

DEMONSTRATION MOTIVATION ENCOURAGES AGGRESSIVE REACTIONS
TO PEER REJECTION AND VICTIMIZATION

by

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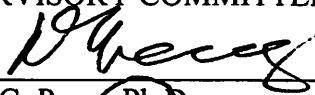
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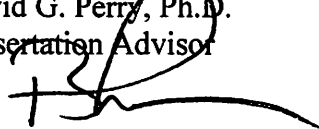
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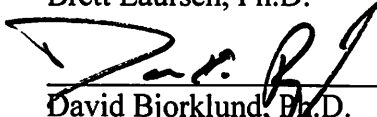
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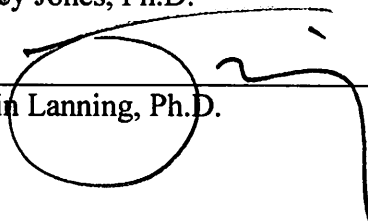
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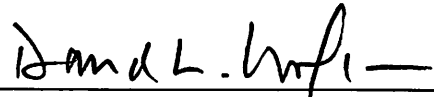
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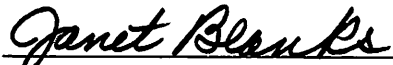
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ABSTRACT

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Some, but not all, children who experience rejection or victimization by peers develop aggressive habits in response. This dissertation study tested the hypothesis that children who possess *demonstration self-guides*—cognitive structures that motivate a child to display behaviors and attributes that bring attention, admiration, or subservience from peers—are particularly at risk for such aggressive reactions. Children with such self-guides, it is suggested, experience adverse treatment by peers as particularly frustrating, humiliating, and shameful, and these reactions increase the children’s threshold for exhibiting aggression during peer interactions. Participants were 195 children in the fourth through seventh grades of a school serving an ethnically and racially diverse student population (94 girls and 101 boys; *M* age = 10.1 years). Children completed self- and peer-report questionnaires in the fall and spring of a school year. Measures included rejection and victimization by peers, demonstration self-guides (narcissism, self-efficacy for demonstration attributes, felt pressure for gender

conformity, and sexist ideology), aggression toward peers, and other variables testing secondary hypotheses. Consistent with the focal hypothesis, children with demonstration self-guides were more likely than other children to increase their aggression following peer rejection or victimization. However, this result was more common for girls than for boys; for boys, increased aggression more often reflected additive rather than interactive effects of peer rejection/victimization and demonstration motivation. Support for the focal hypothesis also depended on additional moderator variables, including gender of the peer group rejecting or victimizing the child, the nature of the demonstration self-guide, and gender of the target of the child's own aggression.

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INTRODUCTION

Investigating influences on aggressive behavior in children is a complex, multifaceted area of research. Traditionally, much of this work has been devoted to uncovering biological, social, cognitive, situational, and emotional underpinnings of aggressive behavior in an effort to understand what influences children to act aggressively, and to what extent these aggressive reactions affect children's development. Central to this dissertation is further exploration of how situational experiences (e.g., adversity experienced in the peer group) and enduring cognitive structures (e.g., narcissism) stimulate aggressive behavior.

The principal purpose of this dissertation is to evaluate the hypothesis that peer rejection and victimization are especially likely to stimulate aggressive reactions from preadolescents whose self-guides are of a "demonstrative" nature in interactions with peers. Demonstration self-guides are cognitive structures that motivate a person to display behavioral, personal, and social characteristics that bring attention, admiration, or subservience from others (e.g., attractive appearance, social dominance, gender conformity). I propose that children who possess such self-guides experience peer rejection and victimization as especially expectancy-violating and therefore frustrating and are likely to react aggressively. I assess a host of self-guides (e.g., narcissism, self-efficacy for popularity, felt pressure for gender conformity) that motivate children to exhibit demonstration attributes, and I see if children high on these variables are more

likely than other children to respond to peer rejection and victimization with increased aggression over a school year. I also see if the gender of the peer group perpetrating the rejection or victimization, the gender of children experiencing the adverse peer experience, or the gender of the targets of the aggression makes a difference in the hypothesized process.

Below I review influences of peer rejection and victimization on aggression, summarize what is known about the mediators and moderators of the influences of peer rejection and peer victimization on aggression, and propose several additional cognitive-motivational moderators that have not yet been explored.

Peer Rejection and Peer Victimization as Main-Effect Influences on Aggression

Adverse treatment by the peer group can have a long-lasting main effect impact on children's health and well-being. Two forms of adversity that are important for children's psychological health are peer rejection (i.e., being widely disliked by peers) and peer victimization (i.e., being repeatedly attacked by peers). A recent report from the Surgeon General identified social rejection in childhood as a significant risk factor for adolescent violence, gang membership, poverty, and substance abuse (Leary, Twenge, & Quinlivan, 2006; Office of the Surgeon General, 2001). Rejection in middle childhood also predicts involvement with antisocial peers in high-school (Coie, Terry, Zakriski, & Lochman, 1995), exacerbation of pre-existing externalizing behaviors (Laird, Jordan, Dodge, Pettit, & Bates, 2001), and high-school dropout (Kupersmidt & Coie, 2008; Parker & Asher, 1987). Consistent with social learning perspectives on aggression, peer rejection appears to have long-lasting influences on the developing individual. Even first-grade children who experience peer rejection are likely to display conduct problems

several years later as third graders (Miller-Johnson, Coie, Maumary-Gremaud, & Bierman, 2002). Peer rejection also fosters aggression in young children transitioning from elementary school to middle school (Coie et al., 1995) as well as in young adults (Buckley, Winkel, & Leary, 2004). Rejection predicts negative adjustment outcomes for both school-aged boys and girls (Bierman, Kalvin, & Heinrichs, 2015).

Peer victimization is a related peer adversity that is also associated with a host of negative outcomes for children. Studies of chronically victimized children have found that aggression and victimization are not highly correlated (either positively or negatively), meaning that some victims are also highly aggressive whereas other victims are not (Aults, Cotler, Marsh, & Jones, 2013; Olweus, 1993; Perry, Hodges, & Egan, 2001; Perry, Kusel, & Perry, 1988). Around 10%-20% of children and adolescents are frequently victimized by peers, but sometimes as many as 30% of community samples are chronically victimized (Hawker & Boulton, 2000; Hodges, Peets, & Salmivalli, 2009; Olweus, 1993; Perry et al., 1988). Chronic victimization leads to reduced self-esteem as well as to internalizing symptoms (e.g., depression, fearfulness, anxiety, social withdrawal). However, for some children victimization also leads to increased externalizing problems, including aggression (Kochenderfer & Ladd, 1997; Leadbeater & Hoglund, 2009; Patterson, Littman, & Bricker, 1967). Several studies with community samples confirm the widespread effect that victimization can have on aggression. Exposure to community violence, re-victimization, and early victimization (e.g., sexual, physical and emotional abuse) have been found to have main-effect influences on aggressive behavior (Logan-Greene, Nurius, Hooven, & Thompson, 2015; Scarpa & Haden, 2006). However, the contribution of victimization to aggression is less reliable

than is the contribution of peer rejection to aggression; in fact, sometimes victimization forecasts reduced rather than increased aggression (Egan, Monson, & Perry, 1998).

Mediators and Moderators of the Effects of Peer Rejection and Victimization on Change in Aggression Over Time

Previous research has identified several mediators and moderators of the influences of peer rejection and victimization on aggression. Peer rejection's effect on later aggression is mediated in part by a hostile attributional bias that is fostered by experiencing peer rejection (Dodge, 2011; Pettit & Mize, 2007). Based on previous experiences with rejection, children learn to make causal attributions about aversive social events that tend to be hostile in nature. These children tend to misunderstand the intentions of others, use aggressive behavior at inappropriate times, and rely on aggression as a problem-solver when facing additional adversity from the peer group (Crick, 1995; Crick & Dodge, 1994; Dodge, Bates, & Pettit, 1990). Thus, the bi-directional influence of rejection and aggression create a reinforcing feedback-loop that exacerbates both problems. Additional evidence comes from laboratory studies involving peer feedback. In one study, preadolescent boys and girls who attributed more hostile intent to their peers tended to be angrier, showed a reduction in self-esteem, and were more aggressive towards those who were rejecting them (Reijntjes, Thomaes, Kamphuis, Bushman, Orobio de Castro, & Telch, 2011). Similar findings come from studies examining mediators of the effects of victimization on aggression. Hostile attributions have been shown to mediate the link between peer victimization and later externalizing problems in middle-childhood (Perran, Ettekal, & Ladd, 2013) and between exposure to

community violence and aggression during adolescence (Bradshaw, Rodgers, Ghandour, & Garbarino, 2009).

There is also evidence that certain variables moderate the effect of rejection or victimization on aggression. One variable shown to moderate this relation is child sex. One study investigating moderators of longitudinal changes in aggressive reactions to peer rejection found that third-grade boys who perceived that they were rejected by peers (and tended to blame others for their social failures) increased in externalizing problems over the school year; this effect was absent in girls (Guerra, Asher, & DeRosier, 2004). Another study found that preadolescent boys, but not girls, actually reduced aggressive behavior over the school year if they were victimized at the beginning of the school year, suggesting that the aggression they were exhibiting became ineffectual at curbing repeated attacks by others (Egan et al., 1998). Thus, the role of child sex in moderating the influence of rejection and victimization on aggression remains unclear.

