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Relations Among Gender-Typical and Gender-Atypical Uses of Aggression, Popularity, and Depression

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I graduated from UK (May 2008) with a Bachelor of Arts Degree in Psychology. I was in the Honors Program.

My Honors and Awards include: Phi Beta Kappa, Diachun Award, Mary Agnes Psychology Award, Arts and Sciences Development Award, Psi Chi Psychology Honor Society, and I was on the Dean’s List from fall semester 2004 to Spring Semester 2007.

I have been accepted to UK’s doctoral program in School Psychology, and I will begin in the fall. Issues that adolescents are facing are an area that I am interested in, especially peer victimization, and it is an area that I intend to continue to pursue in my graduate studies.

In the fall of my junior year, I began developing my study by reading various articles about peer victimization and bullying across different age groups. After much research in this area, my faculty mentors and I decided to investigate bullying and peer victimization in high school students; specifically, the nature of teasing in high school students and how different forms of bullying are related to gender. We traveled to four different high schools across the state to collect data from approximately 1,000 high school students last spring. The purpose of this study was to investigate the methods high school students use to bully other students, such as relational, physical, and verbal aggression, and how this varies with gender. Also, we were interested in how the form of aggression used affects the perpetrator’s social status.

To obtain this information, high school students were given a packet of questionnaires containing various measures. Our contribution to these measures included two narratives in which participants were asked to relate both an experience they had with participating in bullying and an experience they had being the victim of bullying. After data had been collected, we then worked on a method of coding the narratives on many different dimensions, including the form that the bullying took (i.e., physical, verbal, and relational), how the individual reacted to the incident, etc. We also included a definition of each different form of aggression that included examples of how it might be expressed in the narrative. The lesser-known form of aggression, relational aggression, was defined as harm to relationships, such as gossip, or spreading false rumors.

Recently, the data from the study was analyzed. Results indicated that females used more relational aggression and males used more physical aggression. There was no significant interaction between the form of aggression used during the bullying incident and social status; however, we did find that individuals who used gender inconsistent forms of aggression (i.e., males who used relational aggression and females who used physical aggression) reported higher levels of depression than individuals who used gender consistent forms of aggression. This could have occurred for many reasons; however, I believe that individuals believe they should conform to gender stereotypes, and that those who go against gender norms often realize that they are different and often feel awkward and that they are different from others.

Working in a research lab these past two years, and continuing on to conduct my own study in a related area, has given me immeasurable insight into the domain of research in psychology as well as instilled a deeper desire to continue on with this work and find other areas of research that I would be interested in. My experience working on a Senior Honors Thesis has been the most influential experience on my choice of future goals as well as the most helpful course that I have taken as an undergraduate. Because of my previous work in research on child peer victimization, I have made the decision to continue working with children and adolescents.

My most important extracurricular activity would have to be working in a research lab. I have been involved in a research lab in Psychology since my sophomore year, and it has been the best experience in preparing me for graduate school.

I presented a poster on this work at the Undergraduate Showcase of Scholars this past April, 2008, as well as at the Psychology Poster Session Day.
Relations Among Gender-Typical and Gender-Atypical Uses of Aggression, Popularity, and Depression

Abstract
The purpose of this study was to investigate how types of bullying engaged in by high school students (relational, physical, or verbal aggression) vary with gender and how they may be related to a student’s social status. Children in the ninth grade, from four different Kentucky high schools, were administered various measures as part of a larger study on social development in their own classroom. Measures used in our analysis included a bully and victim self-reported narrative, Bullying Questions and Belonging Questionnaire, and a Peer Nomination Scale. Results indicated that females used more relational aggression than males, and males used more physical aggression than females. Analysis did not reveal a significant relation between gender, form of aggression used, and social status. However, use of gender inconsistent forms of aggression (i.e., females using physical aggression and males using relational aggression) was found to be significantly related to levels of depression and sense of inadequacy. Additionally, females reported feeling more guilt than males during the bullying incident. These findings support past research, and suggest that females use a different form of aggression than males. Finally the results raise an intriguing question about the relation between use of a gender inconsistent form of aggression and internalizing difficulties.

