$; $p<.05$), prosocial behavior (partial $r=-.20$; $p<.01$) and reactive overt aggression (partial $r=.13$; $p<.05$) remained significant when controlling for bullying and assisting. At T2, bullying was not significantly associated with any variable, when controlling for assisting and reinforcing. On the other hand, assisting remained negatively related to prosocial behavior (partial $r=-.16$; $p<.05$). Only relational overt aggression (partial $r=.20$; $p<.01$) remained significantly associated with reinforcing when controlling for assisting and bullying.

In summary, the participant role of bully continued to exhibit a strong positive relationship with all subtypes of aggressive behavior when controlling for the follower roles (i.e. reinforcer and assistant). However, this was only the case at T1. Also, the unique association with the other bullying roles was less consistent across the different social, behavioral, and emotional characteristics.

Table 9

Partial Correlations showing Unique Associations between Bullying Roles and Social, Emotional, and Behavioral Characteristics

	<i>CU</i>	<i>E. Dys</i>	<i>Thrill</i>	<i>Pos.</i>	<i>Con</i>	<i>Pro</i>	<i>RR</i>	<i>PR</i>	<i>RO</i>	<i>PO</i>
T1										
Bully (Partial Assist. and Reinforce.)	-.03	.11	-.06	.14*	.07	.05	.17**	.21**	.15*	.17**
Assistant (Partial Bully and Reinforce.)	.11	-.06	-.01	-.03	.01	.01	-.10	-.12*	-.09	-.11
Reinforcer (Partial Assist.and Bully)	.11	.03	.11	.06	.13*	-.20**	.09	.08	.13*	.10
T2										
Bully (Partial Assist.and Reinforce.)	-.02	.09	-.10	-.06	-.05	.07	.02	.05	.02	.07
Assistant (Partial Bully and Reinforce.)	.06	-.00	.06	.07	.11	-.16*	.05	.05	.01	.08
Reinforcer (Partial Assist. and Bully)	.06	-.02	.00	.23	.11	-.02	.09	.07	.20**	.05

Note: CU= Callous Unemotional Traits; E. Dys.=Emotional Dysregulation; Thrill= Thrill and Adventure Seeking; Pos= Positive Expectations for Aggression; Pro= Prosocial Behavior; Con= Conduct Problems; Pro=Prosocial; RR=Reactive Relational Aggression;; PR=Proactive Relational Aggression; RO=Reactive Overt Aggression; PO=Proactive Overt Aggression;

Gender Differences in Correlates. Next, a series of linear regressions were conducted to examine if there was an interaction between gender and the different participant roles in predicting the social, behavioral, and emotional correlates to aggression. It was hypothesized that in girls, bullying, reinforcing, and assisting would be more significantly associated with the relational forms of aggressive behavior. This hypothesis was not supported in that gender did not moderate the associations between bullying roles and type of aggressive behavior at T1.

However, at T1, the regression analysis revealed a significant interaction between bullying and gender (R^2 change= .02; $p=.008$), assisting and gender (R^2 change=.01; $p=.03$), and reinforcing and gender (R^2 change=.03, $p=.001$) in predicting scores on the measure of prosocial behavior.

For boys, prosocial behavior was significantly negatively related to bullying ($r=-.39$; $p<.01$), assisting ($r=-.36$; $p<.01$), and reinforcing ($r=-.47$; $p<.01$). In girls, prosocial behavior was not significantly related to bullying ($r=-.15$; $p=n.s.$) and was not as strongly related to reinforcing

($r=-.18$; $p<.05$) and assisting ($r=-.18$; $p<.05$). There was also a significant interaction between bullying and gender in predicting thrill and adventure seeking (R^2 change=.02; $p=.03$). However, this variable was not significantly related to bullying for girls ($r=-.10$; $p=n.s.$) or boys ($r=.17$, $p=n.s.$)

There was several significant gender by participant role interactions at T2. Again, the hypothesis that girl's bullying behaviors would be more significantly associated with relational forms of aggressive behavior, while boy's bullying behaviors would more significantly related to overt forms of aggressive behavior was not entirely supported. With each of the bullying scales, it appeared that boy's participant role scales were more strongly related to each of the types of aggression than girl's bullying participant role scales. A linear regression revealed significant interactions between bullying and gender (R^2 change=.04, $p=.002$), assisting and gender (R^2 change=.05, $p=.001$), and reinforcing and gender (R^2 change=.07, $p=.00$) in predicting proactive overt aggression. For boys, proactive overt aggression was significantly related to bullying ($r=.55$; $p<.01$), assisting ($r=.49$; $p<.01$), and reinforcing ($r=.51$; $p<.01$). In contrast, in girls proactive overt aggression was not significantly related to bullying ($r=.08$; $p=n.s.$), assisting ($r=.12$; $p=n.s.$), or reinforcing ($r=.12$; $p<.01$). Linear regressions also revealed significant interactions between assisting and gender in predicting reactive relational aggression (R^2 change=.02, $p=.05$), and reactive overt aggression (R^2 change=.03, $p=.006$). Contrary to our hypothesis, for boys, reactive relational aggression was significantly related to assisting ($r=.47$; $p<.01$) while for girls it was not ($r=.12$; $p=n.s.$). Similarly, for boys reactive overt aggression was also significantly related to assisting ($r=.45$; $p<.01$), but for girls it was not ($r=.13$; $p=n.s.$). The results were similar for the reinforcer scale. Linear regressions again revealed significant interactions between reinforcing and gender in predicting reactive relational aggression (R^2

change=.02; $p=.04$) and reactive overt aggression (R^2 change=.04; $p=.004$). Follow up correlation analyses again indicated that the relationships between boy reinforcing and reactive relational aggression ($r=.46$; $p<.01$) and reactive overt aggression ($r=.54$; $p<.01$) was stronger than the same relationship in girls ($r=.18$; $p=n.s$ and $r=.27$; $p<.01$, respectively).

This pattern of severity in boy bullying participant roles could also be observed with other behavioral, emotional, and cognitive correlates to aggression. There were significant interactions between assisting and gender (R^2 change=.03; $p=.009$) and reinforcing and gender (R^2 change=.04; $p=.005$) in predicting conduct problems. Follow up correlation analyses again found a stronger relationship between boy's assisting and conduct problems ($r=.41$; $p<.01$) than between girl's assisting and conduct problems ($r=.04$; $p=n.s.$). Likewise, there was a stronger relationship between boy's reinforcing and conduct problems ($r=.42$; $p<.01$) than between girl's reinforcing and conduct problems ($r=.06$; $p<.01$). Significant interactions were also found between the assisting scale and gender (R^2 change=.02, $p=.04$) and the reinforcing scale and gender (R^2 change=.04, $p=.004$) in predicting positive expectations for aggression. Again, follow up correlation analysis suggested that the relationship between boy's assisting and positive expectations for aggression was stronger ($r=.41$; $p<.01$) than that relationship for girls ($r=.18$; $p=n.s.$). Although the relationship between girl's reinforcing and positive expectations was significant ($r=.26$; $p<.01$), the relationship between boy's reinforcing and positive expectations for aggression was stronger ($r=.50$; $p<.01$).

It should also be noted that at T2 there was also a significant bully by gender interaction predicting prosocial behaviors (R^2 change=.04; $p=.005$). However, contrary to T1 findings, which suggested that the negative association between the bullying participant roles and

prosocial behavior was stronger in girls, at T1 girl's bullying behavior was significantly negatively related to prosocial behavior ($r=-.22$; $p<.01$) but not boy's ($r=-.04$; $p=n.s.$).

At T2, there were also several significant interactions between gender and the defender scale in predicting reactive relational aggression (R^2 change=.03, $p=.02$), proactive relational (R^2 change=.04, $p=.01$), and proactive overt (R^2 change=.04, $p=.01$). For boys the correlation between reactive relational aggression was nonsignificant ($r=.21$, $p=n.s.$); for girls it was also nonsignificant but negative ($r=-.14$, $p=n.s.$). The results were similar for proactive relational aggression; the relationship between defenders and proactive relational aggression was not significant ($r=.21$, $p=n.s.$) and was also not significant but negative for girls ($r=-.18$, $p=n.s.$). Finally, the relationship between defending and proactive overt aggression was positive and not significant in boys ($r=.16$, $p=n.s.$) but negative and non-significant in girls ($r=-.26$, $p=n.s.$).

In conclusion, it was hypothesized that girl's bullying participant roles would be more significantly associated with relational forms of aggression, while boy's bullying participant roles would be more strongly associated with overt forms of aggression. Contrary to our hypothesis, relational aggression was not more strongly associated with bullying participant roles in girls. However, at T1, differences were found between boys and girl's participant roles and the relationship with prosocial behavior. Specifically, the negative association between bullying participant roles and prosocial behavior was stronger in boys. At T2, again results did not support the hypothesis that girl's bullying roles would be more strongly related to relational aggression, while boys bullying roles would be more related to overt aggression. Instead, our results indicated that boys who bully do exhibit a more severe pattern of aggressive behaviors, conduct problems, and positive expectations for aggression, regardless of whether or not the type of aggressive behavior is relational or overt.

Interactions with Victimization. Finally, the last part of hypothesis 3 makes predictions about the potential moderating role of victimization and the associations among bullying roles and the various social, emotional, and behavioral characteristics. To test these hypotheses, a series of linear regression analyses were conducted for all of the participant roles to examine if victimization moderated the relationship between each of the participant roles and the social, behavioral, and emotional predictors of aggressive behavior. Specifically, we examined whether the association between the participant roles and their correlates was stronger in individuals who had higher or lower victimization scores. Results of these regressions are summarized in Tables 10 and 11.

Table 10

T1 Linear Regression Analysis: Examining the Interaction Between Participant Role and Victimization Scales in Predicting Social, Behavioral, and Emotional Correlates

	Bully β	Victim β	Interaction β	R² change
Social/Behavioral/Emotional				
Conduct Problems	.46***	-.07	-.07	.00
Callous-Unemotional Traits	.20**	-.09	-.09	.01
Thrill and Adventure Seeking	.03	.18	-.13*	.02*
Emotional Dysregulation	.26***	-.09	-.10	.01
Positive Expectations	.41***	-.01	-.01	.00
Prosocial Behavior	-.30***	.05	.15**	.02**
Aggression				
Proactive Relational	.47***	-.18**	-.17**	.03**
Proactive Overt	.48***	-.15**	-.18**	.03**
Reactive Relational	.45***	-.13*	-.12*	.01*
Reactive Overt	.51***	-.16**	-.14**	.02**

(Table 10 continued) *T1 Linear Regression Analysis: Examining the Interaction Between Participant Role and Victimization Scales in Predicting Social, Behavioral, and Emotional Correlates*

	Assistant β	Victim β	Interaction β	R ² change
Social/Behavioral/Emotional				
Conduct Problems	.45***	-.10	-.11	.01
Callous-Unemotional Traits	.22***	-.10	-.09	.01
Thrill and Adventure Seeking	.05	.18**	-.14*	.02*
Emotional Dysregulation	.22***	-.09	-.08	.00
Positive Expectations	.37***	-.03	-.01	.00
Prosocial Behavior	-.32***	.07	.18**	.03**
Aggression				
Proactive Relational	.42***	-.19**	-.18**	.03**
Proactive Overt	.43***	-.16**	-.18**	.03**
Reactive Relational	.41***	-.15*	-.14*	.02*
Reactive Overt	.47***	-.18**	-.18**	.03**
	Reinforcer β	Victim β	Interaction β	R ² change
Social/Behavioral/Emotional				
Conduct Problems	.47***	-.08	-.03	.00
Callous-Unemotional Traits	.23***	-.10	-.05	.00
Thrill and Adventure Seeking	.07	.16**	-.13*	.02*
Emotional Dysregulation	.24***	-.10	-.08	.01
Positive Expectations	.39***	-.02	-.02	.00
Prosocial Behavior	-.35***	.08	.13*	.02*
Aggression				

(Table 10 continued) *T1 Linear Regression Analysis: Examining the Interaction Between Participant Role and Victimization Scales in Predicting Social, Behavioral, and Emotional Correlates*