Another variable that governs whether peer adversity fosters aggression is children's initial level of aggression: Children who are aggressive to begin with are the most likely to increase their aggression following peer rejection (Dodge, 2011). Many studies provide evidence that rejection ignites defensive reactions characterized by anger and frustration in aggressive children, predisposing them to this increased aggression over time (Dodge et al., 2003; Dodge & Sherrill, 2007; Peets, Hodges, & Salmivalli, 2011). Certain social experiences can also moderate effects of peer rejection and victimization on aggression. Lack of social support and parental rejection have been found to increase peer adversities' effects on aggression (DeWall, Twenge, Bushman, Im, & Williams, 2010; Ladd & Burgess, 2001).

The present study was designed to further our understanding of cognitive-motivational structures that moderate the effect of peer adversity (rejection and victimization) on aggressive behavior. Recent evidence suggests that cognitive-motivational structures that lead children to seek the attention, approval, and admiration of their peers may moderate aggressive reactions to peer adversity. Motives and self-guides that lead children to try to garner such peer reactions, and thereby to improve or maintain their social status, have been called “demonstration goals” (also called “performance goals”). Demonstration goals may be distinguished from “development goals” (also called “learning goals”), which are motives to acquire competencies for their own sake (e.g., to make new friends, to learn a new skill). Children with many demonstration goals tend to be more aggressive than children with fewer demonstration motives, whereas children with many development goals tend not to be aggressive (Rodkin, Ryan, Jamison, & Wilson, 2013; Rudolph, Abaied, Flynn, Sugimura, & Agoston, 2011).

Demonstration self-guides may also moderate children’s tendencies to react to peer rejection and victimization with aggression. Several laboratory studies on the role of narcissism in aggression, for example, suggest this. Narcissism, which is the chronic motivation to obtain social approval and admiration in order to nourish a grandiose sense of self (Baumeister, Smart, & Boden, 1996; Pauletti, Menon, Menon, Tobin, & Perry, 2012), has been fruitfully studied as a continuously distributed personality variable that figures in the self-concept of some children and adults. In one study, narcissistic children as young as 12 years reacted especially aggressively toward peers who rejected them (Thomaes, Stegge, Bushman, Olthof, & Denissen, 2008). Narcissism has similarly

moderated rejections effect on aggression in older persons. For example, narcissistic teenagers were more likely than other teenagers to show an increase in the severity of aggressive behavior toward those who were rejecting them (Martinez, Zeichner, Reidy, & Miller, 2008). In addition, a recent field study found that other demonstration self-guides (e.g., seeking to be popular with peers) led boys (but not girls) to react to peer victimization with aggression (Llewellyn & Rudolph, 2014). In sum, these are tell-tale signs that demonstration self-guides that encourage striving for social approval and peer status moderate rejection's and victimization's effect on aggression. The present study builds on this line of work.

The Present Study

The principal purpose of the present study was to explore further the potential of demonstration self-guides to moderate peer adversity's effects on aggression. I assess four demonstration self-guides that I suggest enhance the probability of children developing aggression in reaction to peer rejection and victimization. I also assess two cognitive variables that, in contrast to demonstration self-guides, should *not* stimulate aggressive reactions to peer rejection and victimization and in fact may protect children from developing aggression in reaction to peer rejection and victimization. These other cognitive variables assess children's feeling that they are acceptable to themselves and to others. Below I provide my rationales for expecting these two sets of variables to moderate the aggressogenic effects of peer rejection and victimization.

Demonstration Self-Guides

It may be easy to understand why persons with narcissistic tendencies react to peer rejection and other insulting treatment with aggression. However, my thesis is that

demonstration self-guides of any sort have this function. My argument is that children who ardently desire, or who expect to achieve, peer admiration or approval by regulating themselves in ways designed to achieve these outcomes are likely to experience peer rejection and victimization as especially frustrating, painful, and a source of humiliation and shame. These feelings are likely to generate anger, agitation, externalization of blame, hostile rumination, loss of self-regulatory control, and therefore aggressive reactions. Some children with demonstration self-guides may be likely to respond to rejection and victimization with internalizing problems (e.g., depression and anxiety) instead of or in addition to aggressive externalizing behaviors, but aggressive reactions would also seem to be a likely outcome. I will describe four demonstration self-guides that I believe increase the likelihood of children reacting to peer adversity with aggression.

Narcissism. Narcissism may be considered the quintessential demonstration self-guide. The evidence indicates that narcissistic individuals not only tend to be aggressive but, as noted above, also are especially inclined to respond aggressively to insulting, ego-threatening treatment at the hands of others (Baumeister et al., 1996; Kirkpatrick, Waugh, Velencia, & Webster, 2002; Martinez et al., 2008; Thomaes et al 2008; Thomaes & Bushman, 2011; Twenge & Campbell, 2003). Although much of this evidence comes from laboratory studies, it seems likely that highly narcissistic children are more likely to respond aggressively to peer rejection and victimization than less narcissistic children under natural conditions as well. I include a continuous measure of narcissistic motivation in this study.

Self-efficacy for demonstration attributes. Perceptions of self-efficacy are people's beliefs about their ability to enact a behavior (Bandura, 1986). Self-efficacy beliefs are not goals but nonetheless have motivational or self-guide properties. People are more likely to undertake a behavior, to persevere at the behavior in the face of obstacles, and to expect positive outcomes for performing the behavior if their self-efficacy for the behavior is high rather than low. I assess children's self-efficacy for five demonstration behaviors: Social dominance, athletic competence, attractive appearance, popularity, and emotion suppression (inhibiting tender emotions such as sadness and fear). Self-efficacy (or related self-perceptions) for demonstration sometimes predicts aggression (or other antisocial conduct) as a main effect. For example, children who say it is easy for them to dominate others, who feel it is important to suppress tender emotions, or who perceive themselves as highly popular tend to be aggressive (Egan et al., 1998; Puckett, Aikins, & Cillessen, 2008; Steinfeldt, Vaughan, LaFollette, & Steinfeldt, 2012). Furthermore, children who over-estimate their peer social competence (e.g., their popularity), by rating themselves more favorably than their peers rate them, tend to be aggressive (Salmivalli, Ojanen, Haanpaa, & Peets 2005; White & Kistner, 2011; Zakriski & Coie, 1996). One interpretation of these findings is that children who expect to incur peer approval and status from their social behavior are confused and disturbed by indications to the contrary from their peers, encouraging them to respond aggressively. Thus, I suggest that children who hold these beliefs (i.e., have high self-efficacy for demonstration attributes) experience peer rejection or victimization as a particularly distressing affront to their self-concept, increasing the chance they will react with aggression.

Felt pressure for gender conformity. Some children feel pressure from their parents, their peers, and themselves to avoid cross-gender behavior (Egan & Perry, 2001). Children's perceptions of pressure from these three sources are intercorrelated, suggesting that children internalize the sanctions for gender conformity they experience from parents and peers. Felt pressure for gender conformity may be considered a dimension of gender identity (Egan & Perry, 2001), but it is also a demonstration self-guide because it likely captures a motive to demonstrate one's gender adequacy. However, it is a demonstration-avoidance self-goal rather than a demonstration-approach self-guide because the goal is to avoid a set of unwanted attributes—cross-gender behavior—rather than to enact a set of desired ones. Felt pressure for gender conformity often leads to internalizing symptoms and reduced self-esteem for girls (but not for boys) and sometimes fosters aggression for boys (but not for girls; Carver, Yunger, & Perry, 2003; Corby, Hodges, & Perry, 2007; Egan & Perry, 2001; Tobin et al., 2010; Yunger, Carver, & Perry, 2004). However, it is possible that, being a demonstration self-guide, felt pressure for gender conformity increases the chance that children will respond to peer rejection and victimization with aggression. That is, children who feel pressure for gender conformity might experience peer rejection and victimization as particularly strong indicators of their lack of acceptability to peers, predisposing them to respond with distress, agitation, loss of self-regulatory control, and aggression. Such aggressive reactions to peer rejection or victimization among children who feel pressure for gender conformity should be greater for boys than for girls, however. This is because boys who feel pressure for gender conformity may view aggression—a strongly male-stereotyped

behavior—as a way to demonstrate their gender adequacy and thereby regain their peers’ esteem. Rejection and victimization should be especially frustrating for such boys.

Sexist ideology. Sexism is a form of prejudice towards the opposite sex. Studies with adults have revealed that men who possess traditional sexist beliefs towards women (beliefs that subordinate women by assigning them traditional roles at home, work, and relationships) are at increased risk for aggression toward spouses and romantic partners (Crossman, Stith, & Bender, 1990; Flynn, 1990; Smith, 1990). Some women also hold traditional sexist beliefs, but there is little evidence that these women’s beliefs encourage them to behave aggressively toward other women (or toward men). Although the ramifications of having sexist beliefs have been widely studied among adults, studies examining how sexist beliefs influence behavior in children are lacking. Self-guides that promote sexist ideology may stimulate aggression in reaction to peer rejection or victimization because children who hold such self-guides are likely to be monitoring and tailoring their behavior so as to demonstrate satisfactory performance of gender roles and therefore likely to experience peer rejection and victimization as especially frustrating. This may be especially true for boys, as I suggest later.

Self-Acceptance Variables

In addition to assessing the preceding four self-guide variables which are intended to capture children’s motivation for attributes that attract peers’ attention and admiration, I assess two self-acceptance variables that I suggest should *not* have the effect of stimulating aggressive reactions to peer rejection and victimization. These variables are self-esteem (global self-worth) and felt gender typicality. Self-esteem and felt gender typicality are two measures of children’s sense that they are acceptable to themselves and

to their peers. High self-esteem and high felt gender typicality both carry motivational significance for the child, yet this motivation is usually not of a demonstration nature. The quality of motivation inspired by both of these self-appraisals is more of a communal and development nature, and frustration of such motivation through peer rejection and victimization is more likely to cause dejection and disappointment than aggression (Gable & Strachman, 2008; Higgins & Scholer, 2008). Each variable of these self-acceptance variables (self-esteem and felt gender typicality) and the rationale for including it in this study is elaborated in turn.