Introduction
Late adolescence and early adulthood can be a time of confusion, conflict, and experimentation. High school students have many important decisions made within a short time period. Bullying and peer victimization also tend to be prevalent in this period of adjustment. However, others take offense at the comments and do not know how to cope or respond in such an ambiguous situation. Much research looking into the effects of bullying...
and peer victimization on children has been conducted, and the consequences can be negative (Nansel et al., 2001). The detrimental effects of bullying can also be seen in later adulthood. New information may provide insight into the different forms of bullying and how we might best be able to diminish the adverse affects of peer victimization. The purpose of this study was to investigate the various types of bullying engaged in by high school students, such as relational, physical, and verbal aggression; how these types vary with gender; and how they may be related to a student’s social status.

Previous research has defined peer victimization as “victimization that entails face-to-face confrontation (e.g., physical aggression, verbal abuse, nonverbal gesturing) or social manipulation through a third party (e.g., social ostracism, spreading rumors)” (Juvonen & Graham, 2001, p. xiii). Peer victimization is an extensive problem. More than 10% of students are self-reported victims of moderate or frequent bullying, and 13% of students engage in moderate or frequent bullying (Nansel et al., 2001). Bullying has also been found to be stable over time. Research has indicated that the utilization of such forms of aggression has an adverse effect on both the perpetrator and the victim. Nansel et al. (2001) reported that children who are the victims of persistent peer victimization may suffer from loneliness, anxiety, depression, and academic problems.

Current research has identified the possible risk factors associated with being victimized so that we may better understand who are the perpetrators and who are the victims. Those who are bullied have often been found to have internalizing problems such as anxiety, depression, and social withdrawal (Olweus, 1993). Bullies, on the other hand, are often characterized by displaying externalizing problems, such as hostility, impulsivity, and a need to dominate others. All of these risk factors place children at a greater hazard of later being involved in peer victimization and suffering the long-term consequences mentioned above.

While much past research has been devoted to the more overt forms of aggression that peer victimization may take, recent findings have indicated that there is another form of aggression, relational aggression, that has been less recognized and studied. Relational aggression includes behaviors in which damage to relationships “serves as the vehicle of harm” (Crick et al., 2006). Relational aggression can be both direct, in which the perpetrators plainly state the intentions of their actions, or indirect, in which the perpetrators may try to undermine an individual secretly, using rumors or gossip. Relational aggression has been shown to be potentially quite detrimental to both perpetrators and victim, with long-term consequences similar to those of other forms of aggression. Many studies suggest that females employ this method of aggression over any other form, while males primarily utilize physical and verbal forms of aggression (Crick et al., 2006).

Relational aggression plays a vital role in many young girls’ social interactions. It can take the form of social exclusion from a group, or false rumors or gossip spread about individuals so as to embarrass or abuse them. Relational aggression has also been used to gain the favor of other individuals so as to climb up the social ladder. Many females see it as a method of strengthening their popularity or social standing (Rose, Swenson & Waller, 2004).

Recent research on the use of this method to damage social relationships has provided evidence that girls do not experience a benign childhood as was once thought (Crick & Grot彼得, 1995). Additionally, girls who are the perpetrators of relational aggression may be at a greater risk for depression in early adolescence (Conway, 2005). Further research is needed in this area to provide insight into possible ways to alleviate these negative long-term effects.

In a recent study (Crick et al., 2006), gender was found to be related to different forms of aggression, such that males were more likely to exhibit overt or physical aggression and females were more likely to exhibit relational aggression. Additionally, individuals who exhibited gender inconsistent behavior (e.g. males utilizing relational aggression or females utilizing physical aggression) were more likely to receive more negative reactions from both peers and adults, as well as to display withdrawn behavior.