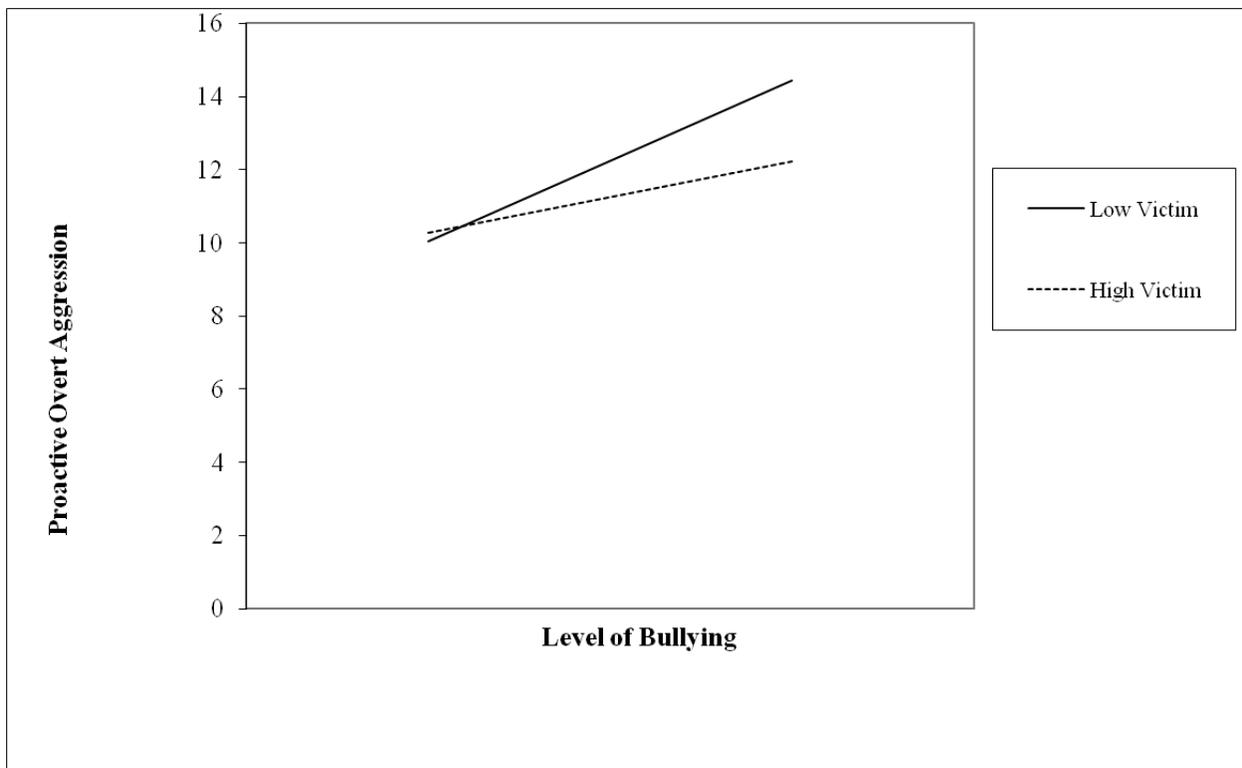
Proactive Relational	.45***	-.20**	-.14*	.02*
Proactive Overt	.47***	-.18***	-.18***	.03***
(table continued)				
Reactive Relational	.44***	-.15**	-.11	.01
Reactive Overt	.51***	-.20***	-.17**	.03**
	Defender β	Victim β	Interaction β	R² change
Social/Behavioral/Emotional				
Conduct Problems	-.24***	-.00	.06	.00
Callous-Unemotional Traits	-.21**	-.05	.06	.00
Thrill and Adventure Seeking	-.03	.21**	.04	.00
Emotional Dysregulation	-.22***	-.04	.12*	.02*
Positive Expectations	-.24***	.04	.04	.00
Prosocial Behavior	.38***	-.00	-.04	.00
Aggression				
Proactive Relational	-.22***	-.09	.07	.00
Proactive Overt	-.26***	-.06	.07	.00
Reactive Relational	-.23***	-.06	.06	.00
Reactive Overt	-.29***	-.08	.09	.01

***p<.001; **p<.01; *p<.05; β is Standardized

The results of the T1 analyses were supportive of the hypothesis that individuals who had high bullying peer reports but low victimization status would exhibit the greatest severity of aggressive behaviors. At T1 the interaction between bullying and victimization significantly

predicted proactive (R^2 change=.03 $p < .01$) and reactive (R^2 change=.01; $p < .05$) relational aggression and proactive (R^2 change=.03; $p < .01$) and reactive (R^2 change=.02; $p < .01$) overt aggression. For all of the aggression types, bullying was more strongly associated with aggression in individuals low on victimization as predicted. The interaction between bullying and victimization and their associations with proactive overt aggression is shown in Figure 3.

Figure 3
Graph Illustrating the Moderating Role of Victimization on the Association between Bullying and Proactive Overt Aggression



The plots for proactive overt aggression, reactive overt aggression, and relational reactive aggression were similar and are not provided. The interaction between bullying and victimization also predicted prosocial behavior (R^2 change=.0210; $p < .01$). The plot illustrating this interaction can be seen in Figure 4. As predicted, bullying showed a stronger negative relationship with prosocial behaviors in those low on victimization. Finally, the interaction between bullying and

victimization also predicted thrill and adventure seeking (R^2 change=.03; $p<.05$). Interestingly, bullying was most strongly negatively associated thrill and adventure seeking in those high on victimization. A plot illustrating this interaction can be seen in Figure 5.

Figure 4
Graph Illustrating the Moderating Role of Victimization on the Association between Bullying and Prosocial Behavior

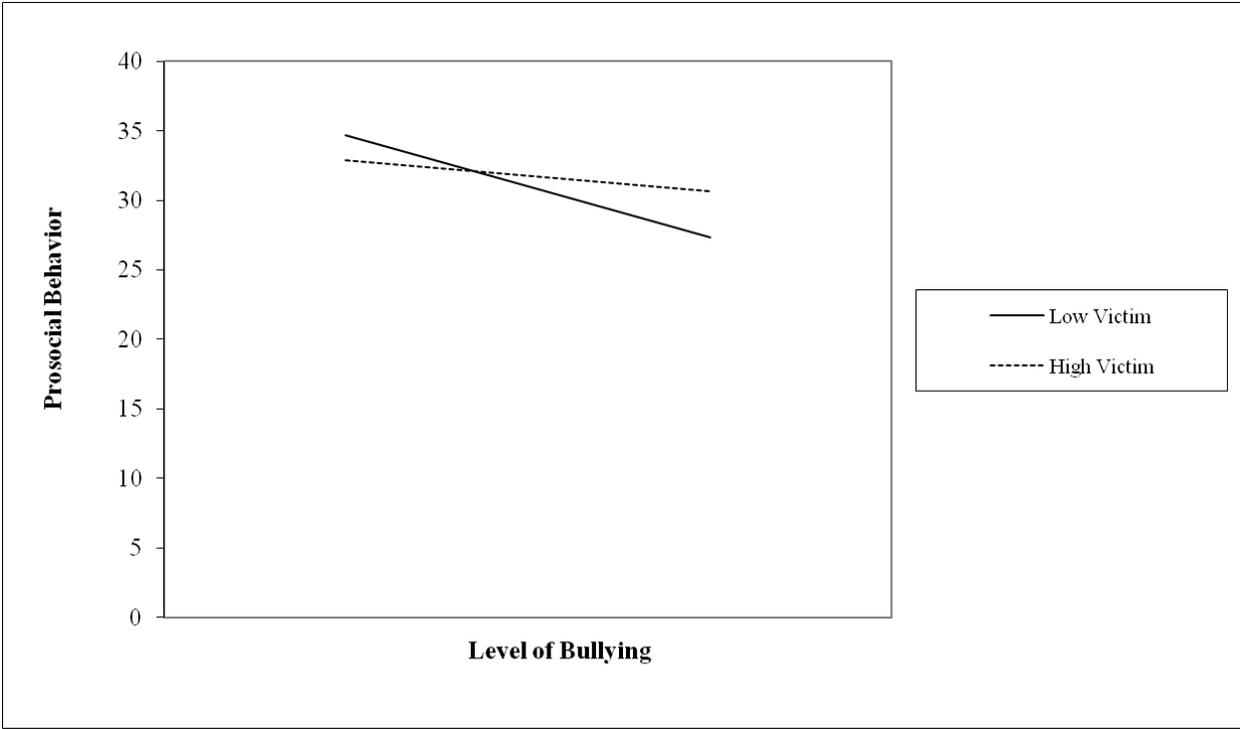
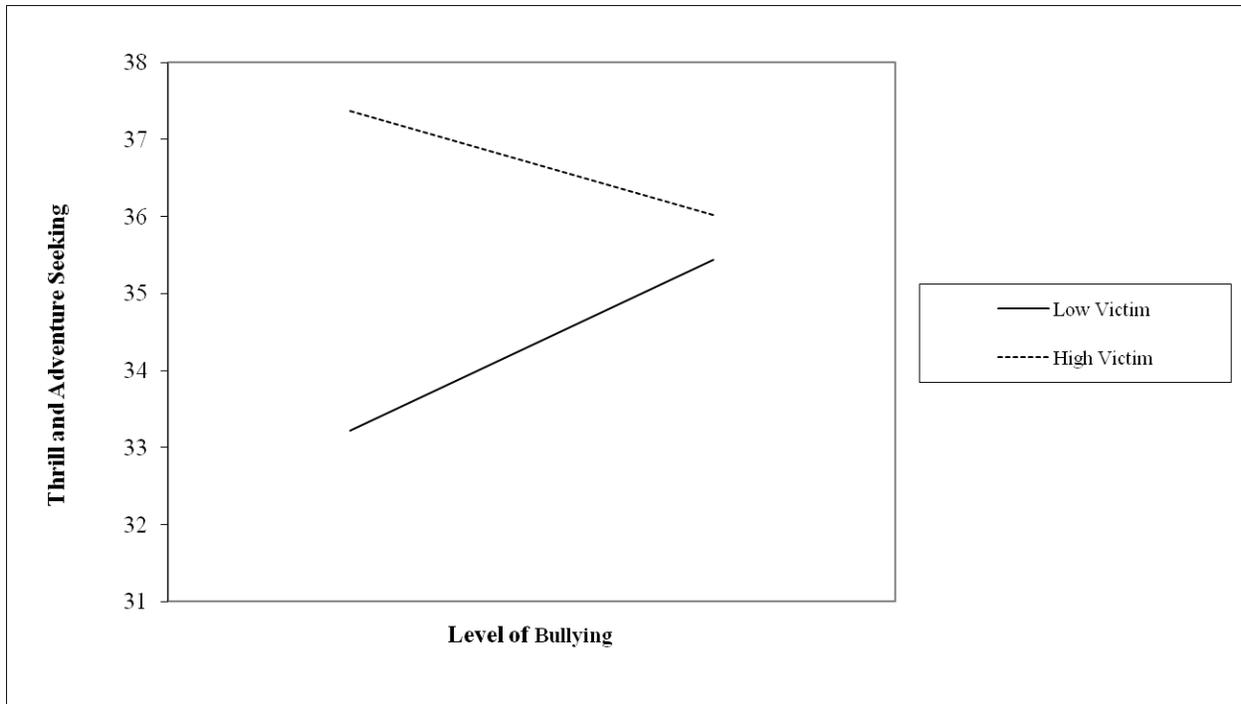


Figure 5

Graph Illustrating the Moderating Role of Victimization on the Association between Bullying and Thrill and Adventure Seeking



Similar results were found for when a series of linear regression were conducted for the participant roles of assistant and victimization. The results again partially supported the hypothesis that scores on the bullying participant role scales would be more strongly associated with aggression at low levels of victimization. Once again the interaction between assisting and victimization significantly predicted all aggression subtypes; proactive relational ($R^2=.02$; $p<.01$), reactive relational ($R^2=.01$; $p<.05$), proactive overt ($R^2=.03$; $p<.00$), and reactive overt ($R^2=.03$; $p<.01$) aggression. Figure 6 illustrates the interaction between assisting and victimization and proactive relational aggression. The interactions were similar for reactive relational, proactive overt, and reactive overt aggression and are not reported. High assisting scores were more strongly associated with all aggression types at low levels of victimization. The interaction between assisting and victimization significantly predicted prosocial behavior (R^2

change=.02; $p < .01$). This interaction is illustrated in Figure 8. The negative association between assisting and prosocial behavior was strongest in those individuals who were low on victimization. Finally, once again the interaction between assisting and victimization also predicted thrill and adventure seeking ($R^2 = .02$; $p < .05$). Results of this analysis can be observed in Figure 7. Assisting was negatively associated with thrill and adventure seeking scores but only at high levels of victimization.

Figure 6
Graph Illustrating the Moderating Role of Victimization on the Association between Assisting and Proactive Relational Aggression

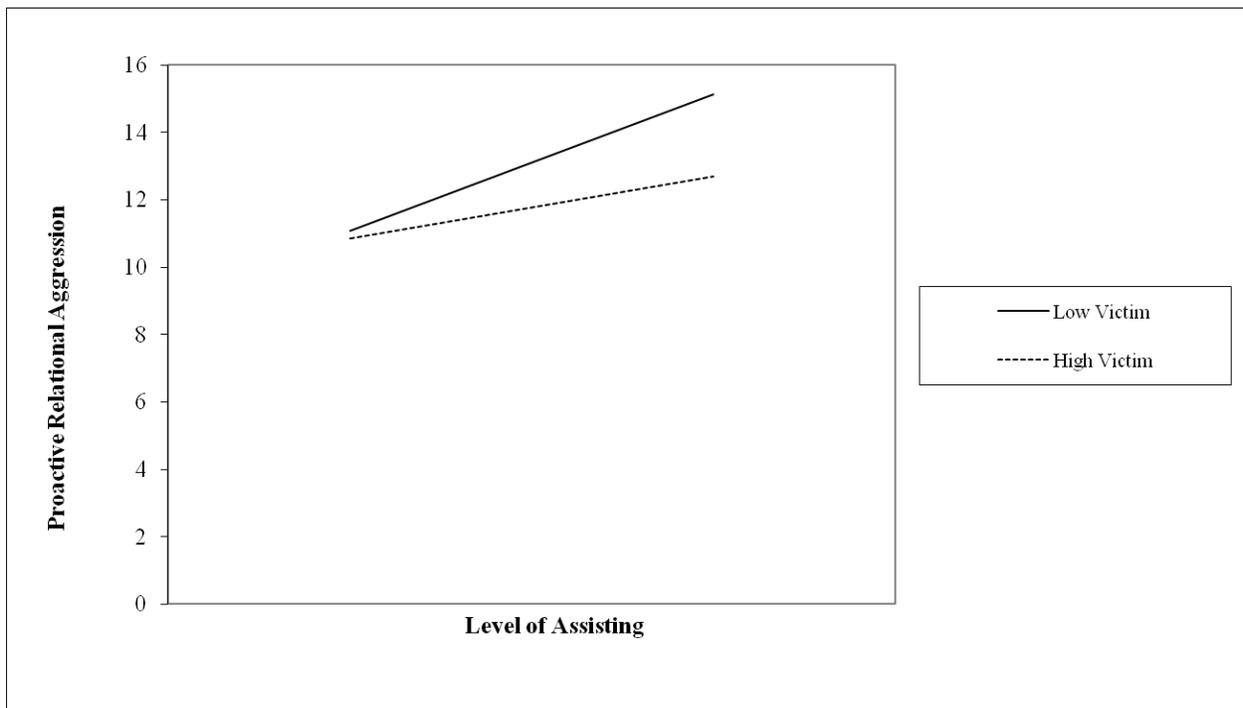


Figure 7
Graph Illustrating the Moderating Role of Victimization on the Association between Assisting and Thrill and Adventure Seeking