Self-esteem. Self-esteem is an overall appraisal of the self as a valuable and worthy person. High self-esteem is based largely on perceptions of acceptance from significant others (especially parents and peers) and of competence in valued domains (e.g., academics, athletics, and social skills; Harter, 2006). It has been suggested that self-esteem serves as a “sociometer” that informs a person of his or her overall acceptability to others (Baumeister & Leary, 1995; Leary, Tambor, Terdal, & Downs, 1995). Presumably, because children with high self-esteem feel valued by and acceptable to others, they are more likely to believe that others will provide them with support and safety, if needed. This means that when they encounter social stress, including challenges to their social status, they should remain confident in their fundamental acceptability to themselves and, to others, and they should be able to weather the stress as a temporary setback. If rejected or victimized, they should experience disappointment but should be confident that they will recover their strong and positive sense of self because they know that they are generally acceptable to others and possess competencies that will allow them to resume satisfying relationships and restore their self respect.

Thus, I expect self-esteem is more likely to buffer children from, rather than create, aggressive reactions to rejection and victimization. Indeed, it might be predicted that peer adversity leads children with high self-esteem to redouble their efforts at establishing communal relationships and interactions, thereby causing them to become *less* aggressive than previously.

It is worth noting that self-esteem and narcissism are conceptually related variables. Both are images of the overall self and have motivational properties. However, the two variables are negligibly correlated, and narcissism cannot be considered to be simply very high self-esteem. Narcissism motivates people to feed a grandiose sense of self by demonstrating superiority over others (Baumeister et al., 1996; Menon et al., 2007; Pauletti, et al., 2012), whereas high self-esteem is more likely to motivate people to connect with others in ways that sustain satisfying close relationships (Crocker & Park, 2004; Harter, 2006; Higgins & Scholer, 2008; Murray, Griffin, Rose, & Bellavia, 2006; Murray, Holmes, & Griffin, 2000). Thus, I do not expect high self-esteem to stimulate aggressive reactions to peer rejection and victimization in the same way I expect narcissism to do.

Felt gender typicality. Felt gender typicality is an appraisal of the self as similar to same-sex others. It is based on self-perceptions of valued and salient same-sex attributes, of having positive relationships with same sex peers, and of being acceptable to these peers (Egan & Perry, 2001). Thus, children with high felt gender typicality, like children with high self-esteem, presumably have reached the conclusion that they are valued by and acceptable to other peers who matter to them, and these self-perceptions provide a sense of security to them.

Importantly, felt gender typicality derives not from pressure for gender conformity but rather from observing the self to possess gender-typical attributes and to be a cooperating member of the same-sex collective (Egan & Perry, 2001). It indicates communal-approach motivation toward others of one's own gender, whereas felt pressure for gender conformity signifies motivation to prove that one is dissimilar to persons of the other gender—a demonstration-avoidance goal. Further, felt typicality and felt pressure have been tied, respectively, to secure and insecure attachment to the mother (Cooper et al., 2013; Pauletti, Cooper, Aults, Hodges, & Perry, 2016). These observations accord with evidence that communal (and approach) motives characterize secure persons (whose fundamental needs for protection and safety have been met), whereas demonstration (and avoidance) motives characterize insecure persons (Higgins & Scholer, 2008). Given that frustration of communal motivation tends to stimulate low-arousal dejection rather than agitated distress and aggression, I do not expect high felt gender typicality to stimulate aggressive reactions to peer rejection and victimization in the way I expect felt pressure for gender conformity to do. In other words, I expect that high felt gender typicality, like high self-esteem, buffers children from the aggressogenic potential of peer rejection and victimization. Indeed, it is conceivable that high felt gender typicality leads children to become less aggressive if rejected or victimized because the adverse peer experiences may cause them to intensify their desire to connect to their peer group in a positive way.

Does Gender Matter?

Children of both sexes participate in this study. I expect the central hypotheses of the study, introduced above, to be confirmed for children of both sexes. That is, I expect

both girls and boys with strong demonstration motivation (of any of the four sorts under study) to react more aggressively to peer rejection and victimization than children with less demonstration motivation, and I expect strong self-acceptance (in the form of either high self-esteem or high felt gender typicality) not to instigate aggression among rejected or victimized children.

However, an important feature of this study is that separate measures of rejection and victimization by female peers and by male peers are collected. This permits test of additional questions. For example, it permits testing the hypothesis that demonstration self-guides are especially likely to spur aggression among boys who are rejected or victimized by female peers. Harsh treatment by female peers is likely to be experienced by boys who possess strong demonstration self-guides as especially frustrating and humiliating, especially if the demonstration self-guides rest on gender stereotypes that suggest males should be dominant rather than submissive vis-à-vis females (Franchina, Eisler, & Moore, 2001; Levant, 2011). Moreover, media reports of school shooters, nearly all of whom have been male, indicate that the perpetrator nearly always had experienced rejection or victimization by a girl (Kimmel & Mahler, 2003; Leary, Kowalski, Smith, & Phillips, 2003). Thus, I predicted, that boys who possess sexist beliefs (especially the belief that girls should be subservient to boys) or who feel strong pressure for gender conformity will react especially aggressively to peer rejection or victimization by girls.

In addition to examining sex of perpetrator of rejection and victimization, I collected separate measures of children's aggression toward female peers and toward male peers. This allowed me to see whether children retaliate aggressively principally

toward the sex of peer who rejected or victimized them. However, this was not a central hypothesis as it was not concerned with adversity x cognition interactions.

Does Age Matter?

Children from elementary school and middle school participate in this study. I expect the central hypotheses of the study, outlined above, to be confirmed for children of all ages. That is, I expect children of all ages with strong demonstration motivation to react more aggressively to peer rejection and victimization than children with less demonstration motivation, and I expect strong self-acceptance to be more likely to buffer children of all ages from the potential of peer rejection and victimization to spur aggression than to predispose children to react aggressively to peer rejection and victimization.

Summary of Hypotheses

In summary, I test three central hypotheses. The first is that all four demonstration self-guides (i.e., narcissism, self-efficacy for demonstration attributes, felt pressure for gender conformity, and sexist ideology) magnify the likelihood that children respond to peer rejection and victimization with aggression. The second is that high self-esteem and felt gender typicality are more likely to protect children from reacting to rejection and victimization with aggression than to encourage it. The third hypothesis is that boys with strong felt pressure for gender conformity or sexist ideology particularly likely to react to rejection or victimization by girls with aggression.

METHOD

Participants and Procedure

Participants were 195 fourth- through seventh-grade boys (M age = 10.2, SD = 1.2 years) and girls (M age = 10.0, SD = 1.1 years) from a university-affiliated school who received written, informed parental consent to participate. Data were collected in the fall of 2010 and the spring of 2011. The sample was demographically diverse and representative of the state of Florida as a whole (51% White, 21% Black, 20% Hispanic, and 8% Other). All measures were administered in both the fall and the spring of the school year. Only children who participated at both times were included in the study.

Measures

Peer rejection. Participants rated how much they liked each classmate on a scale from 1 (Not at all) to 4 (A lot). A child's average rating by male peer and by female peers was computed. These scores were subtracted from 5 to derive separate measures of rejection by male peers and rejection by female peers.

Narcissism. *Narcissism* was assessed with the 10-item Childhood Narcissism Scale (Thomaes et al., 2008). This self-report questionnaire asks participants to rate on a scale from 0 (Not at all true) to 3 (Completely true) the extent to which they endorse statements such as "I am a great example for other kids to follow" and "Kids like me deserve something extra." Cronbach's alpha was .79. Scores were the averages of item response.

Self-efficacy for demonstration attributes. Self-efficacy was assessed with a 28-item questionnaire that assessed children's self-efficacy for each of five demonstration attributes (social dominance, athletic competence, attractive appearance, popularity, and emotion suppression.) Children rated each item on a 4-point scale (from 1 to 4), with higher scores indicating greater self-efficacy for enacting the attribute in question. A score of 1 indicated that children perceived the attribute as very hard to achieve, and a score of 4 indicated they perceived the attribute as very easy to achieve. A sample item for each scale follows. For social dominance self-efficacy (8 items): "Making others feel like I am in charge is _____ for me." Cronbach's alpha was .78. Athletic competence self-efficacy (5 items): "Winning at sports is _____ for me." Cronbach's alpha was .83. Attractive appearance self-efficacy: (4 items) "Being good looking is _____ for me." Cronbach's alpha was .87. Popularity self-efficacy (6 items): "Being popular is _____ for me." Cronbach's alpha was .84. Emotion suppression self-efficacy (5 items): "Acting tough when afraid on the inside is _____ for me." Cronbach's alpha was .73. Scale scores were item averages. Children's scores on the five self-efficacy measures were highly intercorrelated so were averaged to form an aggregated composite measuring *self-efficacy for demonstration attributes*. The Cronbach's alpha for the five item scale was .75.

Felt pressure for gender conformity. *Felt pressure for gender conformity* was measured on a 7-item scale assessing the degree to which the child feels pressure to avoid other-gender behavior. An example item (for girls) was: "I think it would be wrong for me to play with boys' toys or do boys' activities." Scores could range from 1 to 4, with

higher scores indicating that the child anticipated greater negative consequences for cross-gender behavior. Cronbach's alpha was .81. Scale scores were item averages.