To expand on the risks associated with relational aggression, Leadbeater et al. (2006) examined the negative consequences of relational and physical aggression and how these change with gender. These investigators found that there are few social benefits of physical aggression and many costs. Those who participate in relational aggression often experience more relational victimization; this is especially true for boys. However, they also found that females who engage in relational aggression, and who were not relationally victimized, received more positive attention from their peers. Further, these individuals reported more rewards, such as popularity or peer acceptance, for participating in relational aggression. On the other hand, females who participated in physical aggression reported themselves to have lower peer acceptance and greater depressive symptoms (Leadbeater et al., 2006).

Some researchers have theorized that girls may use relational aggression as a means to gain a specific type of popularity, called perceived popularity (Rose et al., 2004). Perceived popularity differs from the conventional idea of popularity in that these are individuals who are believed by their peers to be popular but who are not
necessarily well liked. In a recent longitudinal study by Rose et al. (2004), perceived popularity was measured using a peer nomination scale. Students voted for peers whom they thought to be well liked or for peers whom they perceived as “popular.” A measure of both relational and overt aggression was also included in their questionnaire. Relationally aggressive acts were found to be more highly associated with perceived popularity, and initial perceived popularity later predicted increased relational aggression. However, the opposite was true for boys who participated in relational aggression. The authors explained this observation as due to boys participating in gender inconsistent forms of aggression that their peers do not accept.

In a similar study by Zimmer et al. (2005), researchers investigated gender differences in the forms of aggression that are utilized by boys and girls, as well as how gender-typical versus gender-atypical uses of aggression relates to peer status. Using a peer nomination scale similar to that of the study above, they found that children who engage in gender normative forms of aggression are perceived by their peers to be more well liked than those who engage in gender inconsistent behavior. Additionally, the researchers found relationally aggressive acts to increase peer acceptance when children reached adolescence.

The stability of forms of aggression and their influence on peer status were examined in a study by Cillessen and Mayeux (2004). These investigators also examined gender and age differences in these two forms of aggression and how these forms of aggression influence peer status. They found physical aggression to be more stable than relational aggression. They also found that as age increased in this sample of fifth- to ninth-grade children, relational aggression was increasingly associated with perceived popularity, such that individuals who utilized relational aggression were often found to have high perceived popularity. Further, perceived popularity was found to be a predictor of relational aggression, especially for girls. Cillessen and Mayeux deduced that this could be due to relational aggression being used by children and adolescents as a method to control their peers or to establish dominance. Their findings also suggest that this is true for males who use physical aggression as well, but not for males or females who participate in forms of aggression that are gender atypical, as previous research has also found.

The current study expands on previous research by examining how high school students bully other students, how this varies with gender, and how this may be related to a student’s social status. Given the previous findings, we predicted that girls will exhibit more relational aggression than physical aggression and that individuals who have differing patterns of aggression for their genders will be less liked by their peers. We also predicted that high levels of relational aggression are linked with higher levels of popularity for girls and lower levels of popularity for boys. High levels of overt aggression should also be linked with higher levels of popularity for boys and lower levels of popularity for girls.

A final prediction for this study is that the form of aggression that an individual is subjected to will be related to the victim’s level of distress. We made no a priori prediction on what this relationship will be.

Method
Participants
48 males and 53 females participated in this study. Students were recruited from four different Kentucky high schools, three from central Kentucky and one from north-western Kentucky. All ninth graders from these schools were allowed to participate in the study, there were no exclusionary criteria. All participants were between 13 and 16 years of age.

Recruitment
Participants were recruited from four different high schools, during their high school math class. Students were informed about their opportunity to participate in the study during their class by graduate students and research assistants who explained the purpose of the research study. Students were given consent forms for their parents to sign. They were instructed to return the consent form to their teachers before being allowed to participate in the study. Approximately 1,000 students were asked to participate in the study. Of these students, 984 returned the consent forms to participate in the study. For the purposes of this study, however, we used data from only those participants (N = 101) who completed the narrative measures.

Measures
Participants completed both a victim and a bully narrative in which they were asked to describe a time when they were bullied or teased and a time when they bullied or teased someone else, respectively. Extensive research has shown the value of using narratives, especially for relating experiences that may elicit anger or distress (Baumeister et al., 1990).