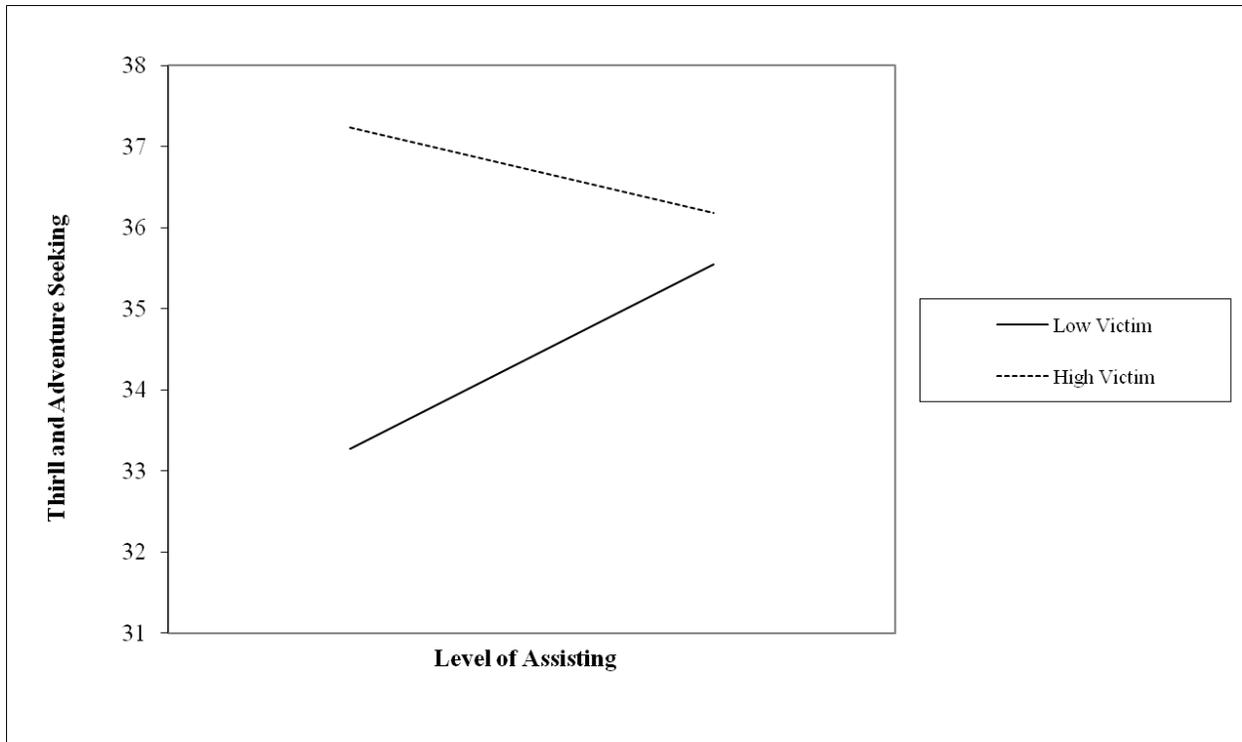
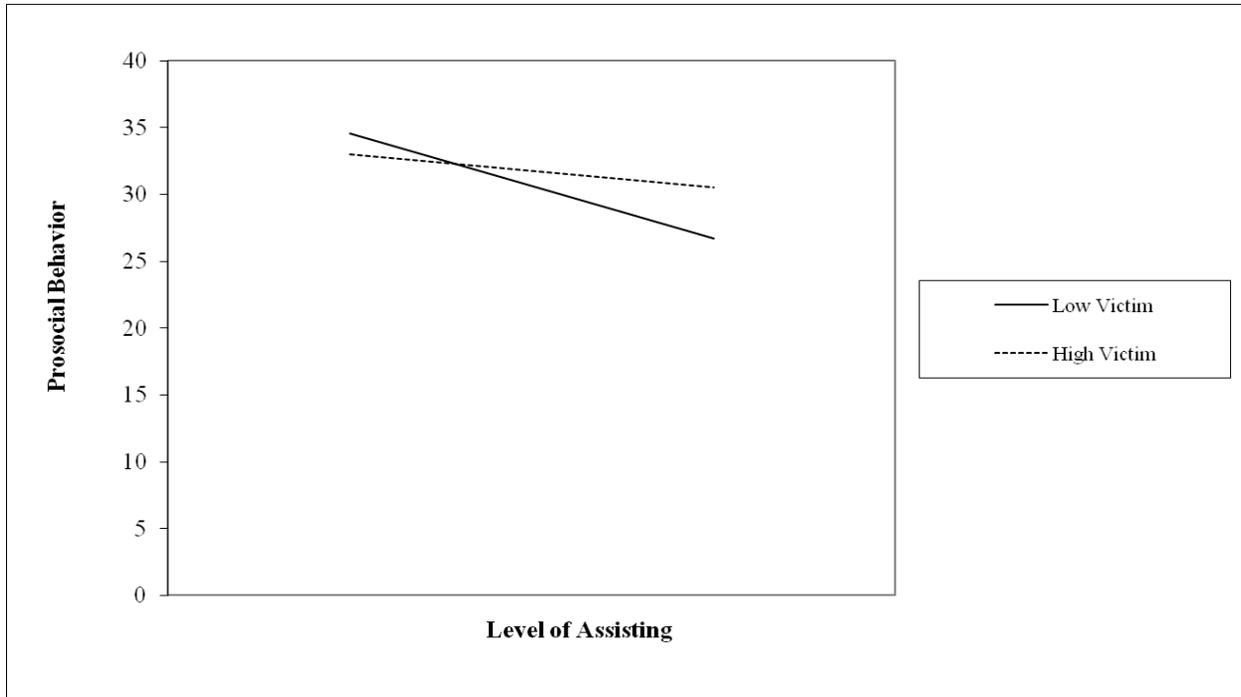


Figure 8

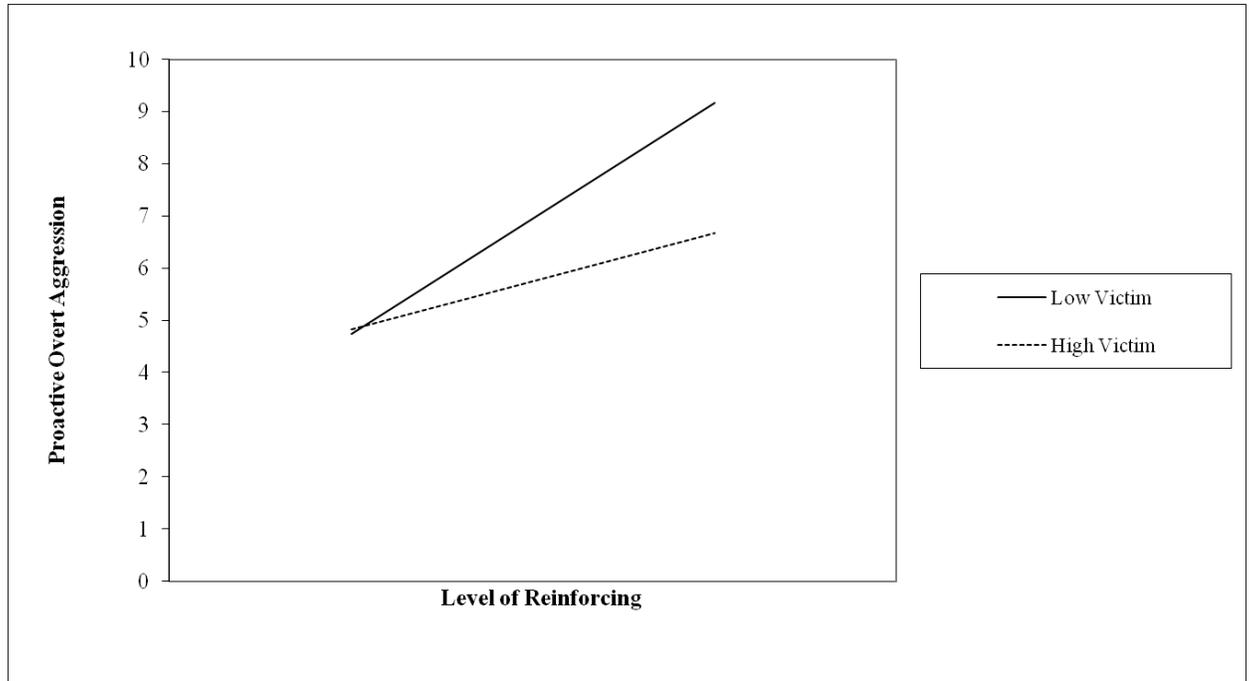
Graph Illustrating the Moderating Role of Victimization on the Association between Assisting and Prosocial Behavior



The results from the series of regression analyses examining the interaction between reinforcers and victims were similar to those found for bullies and assistants. Like bullies and assistants, the interaction between bullying and reinforcing predicted proactive relational aggression (R^2 change=.02; $p<.05$), proactive overt aggression (R^2 change=.03; $p<.01$), and reactive overt aggression (R^2 change=.03; $p<.01$). The association between reinforcing and aggression was stronger in those low on victimization. The interaction with proactive overt aggression is provided in Figure 9 to illustrate these effects. Unlike analyses examining bullies and reinforcers, the interaction between reinforcers and victimization did not significantly predict relational reactive aggression (R^2 change=.01; $p=n.s.$).

Figure 9

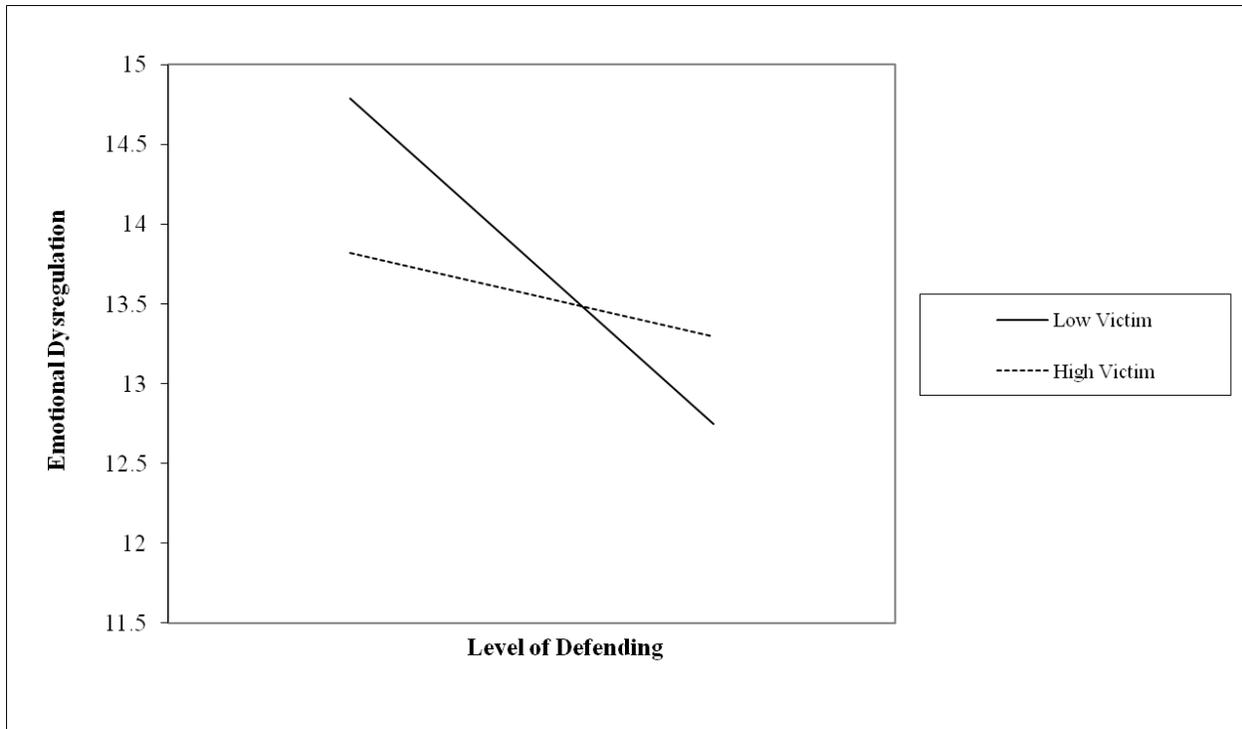
Graph Illustrating the Moderating Role of Victimization on the Association between Reinforcing and Proactive Overt



At T1 there were few significant defender by victimization interactions. The interaction between defending and victimization did predict emotional dysregulation (R^2 change=.02; $p<.05$). Specifically, defending scores were most strongly negatively associated with emotional dysregulation in those with the lowest victimization scores. A graph of this regression is provided in Figure 10.

Figure 10

Graph Illustrating the Moderating Role of Victimization on the Association between Defending and Emotional Dysregulation



The results of the T2 linear regressions also found several significant interactions but these were different in form than those found at T1. Results of these analyses can be found in Table 11. Specifically, bullying and victimization interaction also predicted proactive relational aggression (R^2 change=.02; $p<.05$) and proactive overt aggression (R^2 change=.06; $p<.01$). However, in contrast to T1, the association between bullying and proactive relational and overt aggression was strongest in those with the highest victimization scores. This interaction for proactive overt aggression is illustrated in Figure 11. This same type of interaction was found for assisting and victimization at T2 predicting proactive overt aggression (R^2 change=.04; $p<.01$). This is illustrated in Figure 12. The reinforcing and victimization interaction was also significant in predicting proactive relational (R^2 change=.06; $p<.01$), reactive relational (R^2 change=.02; $p<.05$), proactive overt (R^2 change=.11; $p<.01$), conduct problems (R^2 change=.02;

p<.05). In these cases, the bullying roles were more strongly associated with aggression at high levels of victimization. A regression of reinforcing and victimization predicting proactive relational aggression and conduct problems are plotted in Figures 13 and 14.