Sexist ideology. Sexist ideology was assessed using a scale derived from principal components analysis performed on the items of a 24-item scale assessing diverse sexist beliefs (Pauletti, Menon, Cooper, Aults, & Perry, 2016). The 24 items were modeled after those of the Attitudes Toward Women Scale (Spence & Helmreich, 1972) and assessed a heterogeneous collection of sexist beliefs pertaining to workplace, domestic, and dating contexts. A principal components analysis (with varimax rotation) performed on the 24 items yielded four components, one of which captured the belief that girls should be subservient to boys in dating situations. Four items loaded highly on this factor: "On a date, the girl should let the boy decide where to go and what to do" (item loading of .70); "A girl should treat her boyfriend like he's the boss" (.50); "On a date, the girl should not allow the boy to make all of the decisions" (reversed scored, .77); and "On a date, the girl should go along with whatever the boy decides" (.53). All other item loadings on this factor were low (-.16 to .38). Children's responses to these four items, which could range from 1 to 5, were averaged to obtain an overall score on dating sexism, which I refer to as *sexist ideology*. Cronbach's alpha was .70. The other three factors yielded by the factor analysis were not relevant to children's attitudes toward peers and so were not used in this study.

Self-esteem. *Self-esteem* was measured using Harter's (1985) six-item self-reported global self-worth scale. Items were scored from 1 to 4, with higher scores indicating greater self-esteem. Cronbach's alpha was .73. Scale scores were item averages.

Felt gender typicality. *Felt gender typicality* was assessed with a 5-item scale asking children how similar they feel to others of their gender. A sample question (for girls): “Some girls feel they are different from other girls BUT Other girls feel they are similar to other girls.” For each item, children first decided which of the two types of children described they resembled more, and then indicated whether that choice was “very true” or only “sort of true” for them. Scores could range from 1 to 4, with higher scores indicating greater felt similarity to one’s own gender collective. Cronbach’s alpha was .68.

Aggression and victimization. To obtain measures of aggression and victimization, children were asked to examine rosters of their classmates and to nominate who is *mean* to whom. Each participant was given a booklet. At the top of each page was a fellow classmate’s name (potential aggressor), followed by a list of every other child in the class (potential victims). Participants were asked to indicate “Yes” or “No” as to whether the child at the top of the page was or was not “mean to” each classmate. *Aggression toward girls* and *aggression toward boys* were assessed for each participant by averaging the proportions of peers who named the child as being mean to female and to male classmates, respectively. *Victimization by girls* and *victimization by boys* were obtained by averaging the proportions of nominations indicating the child was victimized by female classmates and by male classmates, respectively. Test-retest coefficients (from fall to spring) for girls (boys) were .76 (.80) for aggression toward girls, .68 (.88) for aggression toward boys, .79 (.64) for victimization by girls, and .55 (.80) for victimization by boys.

RESULTS

Descriptive Statistics

Table 1 presents the mean and standard deviation of each measure in the fall by child sex and age as well as the relation of sex and of age to each other variable in the study. For ease of presentation, fourth and fifth grade children were combined to form a “younger” group, and sixth and seventh grade children formed an “older” group. To assess relations of sex and age to the other variables, a multiple regression was run for each fall measure. Sex and age (in months) were entered on the first step, and the sex x age interaction was entered on the second step. The last two columns of Table 1 present results from Step 1 of the regression analyses. That is, the next to last column tells the size of the sex difference with age controlled and the final column tells the age effect with the sex controlled. I first summarize the sex main effects, then the age main effects, and finally age x sex interactions.

There were several significant main effects of participant sex. As for the adversity measures, girls were rejected by boys more than boys were ($\beta = .41, p < .000$), but boys were rejected more by girls than girls were ($\beta = -.41, p = .008$). Boys were victimized by girls more than girls were ($\beta = -.19, p = .011$). As for the cognitive measures, boys scored higher than girls on felt pressure for gender conformity ($\beta = -.54, p < .000$), sexist ideology ($\beta = -.38, p < .000$), and felt gender typicality ($\beta = -.17, p = .021$). There was no sex difference in any dependent measure.

Turning to age differences, results for the adversity measures revealed that older children were rejected by boys more than younger children were ($\beta = .17, p = .008$) and were rejected by girls ($\beta = .43, p < .000$) more than younger children were. Also, older children were victimized by girls more than younger children were ($\beta = .18, p = .009$). As for the cognitive measures, older children reported more felt pressure for gender conformity than did younger children ($\beta = .16, p = .010$) and reported greater felt gender typicality ($\beta = .17, p = .014$) than did younger children. There was no age difference in any dependent measure.

There were also a few sex x age interactions. As for the adversity measures, the interaction was significant for rejection by girls ($\beta = .22, p < .000$). Rejection by girls markedly increased with age for girls ($\beta = .38, p = .017$), but there was no significant change with age for boys. The interaction was also significant for victimization by girls ($\beta = .17, p = .019$). Girls increased in victimization by girls with age ($\beta = .42, p = .009$) but there was no significant change with age for boys. Only one sex x age interaction was found for the cognitive measures, namely, the interaction for narcissism ($\beta = .22, p = .003$). Narcissism increased with age for girls ($\beta = .33, p = .001$) but there was no change with age for boys. Only one sex x age interaction was found for the dependent measures. This interaction was that of aggression toward girls ($\beta = .23, p = .002$). Aggression toward girls increased with age for girls ($\beta = .31, p = .003$) but decreased with age for boys, though not significantly so.

These data strongly suggest that the transition from preadolescence into early adolescence is associated with considerably more changes for girls than for boys in their relations with peers, especially same-sex peers. That is, with this transition, girls

changed in ways indicative of increased same-sex conflict, most likely resulting in considerable emotional tumult for girls as they transitioned into early puberty. In contrast, boys are more likely to simply retain their ranks over time relative to other boys in the measures under study.

Correlations among measures in the fall for girls can be seen in Table 2, and correlations among measures in the fall for boys can be seen in Table 3. In each table, entries for younger children are above the diagonal, and entries for older children are below the diagonal. As might be expected, there were some correlations among the adversity measures, but because these correlations varied with sex and age and were not consistently high, I did not aggregate them into a single composite. There were also some correlations among the cognitive measures. For example, narcissism and self-efficacy for demonstration attributes were positively correlated for younger ($r = .39$) and for older girls ($r = .55$), but the correlation between these variables varied markedly with age for boys (the correlation was significant for younger boys, $r = .61$, but not for older boys, $r = .24$).

Longitudinal Main Effects of the Predictor Variables

The major analyses of this study examined interactions of adversity measures x cognitive variables, but here I begin by examining the main effect influence of each individual predictor variable (i.e., each adversity and cognition measure) on each dependent variable. This permits assessing the effect of each adversity variable on each outcome without any cognitive variable in the model, and in a similar vein allows assessing the effect of each cognitive variable on each outcome without any adversity variable in the model. This allows one to see if certain previously found effects (e.g., the

effect of adversity on aggression) are present in the present data and also provides information about the effect of each predictor independent of other predictor variables. Longitudinal main effects of the adversities will be explored first, then the main effects of each cognitive variable. The regression model used permitted examining the main effect of the focal predictor but also any interaction of the predictor with sex, age, or both. Thus, on the first step of each regression analysis, one focal predictor (either an adversity or cognition), sex, age, and fall aggression were entered. On the second step, the interactions of age x predictor, sex x predictor, and age x sex were entered. On the third step, the interaction of age x sex x predictor was entered. I will describe results for the adversity predictors first, then describe results for the cognitive predictors. Although when describing these results I speak of influences of adversity and cognition on aggression, it should be understood that the dependent variable is actually change in aggression from fall to spring because fall aggression was always controlled on the first step of the regression analysis.

The interaction of sex and victimization by girls was significant in the analysis on aggression toward girls ($\beta = -.12, p = .016$). A follow-up analysis was run for each sex. On the first step, victimization by girls, age, and fall aggression toward girls were entered. Victimization by girls was significant for boys only ($\beta = .21, p = .002$). This finding is consistent with the idea that boys find victimization by girls to be particularly frustrating and are consistent with literature I cited earlier showing that boys who commit serious acts of aggression (e.g., school shootings) often have experienced victimization or rejection by girls. No other adversity variable significantly predicted change in either dependent measure as a main effect. However, three sex x adversity

interactions trended toward significance when predicting aggression toward boys: Sex x victimization by girls ($\beta = -.10, p = .062$), sex x rejection by girls ($\beta = -.10, p = .087$), and sex x rejection by boys ($\beta = -.09, p = .078$). Follow up analyses were run for each sex, and in each case the adversity variable significantly predicted increased aggression among boys ($p = .023$ or better) but not for girls. These data are consistent with previous research indicating that peer adversity has a greater aggressogenic effect for boys than for girls.

These results are consistent with previous results indicating that adversity suffered at the hands of peers stimulates aggressive reactions. However, subsequent results will show that the effects of adversity on aggression are often moderated by cognitive variables, as I predicted.

Only two of the four demonstration self-guides predicted aggression either as a main effect or in interaction with child sex or age. First, sexist ideology predicted aggression toward girls ($\beta = .14, p = .003$) and toward boys ($\beta = .10, p = .038$). Second, self-efficacy for demonstration attributes interacted with child sex to predict aggression toward boys ($\beta = .10, p = .026$). A follow-up analyses was run for each sex with age and fall aggression toward boys entered simultaneously. Self-efficacy for demonstration attributes had a significant effect for girls ($\beta = .16, p = .041$) but not for boys.