Victim Narratives.
Victim narratives were used to evaluate students’ emotions during a time in which they were bullied or picked on by a peer. Participants were asked to relate a memorable time in which they were bullied or picked on in a hostile manner. Instructions included a list of topics to include in the written narrative, such as what happened, why they think it happened, what emotions they experienced, how they responded during the event, and if there were any long-term effects from the event.
Six independent raters coded the narratives on the victims’ level of distress, anger, forgiveness, form of bullying (physical, verbal, relational, property offenses, physical aggression, and other), and how the victim responded to the incident. These items were rated on a five-point scale, 1 being “not at all,” 5 being “very much” (except for the form of aggression and how the victim responded to the incident, which were coded by categories).

For the coding of the form of bullying, coders were given specific definitions and examples of 5 different forms of victimization. Relational aggression was defined as spreading rumors or excluding someone. Verbal aggression was defined as insults, verbal harassment, and racial epithets. Property offenses was defined as damaging or taking property. Physical aggression was defined as hitting, tripping, or shoving. Coders were also given the option of selecting an “other” category. After the raters had completed coding the narratives, interrater reliability was analyzed and found to be satisfactory (Mean Reliability = .92).

Bully Narratives. Bully narratives were used to assess students’ emotions during a time in which they participated in bullying or teasing a peer in a hostile manner. Students were asked to describe important details of the memory, including what they did, why they think they did it, their emotions at the time, how they reacted, what was the victim’s response, whether the bully told an adult, and if long-term effects resulted from the experience. Coders who rated the victim narratives also rated the bully narratives for bully’s enjoyment, guilt, how much the bully blamed the victim, victim’s response, and what form of bullying was employed (i.e., physical, verbal, relational, etc.) The variables of victim’s response, and form of bullying that was employed were categorical in nature, while the other three variables used in the analyses were continuous variables. Interrater reliability was found satisfactory for the bully narrative as well (Mean Reliability = .93).

In the analyses of both the victim and the bully narratives, some limitations were included. The “other” category for the nature of the bullying incident was not used in analysis, because we were not interested in this category. Also, the category of property offenses was combined with the physical aggression category, because we considered property offenses to be another example of physical aggression.

Social Relationship Questionnaire. Participants also completed a peer nomination scale, called the Social Relationship Questionnaire, in which they were presented with a list of students from their school and in the ninth grade. Students were randomly selected to be on their questionnaire. Each classroom had a different list of students from other classrooms, and no one physically present in the classroom during data collection was on the list for a given student. Students were asked to rate those students on several different measures, including “How much would you like to be in school/social activities with this person?” on a scale of 1 to 5, 1 being “not at all,” 5 being “very much.” Other questions asked them to check the names of students whom they believed possessed a certain attribute, such as “Please check the name of those students whom you admire or look up to.”

Using this measure, students were classified on a continuous scale of high to low social status, based on the score obtained from other student’s views of them. Additionally, a measure of rejection was included on this questionnaire and was also used in analyses.

Behavior Assessment System for Children, Second Edition (BASC-2). The final measure used in this study was the Behavior Assessment System for Children, Second Edition (BASC-2). This is a multi-dimensional measure that looks at both adaptive and problem behaviors in children. Our study used the Adolescent Self-Report measure, which has 186 items on a 4-point scale ranging from “never” to “almost always.” For the purposes of our study, however, we looked only at the 87 items assessing six different internalizing problems: anxiety, depression, sense of inadequacy, school attitudes, interrelatedness, and self-esteem. There is much evidence to demonstrate this measure’s validity and reliability (Reynolds & Kamphaus, 1992).

Overview of Procedure

Questionnaires were group administered in students’ classrooms by a trained graduate or undergraduate research assistant as part of a larger study on social development. Students were given instructions on how to fill out certain measures and were told to work individually on their own surveys, and not to disturb other participants. Additionally, students were told to raise their hands if they had any questions about the material, so that a research assistant could assist them. For participating in the study, students were given small incentives (e.g., small candy, soda).