Figure 11
T2 Graph Illustrating the Moderating Role of Victimization on the Association between Bullying and Proactive Overt Aggression

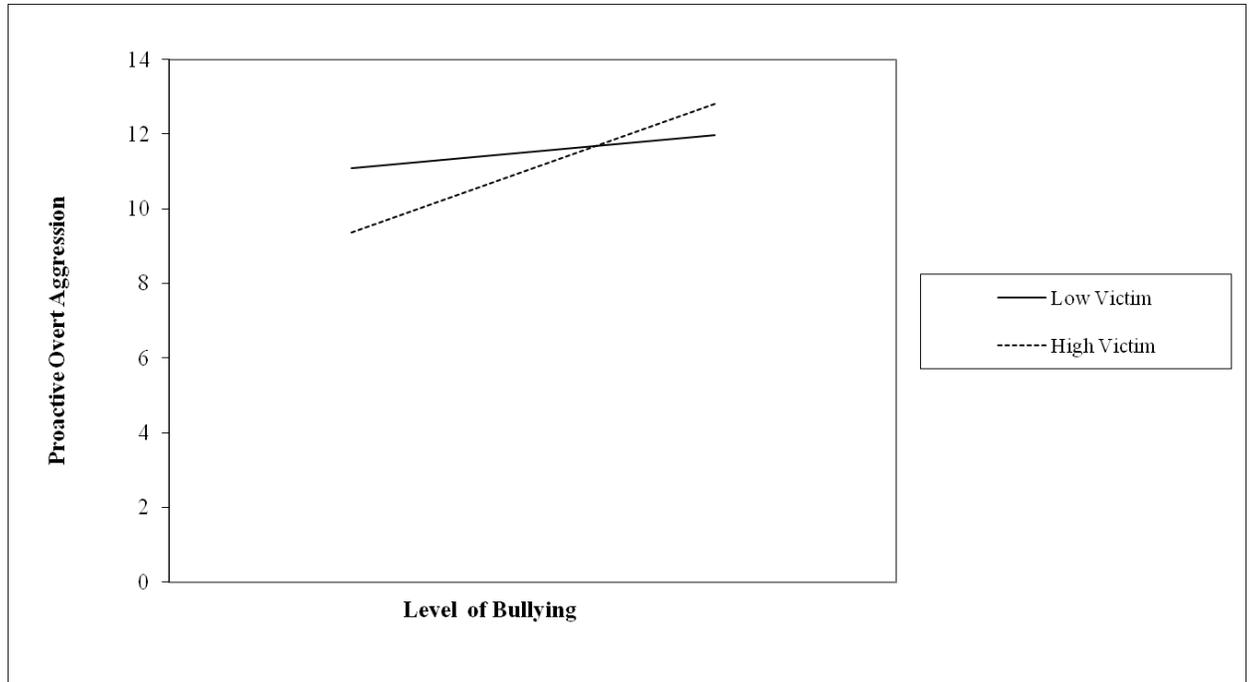


Figure 12

T2 Graph Illustrating the Moderating Role of Victimization on the Association between Assisting and Proactive Overt Aggression

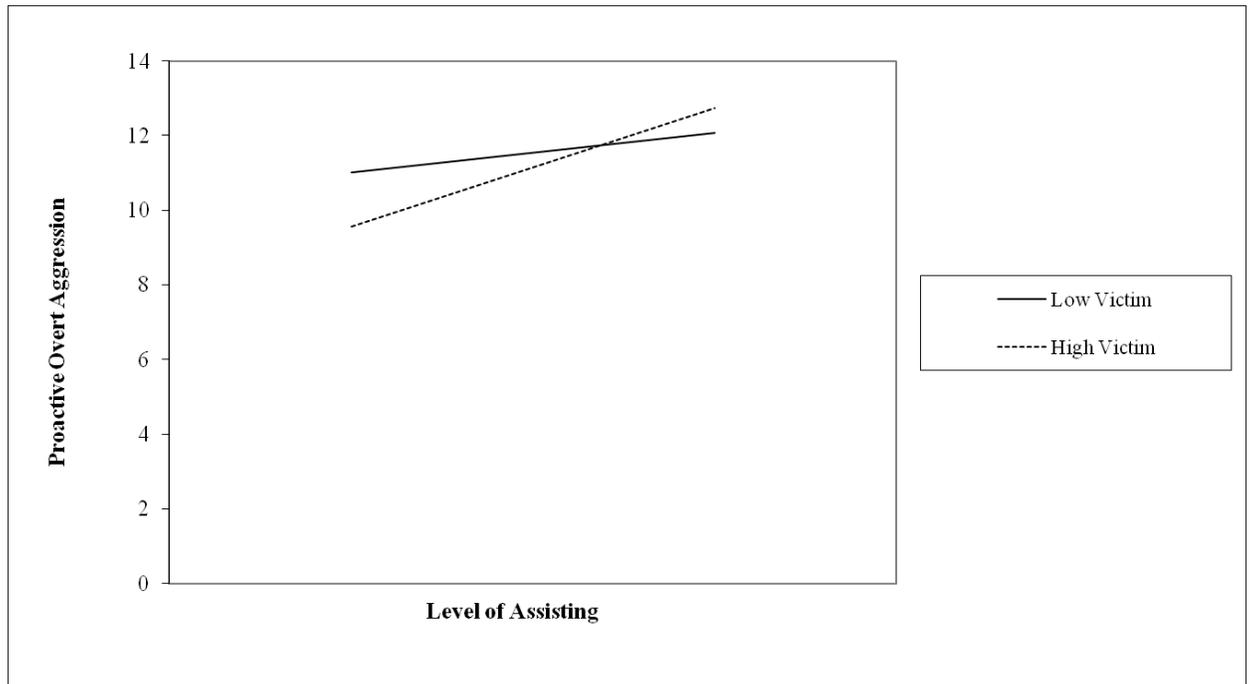


Figure 13

T2 Graph Illustrating the Moderating Role of Victimization on the Association between Reinforcing and Proactive Relational Aggression

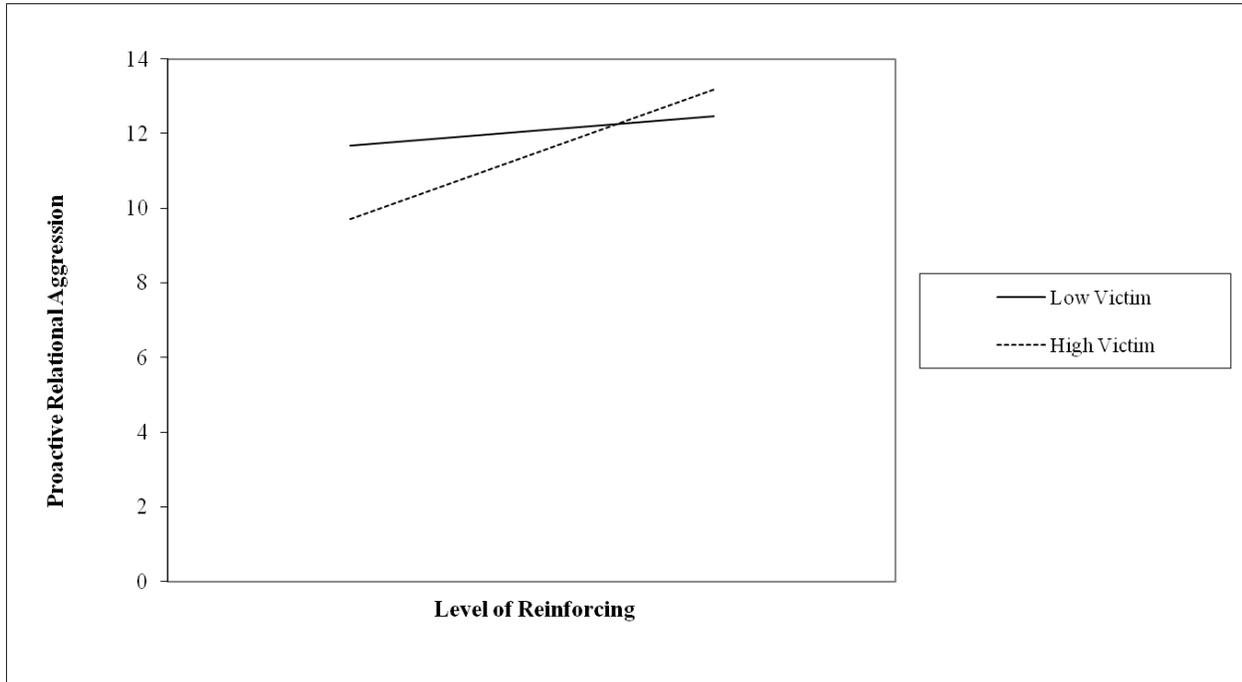
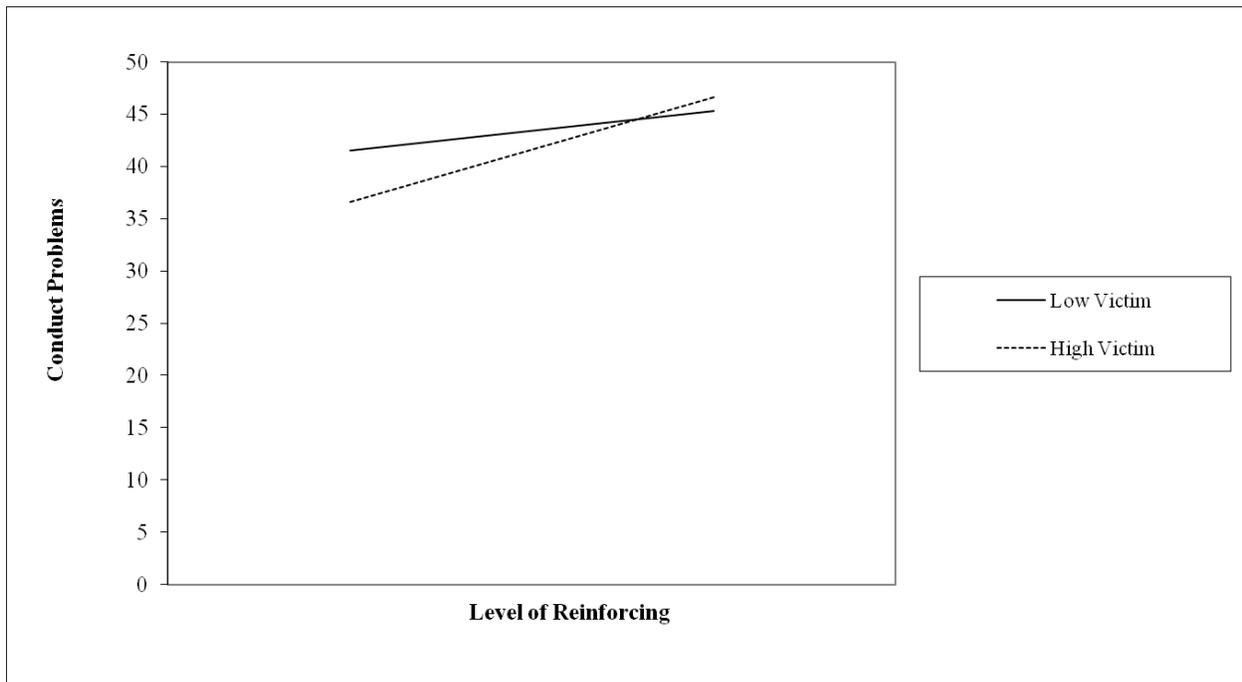


Figure 14
T2 Graph Illustrating the Moderating Role of Victimization on the Association between Reinforcing and Conduct Problems



In addition to these interactions with aggression there was also an interaction between reinforcing and victimization in predicting positive expectations for aggression (R^2 change=.03; $p<.05$). This was again due to the relationship between reinforcing and positive expectations for aggression being stronger when levels of victimization were higher. There was also an interaction between bullying and victimization predicted thrill and adventure seeking (R^2 change=.04; $p<.01$). In this case, the relationship between bullying and thrill and adventure seeking was also strongest when victimization was elevated.