Self-esteem predicted reduced aggression toward boys ($\beta = -.09, p = .037$), and felt gender typicality predicted reduced aggression toward girls ($\beta = -.12, p = .008$). These results are consistent with the view that self-esteem and felt gender typicality are relatively benign non-demonstration self-guides that are not conducive to aggressive

behavior and represent a positive self-concept more likely to represent a communal orientation than to be aggressogenic. However, later results also indicate that self-acceptance protects against aggressogenic effects of peer adversity.

Tests of Focal Adversity x Cognition Interaction Predictions

To test my central hypothesis that demonstration self-guides predispose children to react aggressively to peer rejection and victimization, I used the following four-step hierarchical regression model. The model was run for each combination of an adversity variable (4), a cognitive variable (6), and a dependent variable (2), resulting in 48 regression analyses. On step 1, all main effects were entered (sex, age, fall aggression, fall adversity, and fall cognition). On step 2, six two-way interactions were entered (sex x adversity, sex x cognition, age x adversity, age x cognition, adversity x cognition, and age x sex). On step 3, four three-way interactions were entered (sex x adversity x cognition, age x adversity x cognition, age x sex x cognition, and age x sex x adversity). On step 4, the four-way interaction was entered (age x sex x cognition x adversity). A general four step regression model is shown in Table 4.

No analysis yielded a significant two-way interaction of adversity x cognition. However, several analyses yielded a significant three-way interaction of sex x adversity x cognition or of age x adversity x cognition; the four-way interaction of age x sex x cognition x adversity also was sometimes significant. To examine a significant three-way interaction of sex x adversity x cognition, the sample was split by sex, and a regression analysis examining the two-way interaction of adversity x cognition was run for each sex (with the main effects of age, adversity, and cognition controlled). An analogous strategy was adopted when a three-way interaction of age x adversity x

cognition was significant. That is, I split the sample into younger and older groups, and a regression analysis examining the two-way interaction of adversity x cognition was run for each age group. Finally, when a four-way interaction was significant, I divided the sample into four groups (younger girls, younger boys, older girls, older boys) and examined the two-way interaction of adversity x cognition for each group.

Results are presented below for each cognitive variable in turn. For each cognitive variable, there was a significant two-way interaction of adversity x cognition for at least one participant group (i.e., girls, boys, younger children, older children, younger girls, older girls, younger boys, or older boys). Table 5-10 presents the significant interactions obtained for each cognitive variable in turn. The left-hand column of each table lists all the significant two-way interactions of adversity x cognition that involved the cognitive variables under consideration in the Table. Each entry in the left-hand column of the table tells the participant group for which an interaction was significant, specifies the adversity variable and the dependent measure of aggression involved in that interaction, and tells the significance of the interaction (for the participant group indicated). The remaining six columns of each table present the results of Aiken and West's (1991) procedures for unpacking significant interactions. Columns 2-4 of each table give the relation of the fall adversity measure to spring aggression (i.e., change in aggression over time) at each of three levels of the fall cognitive variables and provide information most directly relevant to an evaluation of my hypotheses. For example, my hypothesis that demonstration motivation encourages aggressive reactions to adversity is supported when the relation of fall adversity to spring aggression becomes stronger (increasingly positive) as the level of the cognitive moderator moves from -1 *SD*

to +1 *SD*. However, each table also tells the relation of the fall cognitive variable to spring aggression at each of three levels of the fall adversity variable; this information is given in the last three columns of the Table.

Narcissism. Table 5 presents results for significant interactions involving narcissism. As indicated in the left-hand column of the table, narcissism interacted with an adversity variable (either rejection or victimization) to predict change in a dependent measure of aggression for three subject groups (girls, older children, and older boys). Three out of eight, or 37 %, of possible outcomes were significant. Each of these three findings is described in turn.

First, a significant three-way interaction was found for sex x narcissism x rejection by girls predicting aggression toward girls ($\beta = -.13, p = .042$). Thus, the two-way interaction of narcissism x rejection by girls was evaluated separately for each sex. This interaction was significant for girls ($\beta = .32, p = .001$) but not for boys. Following the procedures recommended by Aiken and West (1991), I examined the relation of rejection by girls to aggression toward girls at low (-1 *SD*), medium (0 *SD*), and high (+1 *SD*) levels of narcissism. Consistent with my first hypothesis, rejection by girls predicted increased aggression toward girls only for girls with high (+1 *SD*) narcissism ($\beta = .43, p = .003$). This interaction is depicted in Figure 1. The other results involving narcissism also supported my first hypothesis in that the patterns of these other interactions were very similar to that of Figure 1 (and hence are not depicted). A three-way interaction of age x narcissism x victimization by girls predicting aggression toward girls was also found ($\beta = .15, p = .013$). Follow-up regressions run for older and younger children separately showed that the two-way interaction of victimization by girls x narcissism was

significant only for older children ($\beta = .26, p = .003$). Victimization by girls predicted increased aggression toward girls only for highly (+1 *SD*) narcissistic children ($\beta = .52, p < .000$). Finally, a significant four-way interaction of age x sex x narcissism x rejection by boys predicting aggression toward girls was found ($\beta = .15, p = .011$). Follow-up regressions run on each of four subject groups (younger girls, older girls, younger boys, older boys) showed that the two-way interaction of narcissism x rejection by boys was significant only for older boys ($\beta = .16, p = .050$). Rejection by boys was associated with increased aggression toward girls only in older, highly (+1 *SD*) narcissistic boys ($\beta = .43, p < .000$).

All three of the significant interactions of narcissism x adversity reported in the preceding paragraph support my first and most central hypothesis. That is, in each case, the adversity variable predicted increased aggression over time only for children high in narcissism. The results do not address my other two hypotheses.

Self-efficacy for demonstration attributes. Table 6 presents results for significant interactions involving self-efficacy for demonstration attributes. Only one of eight, or 12%, of possible outcomes were significant. A significant three-way interaction was found for age x self-efficacy for demonstration attributes x rejection by boys predicting aggression toward girls ($\beta = .16, p = .019$). The two-way interaction of self-efficacy x rejection by boys was evaluated separately for each age group and was significant only for older children ($\beta = .21, p = .026$). A follow up analysis indicated that rejection by boys was associated with increased aggression toward girls in older children with high (+1 *SD*) self-efficacy for demonstration attributes ($\beta = .46, p = .001$). Thus, the pattern is similar to that of Figure 1.

These results are consistent with my central (first) hypothesis that demonstration self-guides predispose children to respond aggressively to adversity suffered at the hands of their peers. The results are irrelevant to my second and third hypotheses.

Felt pressure for gender conformity. Table 7 presents results for significant interactions involving felt pressure for gender conformity. Only one of eight, or 12%, of possible outcomes were significant. A significant three-way interaction was found for sex x felt pressure for gender conformity x rejection by boys predicting aggression toward girls ($\beta = -.20, p = .017$). The two-way interaction of felt pressure for gender conformity x rejection by boys was evaluated separately for each sex and was significant for boys ($\beta = .16, p = .007$) but not for girls. A follow up analysis indicated that rejection by boys was associated with increased aggression toward girls in boys who feel strong (+1 *SD*) pressure to adhere to masculine gender norms ($\beta = .22, p = .009$). Thus, the pattern is similar to that depicted in Figure 1.

These results further confirm my first hypothesis that demonstration concerns encourage children to react aggressively to adverse peer experiences. They are not relevant to my second hypothesis, and they fail to confirm my third hypothesis that it is boys rather than girls for whom felt pressure for gender conformity is especially likely to encourage aggression in reaction to adversity.

Sexist ideology. Table 8 presents results for significant interactions involving sexist ideology. Five three-way interactions out of eight, 62%, were significant: sex x sexist ideology x victimization by girls predicting aggression toward girls ($\beta = .17, p = .008$), sex x sexist ideology x victimization by boys predicting aggression toward girls (β

= .14, $p = .007$), sex x sexist ideology x rejection by boys predicting aggression toward girls ($\beta = .22, p = .009$), sex x sexist ideology x victimization by girls predicting aggression toward boys ($\beta = .19, p = .007$), and sex x sexist ideology x rejection by boys predicting aggression toward boys ($\beta = .17, p = .009$). When each interaction was probed separately for each sex, all of the focal two-way interactions were significant for girls only. Statistics for these significant two-way interactions for girls are given in the left-hand column of Table 8.

The first three interactions featured in Table 8 provide support for my first hypothesis that demonstration self-guides encourage aggressive reactions to peer adversity because in each case the adversity variable significantly encouraged aggression only among girls who scored high (+1 *SD*) on sexist ideology. The pattern of these interactions is similar to that in Figure 1. The last two interactions in the table do not provide clear support for the hypothesis.

These data are irrelevant to my second hypothesis, and they do not provide support for my third hypothesis (that it is boys rather than girls for whom sexist beliefs are especially likely to encourage aggressive reactions to adversity). There is, however, an unexpected yet salient feature to the data in Table 8 that deserves attention. It is clear for each of the five interactions described in the table that for girls who are *low* in sexist beliefs (i.e., girls with egalitarian beliefs), peer adversity has the effect of *inhibiting* rather than instigating aggression.

Self-esteem. Table 9 presents results for significant interactions involving self-esteem. My second hypothesis was that self-esteem buffers children from the potential

aggressogenic effect of peer adversity. Only one interaction out of eight, 12%, involving self-esteem was significant. A significant three-way interaction was found for sex x self-esteem x victimization by girls predicting aggression toward boys ($\beta = -.19, p = .008$). The two-way interaction of self-esteem x victimization by girls was evaluated separately for sex and was significant for girls ($\beta = -.34, p = .010$) but not for boys. A follow up analysis indicated that victimization by girls was associated with decreased aggression toward boys for girls who have high (+1 *SD*) self-esteem ($\beta = -.54, p = .014$). This interaction is depicted in Figure 2. Thus, for girls, high self-esteem not only buffered girls from any aggressogenic effect of adversity but actually predicted a reduction in aggression as a consequence of peer adversity. This result provides support for my second hypothesis but was not relevant to my first and third hypotheses.