Results

The independent variables in this study are: (a) gender and (b) type of aggression described in the bully narrative (relational, verbal, or physical). The dependent variables include popularity, social exclusion, victim distress, depression, and sense of inadequacy. We investigated how gender and method of aggression relate to the individuals’ social status, depression, and sense of inadequacy. We predicted that gender-inconsistent behavior would result in a lower level of popularity for
the individual, or a higher level of social exclusion.

When evaluating the first hypothesis — that females would use more relational aggression than males — results were found to be consistent with previous findings. Analysis revealed a significant difference for gender and form of aggression used ($p = 0.052$; females reported using more relational aggression than males ($N_f = 7$, $N_m = 4$, respectively), and males reported using more physical aggression than females ($N_m = 16$ and $N_f = 7$, respectively). There was no significant difference between the two genders in the use of verbal hostile aggression ($N_f = 39$ and $N_m = 28$, see Table 1).

Analysis of the second hypothesis — that individuals who used gender inconsistent forms of aggression would have a lower social status than individuals who used gender consistent forms of aggression — revealed no significant main effects or interaction for the individual’s mean likeability score, $F(1, 99) = .28 p > .05$, and the individual’s level of exclusion as reported by his or her fellow students on the peer nomination scale, $F(1, 99) = 1.83, p > .05$.

In the third hypothesis we predicted that individuals who experienced gender inconsistent forms of aggression (i.e., males who experienced relationally aggressive acts and females who experienced physically aggressive acts) would report higher levels of distress; however, results indicated that there was no significant interaction between gender and form of aggression used for the victim’s level of distress, $F(1, 99) = .20, p > .05$.

There were several unexpected results that merit attention. Analyses revealed that there was a significant interaction between gender and form of aggression used during the bully narrative on the individual’s reported level of depression; individuals who reported using gender inconsistent forms of aggression reported having greater levels of depression than individuals who reported using gender consistent forms of aggression, $F(1, 99) = 2.93, p < 0.05$ (see Figure 1). Males who reported using relational aggression had higher BASC depression scores ($M = 48.75$) than males who reported using physical aggression ($M = 43.67$). Females who reported using physical aggression had a higher BASC depression score ($M = 54.29$) than females who reported using relational aggression ($M = 42.00$).

The second unexpected result involved the interaction between gender and form of aggression used for the dependent variable of individual’s self-report of sense of inadequacy. Analysis revealed that individuals who reported using a gender inconsistent form of aggression reported higher levels of a sense of inadequacy than individuals who reported using a gender consistent form of aggression, $F(1, 99) = 2.89, p = .06$ (see Figure 2).

![Figure 1. Interaction of Gender Inconsistent Use of Aggression and Level of Depression.](image-url)
Males who reported using relational aggression had a higher sense of inadequacy ($M = 56.7$) than males who reported using physical aggression ($M = 48.73$). Females who reported using physical aggression had a higher sense of inadequacy ($M = 61.14$) than females who reported using relational aggression ($M = 45.71$).

Finally, there was a significant main effect for level of guilt in the bully narrative. Females reported feeling more guilt than males. This was assessed using a t-test $t(112) = 2.93, p < .05$. Females’ average amount of guilt on a scale of one to five was higher ($M = 2.63$) than males ($M = 1.91$) (see Table 2).

![Figure 2. Interaction of Gender Inconsistent Use of Aggression and Level of Sense of Inadequacy.](image)

**Discussion**

This study investigated the different forms of aggression used by high school students as well as how use of gender inconsistent forms of aggression relates to social status. As expected, results revealed that females reported using more relational aggression than physical aggression and males reported using more physical aggression than relational aggression as determined from the bully and victim narratives. No significant gender differences were observed in use of verbal aggression. Analyses revealed no significant interaction between gender and form of aggression used on the individual’s social status or level of rejection; however, individuals who used gender inconsistent forms of aggression were found to have higher levels of depression and a higher sense of inadequacy than individuals who used gender consistent forms of aggression. Additionally, females reported feeling more guilt than males during a bullying incident.