Table 11

T2 Linear Regression Analysis: Examining the Interaction Between the Participant Role and Victimization Scales in Predicting Social, Behavioral, and Emotional Correlates

	Bully	Victim	Interaction	R² change
Social/Behavioral/Emotional				
Conduct Problems	.26**	-.08	.07	.00
Callous-Unemotional Traits	.21*	.01	-.09	.01
Thrill and Adventure Seeking	-.14	-.20*	.21**	.04**
Emotional Dysregulation	.23**	-.07	-.01	.00
Positive Expectations	.33***	-.06	.10	.01
Prosocial Behavior	-.10	-.11	.02	.00
Aggression				
Proactive Relational	.33***	-.24	.16*	.02*
Proactive Overt	.34***	-.07	.25**	.06**
Reactive Relational	.34***	-.11	.04	.00
Reactive Overt	.42***	-.10	.06	.00
	Assistant	Victim	Interaction	R² change
Social/Behavioral/Emotional				
Conduct Problems	.31***	-.09	.01	.00

(Table 11 continued) *T2 Linear Regression Analysis: Examining the Interaction Between the Participant Role and Victimization Scales in Predicting Social, Behavioral, and Emotional Correlates*

Callous-Unemotional Traits	.22**	.01	-.11	.01
Thrill and Adventure Seeking	-.06	-.22**	.15	.02
Emotional Dysregulation	.20*	-.06	.01	.00
Positive Expectations	.33***	-.06	.09	.01
Prosocial Behavior	-.19*	-.07	.03	.00
Aggression				
Proactive Relational	.32***	-.11	.13	.01
Proactive Overt	.34***	-.06	.21**	.04**
Reactive Relational	.33***	-.11	.03	.00
Reactive Overt	.37***	-.09	.07	.00
	Reinforcer	Victim	Interaction	R² change
Social/Behavioral/Emotional				
Conduct Problems	.30***	-.07	.15*	.02*
Callous-Unemotional Traits	.19*	.01	.02	.00
Thrill and Adventure Seeking	-.06	-.20*	.12	.02
Emotional Dysregulation	.18*	-.03	.02	.00
Positive Expectations	.43***	-.07	.18*	.03*
Prosocial Behavior	-.10	-.11	.01	.00
Aggression				
Proactive Relational	.36***	-.11	.25***	.06***
Proactive Overt	.38***	-.05	.34***	.11***
Reactive Relational	.35***	-.10	.14*	.02*
Reactive Overt	.47***	-.10	.16*	.02*

(Table 11 continued) *T2 Linear Regression Analysis: Examining the Interaction Between the Participant Role and Victimization Scales in Predicting Social, Behavioral, and Emotional Correlates*

	Defender	Victim	Interaction	R² change
Social/Behavioral/Emotional				
Conduct Problems	-.04	.04	.15*	.02*
Callous-Unemotional Traits	-.04	.06	.22	.04**
Thrill and Adventure Seeking	-.10	-.17*	-.21**	.04**
Emotional Dysregulation	-.12	.03	.13	.02
Positive Expectations	.01	.11	.10	.01
Prosocial Behavior	.16*	-.15*	-.07	.00
Aggression				
Proactive Relational	.04	.03	.17*	.03*
Proactive Overt	-.01	.13	.16*	.03*
Reactive Relational	.02	.05	.17*	.03*
Reactive Overt	-.06	.09	.17*	.03*

***p<.001; **p<.01; *p<.05; β is Standardized

Another notable difference between T1 and T2 occurred when examining the interactions between defending and victimization status. There were significant interactions between defending and victimization when predicting the different types of aggressive behaviors; proactive relational (R^2 change=.03; p<.05), proactive overt (R^2 change=.03; p<.05), reactive relational (R^2 change=.03; p<.05), and reactive overt (R^2 change=.03; p<.01). For each of these interactions the negative association between defending and aggression type was strongest in those lowest on victimization. A graph of the significant regression analysis with reactive overt

aggression can be found in Figure 15. The interaction between defending and victimization predicted conduct problems (R^2 change=.02; $p < .05$). The negative association between defending and conduct problems was again stronger in individuals low on victimization. The interaction between defending and victimization also significantly predicted CU traits (R^2 change=.04; $p < .01$) and thrill and adventure seeking (R^2 change=.04; $p < .01$). The negative association between defending and CU traits was strongest among individuals who were low on victimization. An illustration of the regression and its association with CU traits can be observed in Figure 16. However, the negative association between defending and thrill and adventure seeking behaviors was strongest in those high on victimization.

Figure 15
T2 Graph Illustrating the Moderating Role of Victimization on the Association between Defending and Reactive Overt Aggression

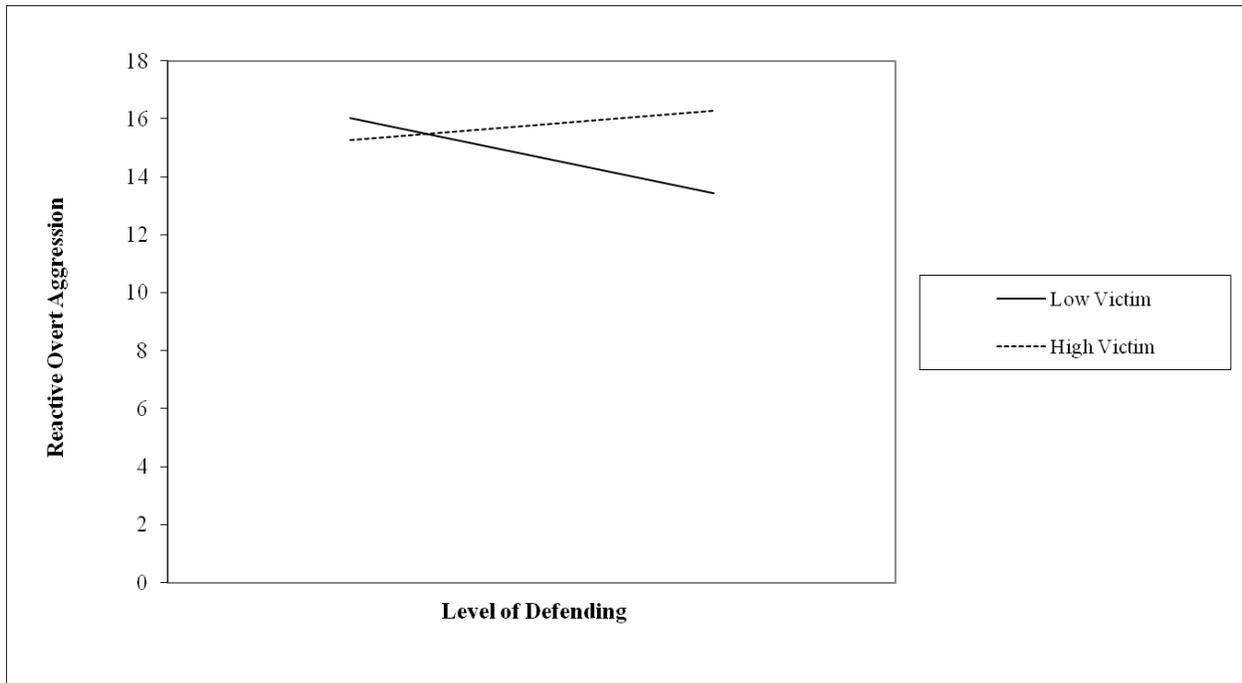
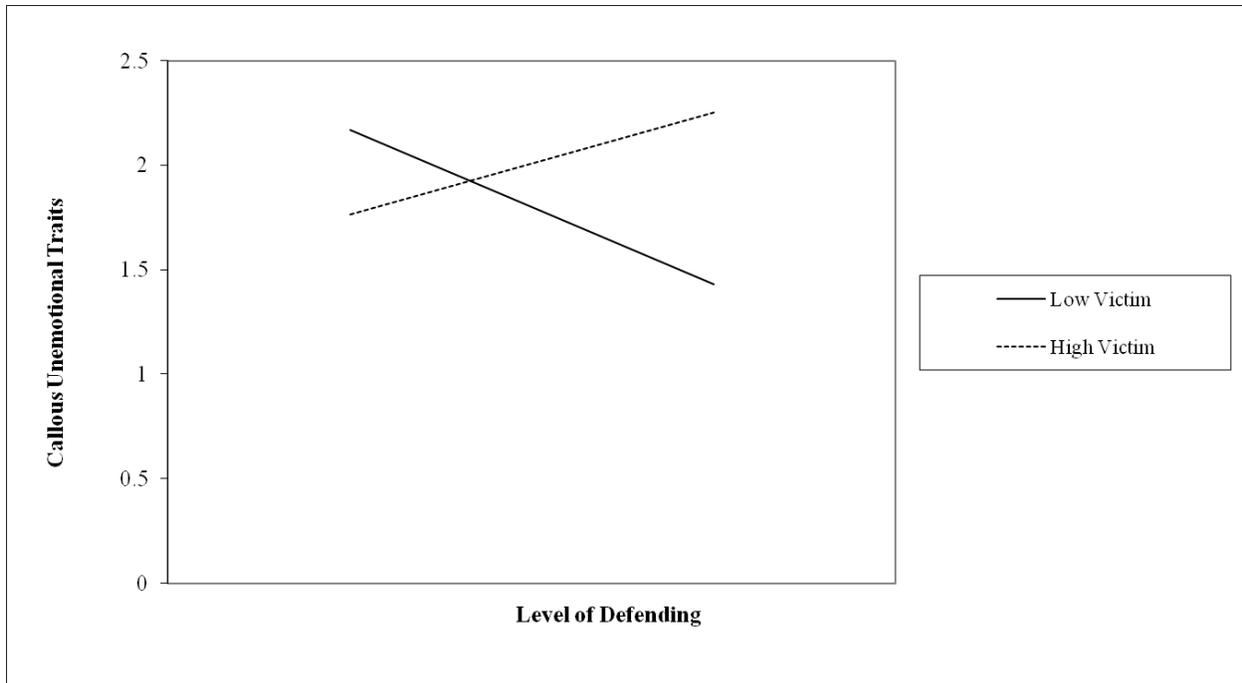


Figure 16

T2 Graph Illustrating the Moderating Role of Victimization on the Association between Defending and Callous Unemotional Traits



In summary, at T1 there were several interactions between the bullying roles and victimization for predicting aggression. As predicted, the bullying participant roles were most strongly associated with aggression (and negatively associated with prosocial behavior) at low levels of victimization. However, at T1, the defender role showed few interactions with victimization. In contrast, at T2 there were few interactions between bullying roles and victimization in predicting aggression. However, when they occurred, they were contrary to predictions, whereby the bullying participant roles were more strongly associated with aggression when victimization was high. However, at T2, there were several interactions between the defender role and victimization with defending being more strongly negatively correlated with aggression and CU traits at low levels of victimization.

Discussion

The purpose of this study was to examine the factorial validity, stability, and the social, behavioral and emotional correlates of several roles that students can play related to bullying behavior (Sutton & Smith, 1999). The current findings can be summarized by several main points. First, there was evidence that peer ratings of the bullying roles of bully, reinforcer, and assistant, and the role of defender could be separated in factor analyses. However, the bullying factors were highly correlated and there were few consistent differences between the correlates to the three bullying roles. Second, peer reports of the various participant roles were fairly stable across school years and this was not moderated by gender of the child or gender of the rater. However, the greater percentage of same raters across the two years led to greater levels of stability. Third, at both T1 and T2, all three bullying roles were significantly associated with aggression and with various behavioral and emotional correlates to aggression (e.g., prosocial behavior, CU traits, emotional dysregulation, positive outcome expectancies), although these correlations were somewhat stronger for boys than girls. Further, the defender role was associated with less aggression and more prosocial characteristics, and this was somewhat stronger for girls. Fourth, at T1, the associations between the bullying roles and aggression (but not the other behavioral and emotional correlates) were moderated by victimization, with the association between bullying and aggression being higher for those low on victimization. However, at T2, the association between defending and lower aggression and greater prosocial behavior was stronger for those low on victimization. Each of these findings are discussed in more detail below.

The Importance of Separating Bullying Roles

Our first goal was to test whether the various bullying roles that have been identified in past research could be differentiated by peer report. Confirmatory factor analysis provided some evidence to support the 4 distinct participant roles: bully, reinforcer, assistant, and defender. That is, the 4 factor model provided the best model fit for our data at T1 consistent with some past work (Salmivalli, 1996). However, the results should be interpreted in light of several other findings. First, the results of the chi-square difference tests at T2 did not provide support for the 4 distinct participant roles. Second, the latent factors of bully, reinforcer, and assistant were very highly intercorrelated ($r=.80$ to $r=1.0$). This is also consistent with past research (Salmivalli, 1998; Sutton & Smith, 1999). Finally, and more importantly, the correlates to the three bullying dimensions were similar. The participant roles of bully, assistant and reinforcer were all strongly positively related to CU traits, emotional dysregulation, positive expectations for aggression, conduct problems, proactive relational and overt aggression, and reactive relational and overt aggression. These participant roles were all negatively associated with prosocial behavior. Past research has supported the idea that the bullying participant roles of bully, assistant, and reinforce, are all associated with similar behavioral and emotional correlates to aggression. Specifically, studies have found that both bullies and reinforcers exhibit positive expectations for aggression (Andreou & Metallidou, 2004). Other studies have also found that bullies, reinforcers, and assistants are all more likely to approve of bullying behaviors (Salmivalli & Voeten, 2004) and tend to associate together (Salmivalli, 1998). Other studies that have used the participant roles scale as a continuous measure, as we did for our study, have also supported the idea that elevated levels of any type of bullying behavior is related to low levels of empathetic responsiveness (Gini et al., 2007). Thus, our research seems to suggest that individuals involved

in bullying other students, regardless of whether they are initiating the behavior or supporting the behavior, appear to demonstrate a more severe pattern of aggression, and several cognitive and emotional characteristics that have been associated with aggressive behavior.

The Stability of Bullying Roles

The next aim of the current study was to explore the stability of bullying roles across school years. The correlations between the bullying roles at T1 and T2 were significant for all participant roles. This finding replicates previous research which found a high degree of correlation between the participant roles scales from the 6th to 8th grades (Salmivalli, 1998). Other research has also indicated that bullying participant roles are somewhat stable over time (Pelligrini & Bartini, 2000; Schafer et al., 2005)

However, it should be noted that again there was a high degree of correlation between the participant roles of bully, assistant and reinforcer at T1 and other bullying roles at T2. These findings suggest that peers consistently identify certain boys and girls as participants in bullying behaviors; however, they do not appear to be able to easily distinguish between these participant roles. It is possible that peers who witness bullying behaviors may be unable to recognize the distinctions between those who instigate bullying behaviors and those who simply support these bullying behaviors. It is also possible that individuals who participate in bullying episodes switch the role that they play in each episode. In contrast to the bullying participant roles, the participant role of defender consistently distinguished itself. These results have been supported in previous research (Espelage et al., 2001; Camodeca, 2002, Salmivalli, 1998).

An important advance of the current study is that we examined several potential moderators of the stability of bullying. First, we examined whether the number of same peers who rated the individual at T1 and T2 influenced the stability of peer reported participant roles. Results of our

analysis revealed that in general the participants with more same raters had greater degrees of stability. One possible explanation for this finding is a “rater effect”, in which raters have somewhat different perceptions of bullying behavior that they use in rating their peers. However, it is important to note that a moderate level of stability was found, even though the average number of same raters from T1 to T2 was 1.17. Also, even for those who had one or fewer same raters, there still was a moderate level of stability in their ratings of their peers bullying. Another possible explanation for the finding that more same raters across time led to greater stability is that individual with more same raters also had an overall greater number of same peers in their classroom from T1 to T2. It is possible that these peer group influences and norms that have been established in the previous year continue to influence individual’s behaviors (Pelligrini, 2007).