Felt gender typicality. Table 10 presents results for significant interactions involving felt gender typicality. Several results supported my second hypothesis—that high felt gender typicality buffers children from the aggressogenic effects of peer rejection and victimization. Three out of eight, 37%, of possible outcomes were significant. A significant three-way interaction was found for age x felt gender typicality x victimization by boys predicting aggression toward boys ($\beta = -.17, p = .016$). When this interaction was probed for younger and older children, the two-way interaction of felt gender typicality x victimization by boys was significant both for younger children ($\beta = .16, p = .024$) and for older children ($\beta = -.29, p = .011$). However, the pattern of the two-way interaction was different for younger versus older children. The pattern of the interaction for younger children (see first row of data in table) failed to support my second hypothesis because the relation of adversity to aggression became increasingly

positive rather than increasingly negative as the level of felt gender typicality (the moderator) increased. However, the hypothesis received some support for older children (see second row in table) because adversity predicted increased aggression only for children scoring low on felt gender typicality. In addition, a similar three-way interaction was found for age x felt gender typicality x victimization by boys predicting aggression toward girls ($\beta = -.16, p = .015$). When this interaction was probed for younger and older children separately, the two-way interaction of felt gender typicality x victimization by boys was significant for older children only ($\beta = -.29, p = .051$). The pattern was consistent with my second hypothesis, because the relation of adversity to aggression was close to significance only for children low in felt gender typicality. Finally, a significant four-way interaction of age x sex x felt gender typicality x victimization by girls predicting aggression toward boys was found ($\beta = -.28, p = .022$). The interaction was (close to) significant only for older girls ($\beta = -.41, p = .052$). Victimization by girls was associated with decreased aggressive behavior toward boys only in older girls who felt highly (+1 *SD*) typical of their gender ($\beta = -.76, p = .022$). This pattern was also consistent with my second hypothesis.

DISCUSSION

This dissertation tested the proposal that children who possess demonstration self-guides are more likely to react aggressively to peer adversity (rejection or victimization) than are children who lack demonstration self-guides. The first hypothesis was that all four demonstration self-guides (i.e., narcissism, self-efficacy for demonstration attributes, felt pressure for gender conformity, and sexist ideology) magnify the likelihood that children respond to peer rejection and victimization with aggression. The second hypothesis was that high self-esteem and felt gender typicality are more likely to protect children from reacting to rejection and victimization with aggression rather than to encourage it. The third hypothesis was that boys with strong felt pressure for gender conformity or sexist ideology would be particularly likely to react to rejection or victimization by girls with aggression. Ample support was found for the first hypothesis, partial support was found for the second hypothesis, and no support was found for the third hypothesis. Below I discuss results for each hypothesis in turn.

The demonstration self-guides assessed (i.e., narcissism, self-efficacy for demonstration attributes, felt pressure for gender conformity, and sexist ideology) were cognitions thought to tap salient motivating forces that contribute to children's behavior. The first hypothesis proposed that heightened levels of these cognitions enhance the probability of children developing aggression in reaction to peer rejection or victimization. Much support was found for this hypothesis in relation to both types of

adversity under study (i.e., rejection and victimization) and with all four demonstration self-guides considered. Consistently, high levels of demonstration motivation led children to react aggressively to peer rejection or victimization. These findings suggest that adverse experiences in the peer group affect different children in different ways, and that inflated levels of demonstration motivation are especially conducive to aggressive behavior in response to adversity. I suggest that these enduring cognitive structures motivate children to respond aggressively to negative social cues because these cues counter the perception of the self as a competent “demonstrator.” When these perceptions are challenged, the child can lose the ability to self-regulate, and the resulting pain and frustration can serve as a wellspring of aggression.

Nonetheless, the results supporting this hypothesis varied not only with the cognitive variable under study but also with the type of adversity (rejection and victimization), with the sex of the perpetrator, and with the dependent variable (aggression toward girls and aggression toward boys). In the aggregate, the overall pattern of interactions supported my hypothesis, but before I can put confidence in the specific variations in the results, there is a need to replicate these diverse findings and to formulate and test hypotheses to account for the variations in results across type of adversity, sex of perpetrator, and sex of target of children’s aggression.

These results are consistent with a growing literature indicating that children’s social-relational environment affects children’s adjustment, not merely as a main-effect influence but in interaction with children’s cognitive structures, including self-representational constructs (Ladd & Troop-Gordon, 2003; Menon et al., 2007; Pauletti et al., 2012; Pauletti, Cooper, & Perry, 2014; Prinstein & Aikins, 2004; Salmivalli et al.,

2005). It is also consistent with literature indicating that when people make their sense of self contingent on demonstrating their adequacy to others, challenges to this contingency generate agitated distress, shame, emotional dysregulation, poor self-regulatory control, and aggression (Aults, Cooper, Pauletti, Jones, & Perry, 2015; Crocker & Park, 2004; Higgins & Scholer, 2008; Gable & Strachman, 2008; Swann & Bosson, 2008). In this dissertation, I replicated these general themes but also provided evidence that certain specific underlying cognitions (i.e., demonstration self-guides) moderate the relationship of peer adversity's effect on aggressive behavior.

An interesting line of future inquiry would involve investigating cognitive mediators of the aggressive reactions to adversity I observed among children with demonstration goals. For example, is the increased aggression of these children due to increased hostile attributional biases, increased rumination, increased desire for revenge, or something else (e.g., increased association with deviant peers)?

The second hypothesis was that cognitions measuring self-acceptance (self-esteem and felt gender typicality) would not moderate peer adversity's effect on aggression the same way that demonstration self-guides would, in that high levels of these measures were expected to protect children from acting aggressively rather than to encourage them to do so. Some support for this hypothesis was found. The clearest influence for this hypothesis comes from the second interaction described in Table 10, which shows that adversity significantly encouraged aggression at low (-1 *SD*) felt gender typicality but was not significantly predictive of aggression at high (+1 *SD*) felt gender typicality. The other interactions in Table 9 and 10 are not inconsistent with this buffering potential of high self-acceptance but in no other case was adversity

significantly predictive of aggression at low levels of the self-acceptance variable. However, two interactions—the one in Table 9 and the last one in Table 10—point to a very interesting result, in that they show that adversity actually predicted a *decrease* in aggression for children scoring high on the self-acceptance variable. In particular, for girls with high self-esteem and for older girls with high felt gender typicality, victimization by girls predicted reduced aggression toward boys. One possibility is that self-accepting girls are inclined to be empathic and communal in their interactions, perhaps especially vis-à-vis their relationships with boys, and the adverse experiences these girls have with other girls leads them to act on their predisposition to exercise their communal orientation toward boys. Future research should expand on these findings and incorporate other measures of self-acceptance to see if these findings are replicable.

The third hypothesis was that boys with strong felt pressure for gender conformity or sexist ideology would be particularly likely to react to rejection or victimization by girls with aggression. That is, I suggested that boys with high felt pressure for gender conformity or sexist ideology who are rejected by girls may feel it necessary to lash out in reaction to adversity in hopes of relieving the stress of being thought of as a lesser male. The results suggested quite the opposite. High felt pressure for gender conformity encouraged aggression only among boys who were rejected by *other boys*. Interestingly, the aggression of these boys was directed toward girls. Perhaps these boys increase their aggressive behavior toward girls in an attempt to show off to male peers who are rejecting them, and to whom they wish to display masculine behavior.

It is also of interest that sexist beliefs moderated girls' but not boys' aggressive reactions to adversity. Whether rejected by boys or victimized by either sex, sexism

encouraged girls to be aggressive toward other girls. The increase in aggression could be (a) used to sanction other females for not acting the way they believe girls should act in particular contexts with male peers or (b) to garner attention and attraction from would be male partners. In any case, this aggression could be due to the fact that sexist girls expect other girls to behave in certain ways in interactions with peers, specifically in the context of dating relationships.

Another unexpected and interesting result concerning the sexist ideology variable was that adversity consistently predicted decreased aggression among girls with low sexism scores (all five interactions in Table 8). That is, girls who were egalitarian in their sexist self-guides (i.e., who scored low on sexist ideology), became *less* aggressive toward both male and female peers following adversity. Thus, egalitarian girls, who are not concerned with sexist beliefs appear to be more adept at coping with adverse experiences. Perhaps, egalitarian sexist beliefs are associated with empathic or communal tendencies in girls and adversity may activate these positive feelings which inhibit aggressive reactions to the adversity.

Several other aspects of the data warrant comment. It is well known that the transition from elementary school to middle school comes with a host of significant social and biological influences on development for both sexes (Maccoby, 1998). However, there were signs in the data that girls are experiencing more change over time in some of their social behaviors and peer relations than are boys. The stability of several measures from fall to spring was markedly lower for girls than boys. In addition, girls (but not boys) became increasingly rejected and victimized by girls over time and also became more aggressive toward other girls over time. Sharp increases in narcissism were

also evident in girls, but not boys. Narcissism appeared to be a salient demonstration self-guide as early as elementary school for girls, but did not play a role the aforementioned process until much later for boys (i.e., middle school). These findings suggest that the transition from preadolescence into early adolescence is associated with an increase in same-sex conflict among girls, very likely resulting in considerable emotional tumult for them. One possible explanation for these findings is the influence of early physical development on girls' social relationships. On average, girls reach puberty earlier than boys, about ages 8 to 14.9 years for females and 9.7 to 14.1 years for boys (Lee, 1980). Furthermore, there is much more variability in the age of onset of puberty for girls than boys, with some girls reaching puberty as early as the fourth grade and some as late as high school. Early maturation in girls, especially the development of secondary sexual characteristics, has been suggested to lead to incongruent same-sex relationships that often lead to negative outcomes over time. For example, early maturation in girls has been linked to delinquency, higher psychological vulnerabilities such as emotional distress, deviant peer pressure, body dissatisfaction, and aggression (Ge, Conger, & Elder, 1996; Najman, Hayatbakhsh, McGee, Bor, O'Callaghan, & Williams, 2009; Tremblay & Lariviere, 2008).