Consistent with previous findings, females reported more relational aggression than males (Crick et al., 2006). These findings suggest that females use a different form of aggression in social interaction than males and may have externalizing difficulties as well, as opposed to only internalizing difficulties. However, these difficulties are manifested differently from typical male aggression. Also, consistent with previous studies, males reported using more physical aggression. There were few reports of relational aggression out of our large sample; however, this could be due to the covert nature of relational aggression. Relationally aggressive acts are often hidden in social context and frequently concealed to inflict more damage to social relationships. The manipulative nature of these acts could be what makes this method of aggression preferred by females.

Our second finding, that use of gender inconsistent forms of aggression was not related to social status or level of peer rejection, is contrary to previous findings. There are many possible explanations for this finding, including a low base rate of reports of relational aggression, salience of the act of relational aggression, as well as the measure used to determine both social status and an individual’s level of rejection. Additionally, individuals who reported using gender inconsistent forms of aggression may do so covertly, without drawing attention to themselves. This may be done more easily with relational aggression than physical aggression because of the nature of relationally aggressive acts.

Our final hypothesis, that form of aggression reported in the victim narrative would be related to victim’s level of distress, was also not supported by our data. Again, possible reasons could include the low base rates of relational aggression discussed in the narratives and the low number of narratives that were acquired.

There were several unpredicted results that are worth mentioning. Individuals who reported using gender inconsistent forms of aggression reported higher levels of depression and higher levels of a sense of inadequacy. This result is similar to previous findings that engagement in gender nonnormative forms of aggression is related to social-psychological adjustment (Crick, 1997). Other studies have found that participating in gender atypical behavior was correlated with the individual’s level of depression; individuals who used gender atypical behavior reported higher levels of depression (Chevron et al., 1978). Our findings suggest that individuals who participate in gender atypical behaviors may realize they are deviating from norms and thus feel depressed or inadequate.

Additionally, another unexpected result includes the finding that females reported feeling more guilt than males in the bully narrative. This finding is consistent with previous studies that females report more guilt with incidents that violate norms of compassion and trust (Williams & Bybee, 1994). There are several possible
explanations for this finding, including that females are often thought to have more empathy than males. In addition, females are more likely to internalize blame, which leads to their experiencing more guilt. They are also often more invested in social relationships. It is interesting to note that females experience more guilt than males when participating in bullying, and yet the form of aggression that they use more often than males is targeted at harming relationships.

This study demonstrates that females utilize a different form of aggression from males, and that this form of aggression is not overt and not easy to observe. It is important to understand the use of gender inconsistent forms of aggression, as well as the implications of this. More research is needed to better understand what is occurring. Also, findings from this study have implications for individuals with internalizing difficulties as well.

Limitations of this study include the method of measuring relational aggression, because students may not be the best reporters of their own actions. Perhaps the ideal method of measuring use of different forms of aggression would be to employ an observational method of data collection. Additionally, the narratives themselves involved free recall of a bullying incident; however, the incident they chose to relate may not have been about a form of aggression that they most typically use. Another limitation of our study is the low base rate for narratives, because of the method used to distribute the materials. The questionnaires were group administered in a very large packet of questionnaires. Students may not have had enough time to get to the narratives, or did not want to spend time writing them. Finally, the low number of reports of relational aggression could have influenced results also, and perhaps our definition of relational aggression did not capture the full spectrum of that form of aggression.

A further limitation of our study that could have implications for future studies is our method of identifying the gender of the participants. Unfortunately, due to the nature of the data, our classification of gender was biologically determined, as reported by the participants, which limits our analysis to biological factors, as opposed to social constructs. Future studies should further investigate this difference and assess gender more directly, rather than relying on sex.

Future studies need to investigate the stability of the adverse effects of using gender inconsistent forms of aggression. Also, our study found little difference between genders in the number of reports of use of verbal aggression. Future studies should investigate this further. Additionally, there needs to be a better understanding of why there is a relationship between gender inconsistent forms of aggression and depression.

References