A second moderator that was tested was whether the stability of the participant roles would be influenced by the number of raters of the same gender as the participant. This was tested because it was possible girls and boys during this particular stage in development (i.e., early adolescence) tend to associate with same gender peers (Neal, 2007). As a result, same gender peers would have a better knowledge of their classmates’ aggressive behavior. However, there were no significant interactions in predicting stability associated with same gender raters.

We also examined whether the gender of the participant influenced the stability of each of the participant roles. We found some significant gender by participant role interactions. Specifically, for the participant roles of bully and assistant it appears that boys exhibit significantly greater stability than girls. These results were similar to the results that were found by Salmivalli (1998). She found that correlations between T1 and T2 bullying and reinforcing scores were stronger for boys than girls. This could be due to differences in the mechanisms that

support aggressive or bullying behaviors in boys and girls. Some research suggests that girls may be more influenced to participate in bullying behavior by social norms, while boy's individual personality characteristics may be more influential in contributing to bullying behaviors (Salmivalli & Voeten, 2004). This possibility would also be consistent with our finding that the correlations between bullying participant roles and the cognitive and emotional correlates to aggression were somewhat stronger in boys.

Bullying Roles and Characteristics Associated with Aggression

Our next goal was to examine the associations between the three bullying roles, aggressive behavior, and the emotional, cognitive and social correlates to aggression. As stated previously, all three bullying participant roles were significantly related to CU traits, emotional dysregulation, positive expectations for aggression, conduct problems, and all of the aggression subtypes. All three participant roles were also significantly negatively related to prosocial behavior at both T1 and T2; these findings were somewhat stronger for boys than girls. Results of our initial analyses are supported by previous research that indicates that individuals who engage in bullying behaviors in general, are more aggressive, less prosocial and less empathetic, and are likely to expect positive outcomes for their aggressive behaviors (Camodeca & Goossens, 2005; Perren & Alsaker, 2006; Pellegrini, 1998; Unever, 2005).

Contrary to expectations we did not find that bullying by girls would be more associated with relationally aggressive behavior than bullying by boys. Some previous research has also suggested that gender differences in the amount of relational aggression utilized by bullies may not be as great as was initially thought (David & Kistner, 2000). Other research suggests that the form of aggression used is not dependent on the bully, but on the gender of the individual being bullied. For example, girls have been found to be more likely to use relationally aggressive

behavior against other girls (Moretti, Odgers, & Jackson, 2004). Other research has suggested that boys, who were verbally aggressive with male peers, were relationally aggressive with female peers (Ostrov & Keating, 2004). Gender differences were found for the role of the defender, with girls being more likely to be nominated by peers for this role. As hypothesized, defending was positively correlated with prosocial behavior and negatively associated with conduct problems, positive expectations for aggression and CU traits. This finding has been supported in past research that found that defenders are more likely than bullies, victims, reinforcers, assistants, and outsiders to exhibit prosocial behaviors such as trust, cooperation, and altruism (Tani, Greenmen, Schneider, & Fergoso, 2003). Although these associations were found in both boys and girls, the relationship appeared to be somewhat stronger in girls. This could be due to gender differences in the values that individuals place on relationships. Some research has suggested that women, in general place more importance on establishing close relationships with others rather than independence and that they are more likely to define themselves by their relationships with others rather than their own individual accomplishments (Crick & Rose, 2000; Cross & Madison, 1997). Researchers speculate that because girls place such importance on interpersonal relationships, it is important for them to develop a skill set to maintain these relationships (Bowie, 2007). Because of this, girl defenders may be more likely to exhibit prosocial behavior as a way of maintaining their relationships.

Finally, we tested whether there would be significant participant role by victimization interactions in predicting aggression and its correlates. Our results suggest that at both T1 and T2 there were significant participant role by victim interactions; however, the direction of those interactions differed at T1 and T2. First, at T1 the associations between all three bullying participant roles (bully, reinforce, and assistant) and the various subtypes of aggression were

strongest in those individuals low on victimization. Very little research has explicitly tied proactive and reactive aggression to bullying behaviors. One such study, indicated that individuals who were bullies but not victims were more likely to be proactively aggressive, but that individuals who were both bullies and victims were more likely to be reactively aggressive (Unever, 2005). Although there was still a strong association between both types of aggression and all three bullying roles in the presence of high victimization scores, the relationship was consistently stronger in those individuals who were low on victimization. These results are supported by the research that has found that bullies often have higher social prestige than victims (Sijtsema, et al, 2009) and may successfully use their aggressive behavior to gain dominance that in ways protects them from being victimized (Camodeca & Goossens, 2005). In contrast to T1, at T2 the participant roles of bully, assistant, and reinforcer were the most strongly associated the aggressive subtypes when victimization status was high. However, it should be noted, that, like at T1, there was also a strong relationship between the participant roles of bully, assistant, and reinforce and the aggressive subtypes when victimization status was low. These results are more in line with previous research that suggests that individuals who were considered both bullies and victims exhibit the most severe patterns of psychopathology (Kokkinos & Panayioutou, 2004, Salmivalli & Niemien, 2002). These individuals are more likely to have higher levels of emotional dysregulation, more hyperactivity, and lower GPA's than other individuals (Nansel, 2001, Salmivalli et al., 2000; Toblin, 2005).

The reasons for the differences in the effects of victimization status at T1 and T2 are somewhat unclear. One possible reason for the differences between T1 and T2 linear regressions could be that individuals who exhibit bullying behaviors are more likely to be victimized over time. This idea was supported in a study by Menseni et al. (2003), which found increases in

victimization over a time period similar to the one used in the current study. It is possible that over time, individuals begin to recognize bullies and act against them. Indeed, research on the sociometric status of bullies has found that bullies are some of the most controversial and rejected individuals (Sljtsema, Veenstra, Lindenberg, & Salmivalli, 2008). It is possible that as a child begins to establish him or herself as a bully, he or she becomes progressively disliked by his or her peers, which in turn leads to more victimization. At T2 the associations between defending and lower aggression and greater prosocial behavior was stronger in those low on victimization. Previous studies have also suggested that individuals who are defenders are more well adjusted and more likely to use positive coping skills as solutions to their problem (Tani et al., 2007). These individuals are more likely to exhibit empathy, have better emotional regulation, and use more adaptive social cognitive strategies (Andreou & Metallidou, 2004; Warden & Mackinnon, 2003). These strengths are likely to be protective against future victimization by peers. In contrast to defenders, most individuals who are victims of aggression have higher levels of emotional instability and lower levels of friendliness, and conscientious (Tati et al., 2003). These individuals have also been found to have low self-esteem and lack self efficacy in social situations (Vijoen et al., 2005). This research on victims paints a picture of an individual whose personal characteristics would make it very difficult for him or her to become a defender. It therefore, makes intuitive sense, that the relationship between defending and prosocial behavior is stronger in individuals low on victimization.

Strengths and Limitations

This study had several strengths. First, the research was conducted in a relatively large non-referred school sample. It is important to study bullying and aggressive behaviors in non-referred samples because some bullying may not lead to referrals for intervention and, thus, may be

underrepresented in clinical samples. Second, this study was conducted on a US sample. As stated previously, much of the psychological research on bullying has traditionally been conducted in European samples (Midthassel, Bru, Idsoe, 2008; Olweus, 2007; Sijtsema, Veenstra, Lindenberg, Salmivalli, 2009). Preliminary evidence from this study and others suggests that the nature of bullying is consistent across continents (Antonio & Salzfass, 2007; Bauman, del Rio, 2005). Next this study was conducted at two time points. It is important to continue to gain an understanding of the stability of how bullying behaviors evolve over time. Finally, peer ratings of bullying were used and compared to self-reports of aggressive behavior and cognitive and emotional correlates which avoids inflated correlations due to shared method variance. Also, the use of peer reports is important because some previous research has suggested that individuals are less likely to rate themselves as bullies than their peers (Sutton & Smith, 1999).

This study also had several limitations. First, a large number of participants were excluded from the study at T2 because of a lack of peer raters who were participants in the study. There were also more individuals who had a smaller number of raters at T2 than at T1. This reduction in raters could have played a role in the differing findings at T1 and T2. Another possible explanation is that participants at T2 may not have had the opportunity to establish group dynamics that may have been present in the spring semester. It is important to note, however, that attrition analyses did not reveal significant differences between the means of the bullying variables at T1 and T2. Also, the relationships between the various participant roles and their correlates were similar at both T1 and T2. Second, this was a voluntary study and many of the most aggressive individuals may have been left out of the study because they did not return parental consent or were not compliant in completing all survey items. However, it should be

noted that this participation rate is consistent with the rate of active parental consent found in research conducted in other schools characterized by a high rate of poverty (Esbensen, Melde, Taylor, & Peterson, 2008). Also, a large study of 13,195 students from 143 high schools did not find that participation rates differed based on the students' aggressive behavior (i.e., carried a weapon during the past 30 days; been in a physical fight during the past 12 months) (Easton, Lowry, Brener, Grunbaum, & Kann, 2004). Third, it is also possible that participant roles scales could have been too short to appropriately capture the nuances of the different participant roles. It is possible that if we had included a questionnaire that had more items it is possible that there would be a greater chance that differences within these participant role scales would be captured. Finally, it is important to note that this sample was taken from a group of individuals in a semi-rural public school system. More research is needed to assess whether these results could be replicated in participants in a more urban environments in the United States. Past research has been conducted primarily on upper middle class Caucasian samples of European elementary and middle school age children (Gini, 2006; Goosen, Olthof, & Decker, 2006; Salmivalli, 1996, 1998). Although the current sample was taken from a semi-rural area, our population was more racially diverse than many of the previous studies of bullying roles (Salmivalli, 1996, 1998).

Implications for Future Research and Practice

While keeping these limitations in mind, our results have several implications for future research. First, this research is supportive of the idea that individuals who are involved in bullying behaviors, regardless of their participant role seem, to exhibit many negative cognitive, social, and emotional characteristics that have been associated with aggression in general. Further, these behaviors and their negative correlates appear to be stable over time. Specifically, individuals who were rated by peers as being high on bullying, reinforcing, and assisting all had

higher CU traits, emotional dysregulation, positive expectations for aggression and conduct problems. Thus, these results support that these children are an important target for intervention.

Also, it suggests that effective bullying interventions should target the emotional and cognitive dysfunctions that have been used in interventions for aggressive individuals. For example, both Aggressive Replacement Training Program (ART) (Goldstein & Gibbs, 1986) and the Anger Coping Program (Lochman & Lenhart, 1993) are cognitive-behaviorally based programs that focus on helping to promote social skill competence, moral reasoning, anger management, and introduce social problem solving skills. The ART program targets chronically aggressive children and adolescents. It requires that children and adolescents attend 3 weekly one hour training sessions over the course of ten weeks (Goldstein, Glick, & Gibbs, 1998). The Anger Coping Program targets slightly younger chronically aggressive children (ages 8-12). The Anger Coping program consists of 12 group sessions and coincides with a behavior management program that is used by classroom teacher. In addition to teaching children anger management and social skill during group sessions, children in this program are reinforced by their teachers for positive behavior and for inhibiting aggressive behavior. The children in this program receive consistent structured behavioral management, at least during the school day (Lochman & Lenhart, 1993). Theoretically, these programs should be effective in improving children's peer relationships and decreasing bullying behaviors by targeting the emotional dysregulation and beliefs that aggressive behaviors will produce positive results (Dodge, Bates, & Pettit, 1990). The programs also focus on replacing negative behaviors with more positive behaviors. Both programs have been shown to reduce aggression in controlled outcome studies (Barnoski, 2004; Lochman & Lenhart, 1993; Lochman & Wells, 1996 ; Wilder Research Center, 2004).

Another important finding is that individuals who are considered bullies, reinforcers, and assistants all utilize the different forms and functions of aggressive behaviors to carry out their bullying behaviors. This is important finding because it illustrates that these youth also use relational forms of aggression, which may not be as easily identified by teachers and staff (Salmivalli et al., 1997). This finding highlights the importance of educating administrators, teachers, and parents about all of the manifestations of aggressive behavior. The importance of this education is highlighted in one of the most successful bullying interventions to date. The Olweus Bullying Prevention Program (2007) attempts to target administrators, teachers, parents, and students and educate them on the manifestations and consequences of bullying behaviors. Additionally, this program encourages administrators, teachers, and parents to set up a series of clear guidelines with their children regarding what is acceptable and what is not acceptable behavior. This program also encourages positive behaviors, and works to promote a classroom atmosphere where prosocial behaviors are rewarded and encouraged. The current research offers preliminary evidence that peer groups can influence the stability of aggressive behavior. Therefore, creating an atmosphere where the group is supportive of the victim and intolerant of the bullying behavior is likely to contribute to reductions in bullying behaviors. The Olweus bullying program has indeed been effective in reducing bullying in several different samples (Limber et al., 2004).

Although our findings do not provide strong support for separating the bullying roles of bully, reinforcer, and assistant, our results do suggest that the role of defender may be important. Our findings suggest that defending behavior is relatively stable across school years and is associated with higher levels of prosocial behaviors and lower CU traits, emotional dysregulation, and aggression. Past research suggests that individuals who are considered

defenders have the ability to reduce the aggressive behaviors of others (Meneseni et al, 2003). Specifically, Menseni and colleagues identified as defenders were targeted and these individuals led groups of their peers in discussions about the negative influence of bullying. This intervention's aim was twofold. First, it targeted individuals with prosocial tendencies and focused on fostering those positive qualities. Second, it aimed to change the classroom dynamic to one that was more supportive of victims of bullying and where the classroom norm was that bullying would not be tolerated. An evaluation of this program found that when compared to a control group who did not receive the intervention, the experimental group did not show the same level of increase in bullying behaviors that the control group exhibited (Menesini et al., 2003). Thus, although our study did not fully support the distinction among the various bullying roles (e.g., bully, reinforce, assister), it did support the importance of the defender role, as a potential participant in school-based interventions designed to reduce bullying behaviors.