In this study, many more adversity x cognition interactions were found for girls than boys. This does not mean, however, that boys are not influenced by adversity or demonstration cognitions, however. However, these variables may act on boys' aggression more as main-effect influences than in interaction. Importantly, and consistent with prior studies, adversity had more of a main-effect influence on boys' aggression (toward both boys and girls) than it did on girls' aggression. Also, sexist

ideology predicted increased aggression toward both male and female peers for both boys and girls. Thus, for boys, there are additive rather than interactive effects of peer adversity and sexist ideology on aggression. That is, for boys the effects of adversity and sexist ideology are summative, and neither variable depends on the other for its aggressogenic effect for boys. For girls, in contrast, increased aggression is more limited to the conjoint occurrences of adversity and demonstration motivation, each requires the presence of the other to encourage girls to become aggressive.

Some limitations to this study are of note. First, this study was a short-term longitudinal study (over the course of one school year only). A longer interval of time between measures may lead to a better understanding of how these processes develop over even longer periods of time. Second, the dependent variable in this study was a generalized measure of aggressive behavior. Examining certain subtypes of aggression (e.g., reactive, proactive, instrumental, or relational) may shed light into the aforementioned processes, and uncover some additional motivating links that underpin aggressive behavior. Third, more nuanced measures of the frequency, severity, and duration of the peer adversity experiences (rejection and victimization) were not obtained. Experiencing long intervals of rejection or victimization may exacerbate these problems in some children, and could possibly lead to more violence or even psychopathology later in life. Finally, exploring other outcomes other than aggression may be a fruitful line of inquiry. Perhaps, depression or anxiety may occur in conjunction with, or instead of, aggressive behavior in reaction to certain combinations of adversity and cognition.

Notwithstanding these limitations, this dissertation provides a framework for future inquiry for the study of how cognitive moderators can encourage aggressive reactions to peer adversity. Identifying how enduring cognitive structures interact with situational cues to encourage aggressive behavior is an important avenue of research that has been largely overlooked in recent years. Given the recent rise in severity of aggressive behavior during this time period in development, future research should try to uncover factors that contribute to these behaviors, ultimately in an attempt to diminish the occurrence of more violent displays of aggressive behavior in children and adolescents.

Conclusion

The results of this dissertation suggest that children, especially girls, who possess demonstration self-guides are more prone to aggressive behavior after experiencing peer adversity than are children who lack such motivation. Therapists or school counselors might consider demonstration self-guides as wellsprings of children's aggression and work with children to alleviate them. In addition, research should try to identify ways to prevent children from developing the kinds of demonstration self-guides that contribute to aggressive tendencies and offer children certain ways for dealing with the effects of peer adversity in healthy, non-aggressive ways.

Table 1

Means and Standard Deviations of Measures

Measure	Girls				Boys				Sex difference (β)	Age difference (β)
	Younger		Older		Younger		Older			
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Adversity										
Rejection by boys	2.36	.44	2.66	.39	1.95	.50	2.23	.48	.41***	.17**
Rejection by girls	1.76	.48	2.44	.51	2.49	.48	2.88	.44	-.49***	.43***
Victimization by boys	.06	.07	.03	.06	.06	.06	.05	.04	-.06	-.13
Victimization by girls	.03	.03	.05	.07	.06	.04	.05	.04	-.19*	.18**
Cognition										
Narcissism	1.57	.56	1.88	.46	1.71	.66	1.70	.49	.00	.09
Self-Efficacy	2.98	.47	2.94	.37	3.11	.53	3.01	.39	-.12	-.05
Felt pressure	1.59	.44	1.84	.55	2.54	.82	2.64	.75	-.54***	.16*
Sexist ideology	3.31	.48	1.88	.70	2.77	.99	2.44	.86	-.38***	-.08
Self-esteem	3.62	.42	3.57	.79	3.48	.50	3.64	.82	.05	.04
Felt gender typicality	2.01	.73	2.93	.67	2.87	.66	3.24	.58	-.17*	.17*
Dependent variable										
Aggression to boys	.05	.07	.05	.06	.06	.10	.05	.05	-.01	-.03
Aggression to girls	.03	.06	.05	.06	.05	.08	.03	.04	-.06	.05

Note. To weight the child sexes equally, boys were coded -.93 and girls were coded 1. Younger children comprised fourth and fifth grade children. Older children comprised sixth and seventh grade children.

† $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 2

Intercorrelations of Measures in the Fall for Girls

Measure	1	2	3	4	5	6	7	8	9	10	11	12
1. Rejection by boys	--	.39	.24	.29	-.04	.12	-.08	-.11	-.15	.03	.49	.57
2. Rejection by girls	.64	--	.08	.37	.14	-.14	.33	.03	.00	.04	.71	.67
3. Victimization by boys	.63	.58	--	.13	.14	.16	.05	.03	.18	.08	.25	.18
4. Victimization by girls	.58	.64	.97	--	.12	-.19	.01	.00	.08	.01	.15	.24
5. Narcissism	-.38	-.15	-.05	-.07	--	.39	.16	-.05	.14	.07	.10	.25
6. Self-efficacy	-.33	-.03	-.19	-.18	.55	--	-.10	-.10	.15	.06	.15	.21
7. Felt pressure	-.19	-.05	.27	.22	.14	-.18	--	-.10	-.18	.05	.23	.15
8. Sexist ideology	.20	.25	.19	.20	-.08	.04	.05	--	.20	.06	.15	.24
9. Self-esteem	-.12	.02	-.11	-.13	.06	.51	-.30	-.04	--	.14	.11	.04
10. Felt gender typicality	.01	-.07	-.22	-.20	-.06	.11	-.02	-.17	.20	--	.23	.19
11. Aggression to boys	.50	.35	.22	.15	-.17	.11	.03	.25	.21	.27	--	.80
12. Aggression to girls	.38	.56	.24	.25	-.09	.07	.17	.03	.14	.40	.65	--

Note. Correlations for younger girls are above the diagonal; correlations for older girls are below the diagonal. Entries in bold are significant at $p < .05$. Younger children comprised fourth and fifth grade children. Older children comprised sixth and seventh grade children.

Table 3

Intercorrelations of Measures in the Fall for Boys

Measure	1	2	3	4	5	6	7	8	9	10	11	12
1. Rejection by boys	--	.42	.49	.37	.01	-.09	.16	.14	-.24	-.09	.69	.76
2. Rejection by girls	.60	--	.47	.56	-.24	-.08	.04	.04	-.20	.01	.43	.51
3. Victimization by boys	.80	.69	--	.48	-.23	-.15	.00	-.11	-.36	-.05	.65	.63
4. Victimization by girls	.71	.68	.82	--	-.18	-.19	.22	.06	-.13	-.17	.50	.51
5. Narcissism	.10	.06	.11	.09	--	.61	.33	.34	.33	.23	-.09	-.02
6. Self-efficacy	-.26	.02	-.30	-.17	.24	--	.15	.37	.35	.20	-.08	-.04
7. Felt pressure	-.01	.09	.04	-.03	.04	.33	--	.11	.13	-.15	.12	.14
8. Sexist ideology	-.06	.06	-.04	.08	.48	.14	-.15	--	.11	-.10	.02	.09
9. Self-esteem	.13	.08	.12	.10	-.16	.04	-.07	-.38	--	.35	-.28	-.29
10. Felt gender typicality	.04	.29	.12	.16	-.07	.19	.25	-.17	.51	--	-.09	-.04
11. Aggression to boys	.43	.43	.49	.41	.32	.05	.16	.06	.03	.15	--	.91
12. Aggression to girls	.22	.26	.22	.45	.30	.26	.06	.16	.06	.24	.55	--

Note. Correlations for younger boys are above the diagonal; correlations for older boys are below the diagonal. Entries in bold are significant at $p < .05$. Younger children comprised fourth and fifth grade children. Older children comprised sixth and seventh grade children.

Table 4

Sample Four Step Regression Model

Dependent Variable	Predictors
T2 Aggression	<p>Step 1</p> <p>Age</p> <p>Sex</p> <p>T1 Aggression</p> <p>T1 Adversity</p> <p>T1 Cognition</p> <p>Step 2</p> <p>T1 Adversity x T1 Cognition</p> <p>Age x T1 Cognition</p> <p>Sex x T1 Cognition</p> <p>Age x T1 Adversity</p> <p>Sex x T1 Adversity</p> <p>Step 3</p> <p>Age x T1 Adversity x T1 Cognition</p> <p>Sex x T1 Adversity x T1 Cognition</p> <p>Age x Sex x T1 Cognition</p> <p>Age x Sex x T1 Adversity</p> <p>Step 4</p> <p>Age x Sex x T1 Cognition x T1 Adversity</p>

Note. T1 represents measures collected at time 1 (Fall) and T2 represents measures collected at time 2 (Spring).