End Note

- ¹ The error term MLMV was used because the data was continuous but not distributed normally. The MLMV option produces a mean and variance adjusted chi-square test of model fit (Muthen & Muthen, 2006). An adjusted chi-square cannot be used for chi-square difference testing of nested models because a difference between two scaled chi-squares for nested models is not distributed as chi-square (Satorra, 2000). Chi-square difference tests were hand calculated using Satorra-Bentler Scale chi-square formula as recommended by Muthen and Muthen (2006).

References

- Andreou, E. & Metallidou, P. (2004). The Relationship of academic and social cognition to Behavior in bullying situations among Greek primary school children. *Educational Psychology, 24*, 27-41.
- Antonio, D., & Salzfass, E. (2007). How We Treat One Another in School. *Educational Leadership, 64*(8), 32-38.
- Atria, M., Strohmeier, D., & Spiel, C. (2007). The relevance of the school class as a social unit for the prevalence of bullying and victimization. *European Journal of Developmental Psychology, 4*, 372-387.
- Berkowitz, L. (1993). *Aggression: Its causes, consequences, and control*. New York: Academic Press.
- Biggs, B. K., Twemlow, S. W., Fonagy, P., & Dill, E. J. (2008). Teacher adherence and its relations to teacher attitudes and student outcomes in an elementary school-based violence prevention program. *School Psychology Review, 37*, 533-549.
- Björkqvist, K. (2001). Social defeat as a stressor in humans. *Physiology & Behavior, 73*(3), 435-442.
- Bond, L., Carlin, J.B., Thomas, L., Rubin, K., & Patton, G. (2001). Does bullying cause Emotional problems? A prospective study of young teenagers. *BMJ, 323*, 480-484.
- Bowie, B.H. (2007). Relational Aggression, Gender, and the developmental process. *Journal of Child and adolescent psychiatric nursing, 20*, 107-115.
- Cairns, R.B., & Cairns, B.D. (1994). *Lifelines and risks: Pathways of youth in our time*. New York: Cambridge University Press.
- Camodeca, M., Goossens, F., Meerum, T., & Sheuengel, C. (2002). Bullying and victimization among school-age children: Stability and links to proactive and reactive aggression. *Social Development, 11*, 332-345.
- Camodeca, M. & Goossens, F. (2005). Aggression, social cognitions, anger, and sadness in bullies and victims. *Journal of Child Psychology and Psychiatry, 46*, 186-197.
- Camodeca, M. & Goossens, F. (2005). Children's opinions on effective strategies to cope with bullying: the importance of bullying role and perspective. *Educational Research, 47*, 93-105.
- Cohen, G., & Prinstein, M. (2006). Peer Contagion of Aggression and Health Risk Behavior Among Adolescent Males: An Experimental Investigation of Effects on Public Conduct and Private Attitudes. *Child Development, 77*(4), 967-983.

- Crapanzano, A., Frick, P., & Terranova, A. (in press). Patterns of Relational and Physical Aggression in a School-Based Sample of Boys and Girls. *Journal of Abnormal Child Psychology*.
- Crick, N. (1996). The role of overt aggression, relational aggression, and prosocial behavior in the prediction of children's future social adjustment. *Child Development, 67*(5), 2317-2327.
- Crick, N.R., & Grotpeter, J.K. (1995). Relational aggression, gender, and social-psychological adjustment.
- Crick, N., & Rose, A. (2000). Toward a gender-balanced approach to the study of social emotional development: A look at relational aggression. *Toward a feminist developmental psychology* (pp. 153-168).
- Cross, S., & Madson, L. (1997, July). Models of the self: Self-construals and gender. *Psychological Bulletin, 122*(1), 5-37.
- Coie, J., Dodge, K., Terry, R., & Wright, V. (1991). The role of aggression in peer relations: An analysis of aggression episodes in boys' play groups. *Child Development, 62*(4), 812-826.
- David, C., & Kisner, J. (2000). Do Positive Self-Perceptions Have a 'Dark Side'? Examination of the Link between Perceptual Bias.. *Journal of Abnormal Child Psychology, 28*(4), 327.
- Dempsey, J.P, Fireman, G.D., Wang, E. (2006). Transitioning out of peer victimization in school children: Gender and Behavioral Characteristics. *Journal of Psychopathology and Behavioral Assessment, 28*, 273-282.
- DeRosier, M., Cillessen, A., Coie, J., & Dodge, K. (1994). Group social context and children's aggressive behavior. *Child Development, 65*(4), 1068-1079.
- Dill, E. J., Vernberg, E. M., Fongay, P., Twemlow, S. W., & Gamm, B. K. (2008). Negative affect in victimized children: The roles of social withdrawal, peer rejection, and attitudes toward bullying. *Journal of Abnormal Child Psychology, 32*, 159-173.
- Dixon, R., Smith, P. K., & Jenks, C. (2004a). Bullying and difference: a case study of peer group dynamics in one school. *Journal of School Violence*2004a; 3(4): 17-39.
- Dodge, K.A., Bates, GE. & Pettit, G.S. (1990). *Mechanisms in the cycle of violence*.
- Dodge, K.A. & Coie, J.D. (1987). Social-information-processing factors in reactive and proactive aggression in children's peer groups. *Journal of Personality and Social Psychology, 53*, 1146-1158.

- Dodge, K.A., Lochman, J.E., Harnish, J.D., Bates, J.E., & Pettit, G.S. (1997). Reactive and proactive aggression in school children and psychiatrically impaired chronically assaultive youth. *Journal of Abnormal Psychology, 106*, 37-51
- Eaton, D.K., Lowry, R., Brener, N.D., Grunbaum, J. A., & Kann, L. (2004). Passive versus active parental permission in school-based research: Does the type of permission affect prevalence estimates of risk behaviors? *Evaluation Review, 28*, 564-577.
- Esbensen, F., Melde, C., Taylor, T., & Peterson, D. (2008). Active Parental Consent in School-Based Research: How Much Is Enough and How Do We Get It?. *Evaluation Review, 32*(4), 335-362.
- Ellis, W. & Zarbatany, L. (2007). Peer –Group Status as a Moderator of Group Influence on Children’s Deviant, Aggressive, and Prosocial Behavior. *Child Development, 78*, 1240-1254.
- Espelage, D., & Holt, M. (2001). Bullying and victimization during early adolescence: Peer influences and psychosocial correlates. *Bullying behavior: Current issues, research, and interventions* (pp. 123-142). Binghamton, NY US: Haworth Maltreatment and Trauma P Press/The Haworth Press.
- Frick, P.J., Cornell, A.H., Barry, C.T., Bodin, S.D., & Dane, H.E. (2003). Callous-unemotional traits and conduct problems in the prediction of conduct problem severity, aggression, and self-report of delinquency. *Journal of Abnormal Child Psychology, 31*, 457-470.
- Frick, P.J. & Hare, R.D. (2001). *Antisocial process screening device: Technical manual*. New York: Multi-Health Systems, Inc.
- Frick, P.J., Lilienfeld, S.O., Ellis, M.L., Loney, B.R., & Silverthorn, P. (1999). The Association between anxiety and psychopathy dimensions in children. *Journal of Abnormal Child Psychology, 27*, 381-390.
- Frick, P.J., & Morris, A.S. (2004). Temperament and developmental pathways to conduct problems. *Journal of Clinical Child and Adolescent Psychology, 33*, 54-68.
- Frisen, A., Jonsson, A., & Persson, C. (2007). Adolescents’ Perception of Bullying: Who is the Victim? Who is the bully? What can be done to stop bullying? *Adolescence, 42*, 749-761.
- Gadow, K.D. & Sprafkin, J. (2000). *Early childhood inventory-4 screening manual*. StonyBrook, NY Checkmate Plus.
- Gadow, K., Sprafkin, J., Carlson, G., Schneider, J., Nolan, E., Mattison, R., et al. (2002). A DSM-IV-referenced, adolescent self-report rating scale. *Journal of the American Academy of Child & Adolescent Psychiatry, 41*(6), 671-679.

- Gini, G. (2006). Bullying as a social process: The role of group membership in students' Perception of inter-group aggression at school. *Journal of School Psychology, 44*(1), 51-65.
- Gini, G., Albiero, Benelli, B. & Altoe, G. (2007). Does Empathy Predict Adolescents' Bullying and Defending Behavior. *Aggressive Behavior, 33*, 467-476.
- Gini, G., Albiero, P., Benelli, B., Altoe, G. (2008). Determinants of adolescents' active defending and passive bystanding behavior in bullying. *Journal of Adolescence, 31*, 93-105.
- Gini, G., Pozzoli, T., Borghi, F., & Franzoni, L. (2008). The role of bystanders in students' perception of bullying and sense of safety. *Journal of School Psychology, 46*, 617-638.
- Green, L., Richardson, D.R., & Lago, T. (1996). How do friendship, indirect and direct aggression relate? *Aggressive Behavior, 22*, 81-86.
- Goldstein, A.P.; Barry Glick; and J.C. Gibbs. 1998. *Aggression Replacement Training: A Comprehensive Intervention for Aggressive Youth (revised ed.)*. Champaign, Ill: Research Press.
- Goossens, F.A., Olthof, T., Dekker, P.H.(2006). New Participant Role Scales: Comparison between Various Criteria for Assigning Roles and Indications for Their Validity. *A aggressive Behavior, 32*, 343-357.
- Hawley, P.H., Little, T., & Rodkin, P.C. (2007) *Aggression and Adaptation: The Bright Side of Bad Behavior*. New Jersey, Lawrence Erlbaum Associates.
- Huttunen, A., & Salmivalli, C. (1996). Ystävyysuhteet ja kiusaaminen koululuokassa. *Psykologia, 31*(6), 433-439.
- Holt, M.K., Finkelhor, D., Kantor, D., & Kaufman, G. (2007). Hidden forms of Victimization in elementary students involved in bullying. *School Psychology Review, 36*, 1-18.
- Karatzias, A., Power, K.G., Swanson, V. (2002). Bullying and Victimization in Scottish secondary Schools: Same or Separate Entities? *Aggressive Behavior, 28*, 45-61.
- Kaukianen, A., Salmivalli, C., Lagerspetz, K., Tamminen, M., Vauras, M., Maki, H., & Poskiparta, E. (2002). Learning difficulties, social intelligence, and self-concept: Connections to bully-victim problems. *Scandinavian Journal of Psychology, 43*, 269-278.
- Kokkinos, C.M. & Panayiotou, G. (2004). Predicting Bullying and Victimization Among Early adolescents: Associations with Disruptive Behavior Disorders. *Aggressive Behavior, 30*, 520-533.

- Kruh, I.P., Frick, P.J., Clement, C.B. (2005). Historical and personality correlates to the violence patterns of juveniles tried as adults. *Criminal Justice and Behavior*, 32, 69-96.
- Kumpulainen, K., Räsänen, E., & Puura, K. (2001). Psychiatric disorders and the use of mental health services among children involved in bullying. *Aggressive Behavior*, 27(2), 102-110.
- Laird, R.D., Pettit, G.S., Dodge, K.A., Bates, J.E. (2005). Peer relationship antecedents of delinquent behavior in late adolescence: Is there evidence of demographic group differences in developmental processes? *Development and Psychopathology*, 17, 127-144.
- Laird, R., Pettit, G., Dodge, K., & Bates, J. (1999). Best friendships, group relationships, and antisocial behavior in early adolescence. *Journal of Early Adolescence*, 19(4), 413-437.
- Levine, M., Cassidy, C., Brazier, G., & Reicher, S. (2002). Self-categorization and bystander non-intervention: Two experimental studies. *Journal of Applied Social Psychology*, 32(7), 1452-1463.
- Limber, S. (2004). Implementation of the Olweus Bullying Prevention programme in the Southeastern United States. *Bullying in Schools*.
- Lochman, J., & Lenhart, L. (1993). Anger coping intervention for aggressive children: C Conceptual models and outcome effects. *Clinical Psychology Review*, 13(8), 785-805.
- Lochman, J., & Wells, K. (1996). A social-cognitive intervention with aggressive children: P Prevention effects and contextual implementation issues. *Preventing childhood disorders, Substance abuse, and delinquency* (pp. 111-143).
- Loeber, R., & Hay, D. (1997). Key issues in the development of aggression and violence from childhood to early adulthood. *Annual Review of Psychology*, 48, 371-410.
- Loney, B.R., Frick, P.J., Clements, C.B., Ellis, M.L. & Kerlin, K. (2004). Callous-unemotional traits, impulsivity, and emotional processing in adolescents with antisocial behavior problems. *Journal of Clinical Child and Adolescent Psychology*, 32, 66-80.
- Ma, L., Phelps, E., Lerner, J., & Lerner, R. (2009). Academic competence for adolescents who bully and who are bullied: Findings from the 4-H study of positive youth development. *The Journal of Early Adolescence*, 29(6), 862-897.
- Mahdavi, D., & Smith, P. K. (2007). Individual risk factors or group dynamics? An investigation of the scapegoat hypothesis of victimization in school classes. *European Journal of Developmental Psychology*, 4, 353-371.

- Marsee, M.A., Barry, C.T. Frick, P.J., Kimonis, E.R., Muñoz, L.C., & Aucoin, K.J. (2006). *Factor structure of the Peer Conflict Scale in a sample of juvenile justice involved youth*. Manuscript in preparation.
- Marsee, M., & Frick, P. (2007). Exploring the cognitive and emotional correlates to proactive and reactive aggression in a sample of detained girls. *Journal of Abnormal Child Psychology*, 35, 969-981.
- Marsee, M., Weems, C., & Taylor, L. (2008). Exploring the association between aggression and anxiety in youth: A look at aggressive subtypes, gender, and social cognition. *Journal of Child and Family Studies*, 17(1), 154-168
- Mattison, R., Gadow, K., Sprafkin, J., Nolan, E., & Schneider, J. (2003). A DSM-IV- referenced teacher rating scale for use in clinical management. *Journal of the American Academy of Child & Adolescent Psychiatry*, 42(4), 442-449.
- Menesini, E., & Camodeca, M. (2008). Shame and guilt as behaviour regulators: Relationships with bullying, victimization and prosocial behaviour. *British Journal of Developmental Psychology*, 26(2), 183-196.
- Menesini, E., Melan, E., & Pignatti, B. (2000). Interactional styles of bullies and victims observed in a competitive and a cooperative setting. *Journal of Genetic Psychology*, 161(3), 261-281.
- Menesini, E., Codecasa, E., Benelli, B., & Cowie, H. (2003). Enhancing children's responsibility to take action against bullying: Evaluation of a befriending intervention in Italian middle schools. *Aggressive Behavior*, 29(1), 1-14.
- Menesini, E. & Camodeca, M. (2008). Shame and guilt as behavior regulators: Relationships with bullying, victimization and prosocial behavior. *British Journal of Developmental Psychology*, 26, 183-196.
- Midthassel, U., Bru, E., & Idsoe, T. (2008). Is the sustainability of reduction in bullying related to follow-up procedures?. *Educational Psychology*, 28(1), 83-95.
- Monks, C., Smith, P., & Swettenham, J. (2003). Aggressors, Victims, and Defenders in Preschool: Peer, Self-, and Teacher Reports. *Merrill-Palmer Quarterly: Journal of Developmental Psychology*, 49(4), 453-469.
- Moretti, M.M., Odgers, C.A., & Jackson, M.A. (2004). *Girls and Aggression: Contributing Factors and Intervention Principles*. (pp 57-74). Plenum Publishers, New York.
- Mouttapa, M., Valente, T., Gallaher, P., Rohrbach, L., & Unger, J. (2004). Social network predictors of bullying and victimization. *Adolescence*, 39(154), 315-335

- Munoz, L.C., Frick, P.J., Kimonis, E.R., & Aucoin, K.J. (2006). *Types of aggression, responsiveness to provocation, and callous-unemotional traits in detained adolescents*. Manuscript submitted for publication
- Munoz, L.C. & Frick, P.J. (2007). The reliability, stability, and predictive utility of the self-report version of the Antisocial Process Screening Device. *Scandinavian Journal of Psychology, 48*, 299-312.
- Muthen, L.K. & Muthen, B.O. (2006). *MPlus: Stastical Analysis with Latent Variables User's Guide*. Los Angeles, CA.
- Nansel, T., Overpeck, & M., Pilla, R.S (2001). Bullying Behaviors Among US Youth: Prevalence and Association with Psychosocial Adjustment. *JAMA, 16*, 2094-2100.
- Neal, J. (2007, December). Why social networks matter: A structural approach to the study of relational aggression in middle childhood and adolescence. *Child & Youth Care Forum, 36*(5), 195-211.
- Nesdale, D. Milliner, E., Duffy, A., Griffiths, J.A. (2009). Group Membership, Group Norms, Empathy, and Young Children's Intentions to Aggress. *Aggressive Behavior, 35*, 244-258.
- Newman, J.P., Patterson, C.M., & Kosson, D.S. (1987). Response preservation in Psychopaths. *Journal of Abnormal Psychology, 96*, 145-148.
- Nickerson, A.B., Mele, D., Princiotta, D. (2008). Attachment and Empathy as predictors of roles as defenders or outsiders in bullying interactions. *Journal of School Psychology, 46*, 687-703.
- Orobio de Castro, B. (2007). Do the same social mechanisms explain bullying in different classrooms? A commentary on Madhavi & Smith and Atria, Strohmeier, & Spiel. *European Journal of Developmental Psychology, 4*, 393-399.
- Olweus, D.(1991) Bully/Victim problems among school children: Basic Facts and effects Of a school based intervention program. In: Pepler D, Rubin K, editors. The development and treatment of childhood aggression. Hillsdale, NJ: Erlbaum.
- Olweus, D. (1993). *Bullying at school. What we know and what we can do*. Oxford, UK: Blackwell.
- Olweus, D. (1994). Annotation: Bullying at school: Basic facts and effects of a school based intervention program. *Journal Child Psychology and Psychiatry, 35*, 1171-1190.
- Olweus, D. (2001). Peer harassment: A critical analysis and some important issues. In J. Juvonen, & S. Graham (eds.). *Peer harassment in school: The plight of the vulnerable and victimized* (p. 3-20) . New York: Guilford Press.

- Ostrov, J., & Keating, C. (2004, May). Gender Differences in Preschool Aggression During Free Play and St
- Peets, K., Hodges, E., & Salmivalli, C. (2008). Affect-congruent social-cognitive evaluations and behaviors. *Child Development, 79*(1), 170-185.
- Pellegrini, A. D. (1998). Bullies and victims in school: A review and call for papers. *Journal of Applied Developmental Psychology, 19*, 165-176.
- Pellegrini, A. (2007). Is aggression adaptative? Yes: Some kinds are and in some ways. *Aggression and adaptation: The bright side to bad behavior* (pp. 85-105). Mahwah, NJ, US: Lawrence Erlbaum Associates Publishers.
- Perren, S., & Alsaker, F. (2006). Social behavior and peer relationships of victims, bully-victims, and bullies in kindergarten. *Journal of Child Psychology and Psychiatry, 47*(1), 45-57.
- Perry, D.G., Kusel, S.J. & Perry, L.C. (1988). Victims of Peer Aggression. *Developmental Psychology, 24*, 807-814.
- Rigby, K., & Johnson, B. (2006). Expressed readiness of Australian schoolchildren to act as bystanders in support of children who are being bullied. *Educational Psychology, 26*(3), 425-440.
- Russo, M.F., Garnett, S.S., Lahey, B.B. et.al. (1993). A sensation seeking scale for children: Further refinement and psychometric development. *Journal of Psychopathology and Behavioral Assessment, 15*, 69-86.
- Salmivalli, C., Huttunen, A., & Lagerspetz, K. (1997). Peer networks and bullying in schools. *Scandinavian Journal of Psychology, 38*(4), 305-312.
- Salmivalli, C., Kaukiainen, A., & Lagerspetz, K. (2000). Aggression and sociometric status among peers: Do gender and type of aggression matter?. *Scandinavian Journal of Psychology, 41*(1), 17-24.
- Salmivalli, C., Lagerspetz, K., Bjorkqvist, K., Osterman, K., & Kaukiainen, A. (1996). Bullying as a Group Process: Participant Roles and Their Relations to Social Status within the Group. *Aggressive Behavior, 22*, 1-15
- Salmivalli, C., Lappalainen, M., Lagerspetz, K.M. (1998). Stability and Change of Behavior in Connection with Bullying in Schools: A Two-Year Follow-Up. *Aggressive Behavior, 24*, 205-218.
- Salmivalli, C., & Nieminen, E. (2002). Proactive and reactive aggression among school bullies, v Victims, and bully-victims. *Aggressive Behavior, 28*(1), 30-44.
- Salmivalli, C. & Voeten, M. (2004). Connections between attitudes, group norms, and behavior In bullying situations. *International Journal of Behavioral Development. 24*6-258.

- Satorra, A. & Bentler, P.M. (2010). Ensuring positiveness of the scaled difference chi-square test statistic. *Psychometrika*, 75, 243-248.
- Satorra, A. (2000). Scale and adjusted restricted tests in multi-sample analysis of moment Structures. In Heijmans, R.D.H., Pollock, D.S.G. & Satorra, A. (eds.). *Innovations in Multivariate statistical analysis. A Festschrift for Heinz Neudecker* (p.p. 233-247). London: Kluwer Academic Publishers.
- Scafer, M., Korn, S., Brodbeck, F.C., Wolke, D., Schulz, H. (2005). Bullying roles in changing contexts: The stability of victim and bully roles from primary to secondary school. *International Journal of Behavioral Development*, 29, 323-335.
- Schwartz, D., & Proctor, L. (2000). Community violence exposure and children's social adjustment in the school peer group: The mediating roles of emotion regulation and social cognition. *Journal of Consulting and Clinical Psychology*, 68(4), 670-683.
- Schwartz, D., Hopmeyer Gorman, A., Nakamoto, J. & Toblin, R. (2005). Victimization in the Peer Group and Children's Academic Functioning. *Journal of Educational Psychology*, 97, 425-435.
- Shields, A., & Cicchetti, D. (1998). Reactive aggression among maltreated children: The contributions of attention and emotion dysregulation. *Journal of Clinical Child Psychology*, 27, 381-395.
- Sijtsema, J., Veenstra, R. Lindenberg, S., & Salmivalli, C. (2009). Empirical Test of Bullies' Status Goals: Assessing Direct Goals, Aggression, and Prestige. *Aggressive Behavior*, 35, 57-67.
- Smith, P.K. & Brain, P. (2000). Bullying in Schools: Lessons from Two Decades of Research. *Aggressive Behavior*, 26, 1-9.
- Smith, P.K. & Sharp, S. (1994). The Problem of School Bullying. *School Bullying: Insights and Perspectives*, Routledge.
- Smith, P., Shu, S., & Madsen, K. (2001). Characteristics of victims of school bullying: developmental changes in coping strategies and skills. *Peer harassment in school: The light of the vulnerable and victimized* (pp. 332-351). New York, NY US: Guilford Press.
- Smith, P., Talamelli, L., Cowie, H., Naylor, P., & Chauhan, P. (2004). Profiles of non-victims, escaped victims, continuing victims and new victims of school bullying. *British Journal of Educational Psychology*, 74(4), 565-581
- Smorti, A., & Ciucci, E. (2000). Narrative strategies in bullies and victims in Italian schools. *Aggressive Behavior*, 26(1), 33-48

- Solberg, M.E., Owleus, D. & Endresen, I.M. (2007). Bullies and victims at school: Are they the same pupils? *British Journal of Educational Psychology*, 77, 441-464.
- Sourander, A., et al. (2007). What is the Early Adulthood Outcome of Boys who Bully or are Bullied in Childhood? The Finnish "From a boy to a man" study. *Pediatrics*, 120, 397-404.
- Storch, E.A., Masia-Warner, C., Crisp, H., Stein, R.G. (2005). Peer victimization and Social anxiety in adolescence: a prospective study. *Aggressive Behavior*, 31, 437-452.
- Sutton, J. & Smith, P.K (1999). Bullying as a Group Process: An Adaptation of the Participant Role Approach. *Aggressive Behavior*, 25, 97-111
- Sutton, J., Smith, P., & Swettenham, J. (1999). Bullying and 'theory of mind': A critique of the social skills deficit' view of anti-social behaviour. *Social Development*, 8(1), 117-127.
- Sweeting, H., & West, P. (2003). Sex differences in health at ages 11, 13 and 15. *Social Science & Medicine*, 56(1), 31-39.
- Tani, F., Greenman, P., Schneider, B., & Fregoso, M. (2003). Bullying and the Big Five: A study of childhood personality and participant roles in bullying incidents. *School Psychology International*, 24(2), 131-146
- Toblin, R., Schwartz, D., Gorman, A., & Abou-ezzedine, T. (2005). Social-cognitive and behavioral attributes of aggressive victims of bullying. *Journal of Applied Developmental Psychology*, 26(3), 329-346.
- Unever, J.D. (2005). Bullies, Aggressive Victims, and Victims: Are They Distinct Groups? *Aggressive Behavior*, 31, 153-171.
- Vaillancourt, T. & Hymel, S. (2004). The Social Context of Children's Aggression. In M. Moretti, C.L. Odgers, & Jackson, M.A. *Girls and Aggression: Contributing Factors and Intervention Principles*. (pp 57-74). Plenum Publishers, New York.
- Vernberg, E.M., Jacobs, A.K., Hershberger, S.L. (1999). Peer Victimization and Attitudes about violence during early adolescence. *Journal of Clinical Child Psychology*, 28, 386-395.
- Vijoen, J.L., O'Neill, M.L., Sidhu, A. (2005). Bullying Behaviors in Female and Male Adolescent Offenders: Prevalence, Types, and Association with Psychosocial Adjustment. *Aggressive Behavior*, 31, 521-536.
- Vitaro, F., Brendgen, M., & Tremblay, R.E. (2002). Reactively and proactively aggressive children: Antecedent and subsequent characteristics. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, 43, 495-506.

- Warden, D. & Mackinnon, S. (2003). Prosocial children, bullies and victims: An investigation of their sociometric status, empathy and social problem-solving strategies. *British Journal of Developmental Psychology*, *21*, 367-385.
- Xie, H, Swift, D.J., Cairns, B.D., & Cairns, R.B. (2002). Aggressive behavior in social Interaction and developmental adaptation: a narrative analysis of interpersonal conflicts During early adolescence. *Social Development*, *11*, 205-224.
- Young Shin, K., Boyce, T., Yun-Joo, K., & Leventhal, B.L. (2009). Time trends, trajectories, and demographic predictors of bullying: A prospective study in Korean adolescents. *Journal of Adolescent Health*, *45*,360-367.
- Zeman, J., Shipman, K., & Penza-Clyve, S. (2001). Development and initial validation of the children's sadness management scale. *Journal of Nonverbal Behavior*, *25*, 187-205.

Vita

Annie Crapanzano was born and raised in New Orleans, LA. She received her B.A. in Psychology from Loyola University, New Orleans in 2005. She received her M.S. in Applied Developmental Psychology from the University of New Orleans in 2007. She is currently continuing her research on bullying and teaching at Loyola University New Orleans.