Table 5

Follow-up Results for Significant Adversity x Narcissism Interactions

Participant group and adversity x cognition interaction effect for that group	Relation (β) of fall adversity to spring aggression at 3 levels of fall narcissism			Relation (β) of fall narcissism to spring aggression at 3 levels of fall adversity		
	-1 <i>SD</i>	0 <i>SD</i>	+1 <i>SD</i>	-1 <i>SD</i>	0 <i>SD</i>	+1 <i>SD</i>
Girls: narcissism x rejection by girls predicting aggression toward girls ($\beta = .32, p = .001$)	-.19 (.06)	.12 (.13)	.43** (.20)	-.24† (.01)	.07 (.13)	.38*** (.25)
Older children: narcissism x victimization by girls predicting aggression toward girls ($\beta = .26, p = .003$)	-.22 (-.09)	.15 (-.01)	.52*** (.08)	-.16† (-.15)	.08 (-.01)	.45*** (.15)
Older boys: narcissism x rejection by boys predicting aggression toward girls ($\beta = .14, p = .050$)	.08 (-.11)	.25*** (-.02)	.43*** (.24)	-.08 (-.27)	.09 (-.02)	.26* (.24)

Note. Intercept values are given in parentheses below the β values. Younger children comprised fourth and fifth grade children. Older children comprised sixth and seventh grade children.

† $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 6

Follow-up results for significant adversity x self-efficacy interactions

Participant group and adversity x cognition interaction effect for that group	Relation (β) of fall adversity to spring aggression at 3 levels of fall self-efficacy			Relation (β) of fall self-efficacy to spring aggression at 3 levels of fall adversity		
	-1 <i>SD</i>	0 <i>SD</i>	+1 <i>SD</i>	-1 <i>SD</i>	0 <i>SD</i>	+1 <i>SD</i>
Younger children: self-efficacy x rejection by boys predicting aggression toward girls ($\beta = .11, p = .040$)	-.09 (-.03)	-.09 (.02)	.08 (.08)	-.03 (.03)	.06 (.02)	.15* (.01)
Older children: self-efficacy x rejection by boys predicting aggression toward girls ($\beta = .21, p = .026$)	-.02 (-.04)	.22* (.13)	.46*** (.29)	-.08 (-.09)	.16† (.13)	.41** (.34)

Note. Intercept values are given in parentheses below the β values.

† $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 7

Follow-up Results for Significant Adversity x Felt Pressure Interactions

Participant group and adversity x cognition interaction effect for that group	Relation (β) of fall adversity to spring aggression at 3 levels of fall felt pressure			Relation (β) of fall felt pressure to spring aggression at 3 levels of fall adversity		
	-1 SD	0 SD	+1 SD	-1 SD	0 SD	+1 SD
Boys: felt pressure x rejection by boys predicting aggression toward girls ($\beta = .16, p = .007$)	-.11 (.03)	.06 (-.01)	.22** (-.05)	-.20* (-.07)	-.04 (-.01)	.13† (.05)

Note. Intercept values are given in parentheses below the β values.

† $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 8

Follow-up Results for Significant Adversity x Sexist Ideology Interactions

Participant group and adversity x cognition interaction effect for that group	Relation (β) of fall adversity to spring aggression at 3 levels of fall sexist ideology			Relation (β) of fall sexist ideology to spring aggression at 3 levels of fall adversity		
	-1 <i>SD</i>	0 <i>SD</i>	+1 <i>SD</i>	-1 <i>SD</i>	0 <i>SD</i>	+1 <i>SD</i>
Girls: sexist ideology x victimization by girls predicting aggression toward girls ($\beta = .33, p = .001$)	-.47** (-.15)	-.07 (.01)	.34* (.17)	-.24† (.08)	.16* (.01)	.57*** (-.06)
Girls: sexist ideology x victimization by boys predicting aggression toward girls ($\beta = .30, p = .000$)	-.59*** (-.23)	-.19* (-.06)	.20* (.12)	-.22† (.14)	.18* (-.06)	.57*** (-.25)
Girls: sexist ideology x rejection by boys predicting aggression toward girls ($\beta = .28, p = .000$)	-.28** (-.10)	-.04 (.02)	.21* (.15)	-.12 (.06)	.12† (.02)	.37*** (-.01)
Girls: sexist ideology x victimization by girls predicting aggression toward boys ($\beta = .28, p = .019$)	-.39* (-.17)	-.06 (.01)	.28 (.20)	-.15 (.07)	.18* (.01)	.52** (-.04)
Girls: sexist ideology x rejection by boys predicting aggression toward boys ($\beta = .17, p = .045$)	-.26* (-.13)	-.11 (.03)	.05 (.18)	.00 (.13)	.15† (.03)	.31** (-.08)

Note. Intercept values are given in parentheses below the β values. † $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 9

Follow-up Results for Significant Adversity x Self-Esteem Interactions

Participant group and adversity x cognition interaction effect for that group	Relation (β) of fall adversity to spring aggression at 3 levels of fall self-esteem			Relation (β) of fall self-esteem to spring aggression at 3 levels of fall adversity		
	-1 <i>SD</i>	0 <i>SD</i>	+1 <i>SD</i>	-1 <i>SD</i>	0 <i>SD</i>	+1 <i>SD</i>
Girls: self-esteem x victimization by girls predicting aggression toward boys ($\beta = -.34, p = .010$)	.33 [†] (.26)	-.10 (.03)	-.54* (-.21)	.20 (.13)	-.23** (.03)	-.67** (-.08)

Note. Intercept values are given in parentheses below the β values.

[†] $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 10

Follow-up Results for Significant Adversity x Felt Gender Typicality Interactions

Participant group and adversity x cognition interaction effect for that group	Relation (β) of fall adversity to spring aggression at 3 levels of fall felt gender typicality			Relation (β) of fall felt gender typicality to spring aggression at 3 levels of fall adversity		
	-1 <i>SD</i>	0 <i>SD</i>	+1 <i>SD</i>	-1 <i>SD</i>	0 <i>SD</i>	+1 <i>SD</i>
Younger children: felt gender typicality x victimization by boys predicting aggression toward boys ($\beta = .16, p = .024$)	-.22† (-.02)	-.06 (-.01)	.10 (.02)	-.15 (.06)	.02 (-.01)	.18† (-.06)
Older children: felt gender typicality x victimization by boys predicting aggression toward boys ($\beta = -.29, p = .011$)	.18* (.12)	-.01 (-.09)	-.17 (-.31)	-.04 (-.08)	-.21** (-.09)	-.39*** (-.10)
Older children: felt gender typicality x victimization by boys predicting aggression toward boys ($\beta = -.29, p = .051$)	.20† (.09)	.02 (-.11)	-.16 (-.32)	-.03 (-.13)	-.21** (-.11)	-.39*** (-.10)
Older girls: felt gender typicality x victimization by girls predicting aggression toward boys ($\beta = -.41, p = .052$)	-.25† (.18)	-.51* (-.05)	-.76* (-.28)	.02 (.46)	-.23† (-.05)	-.48** (-.56)

Note. Intercept values are given in parentheses below the β values. Younger children comprised fourth and fifth grade children. Older children comprised sixth and seventh grade children. † $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

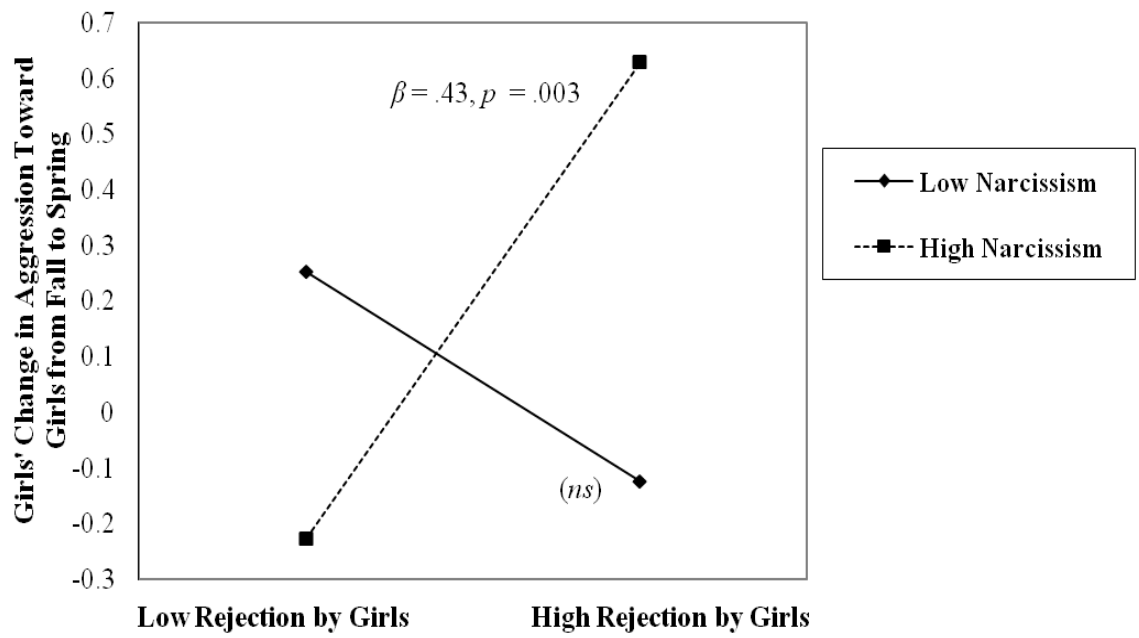


Figure 1. Change in Girls' Aggression Toward Girls from Fall to Spring as a Function of the Interaction of Rejection by Girls and Narcissism.

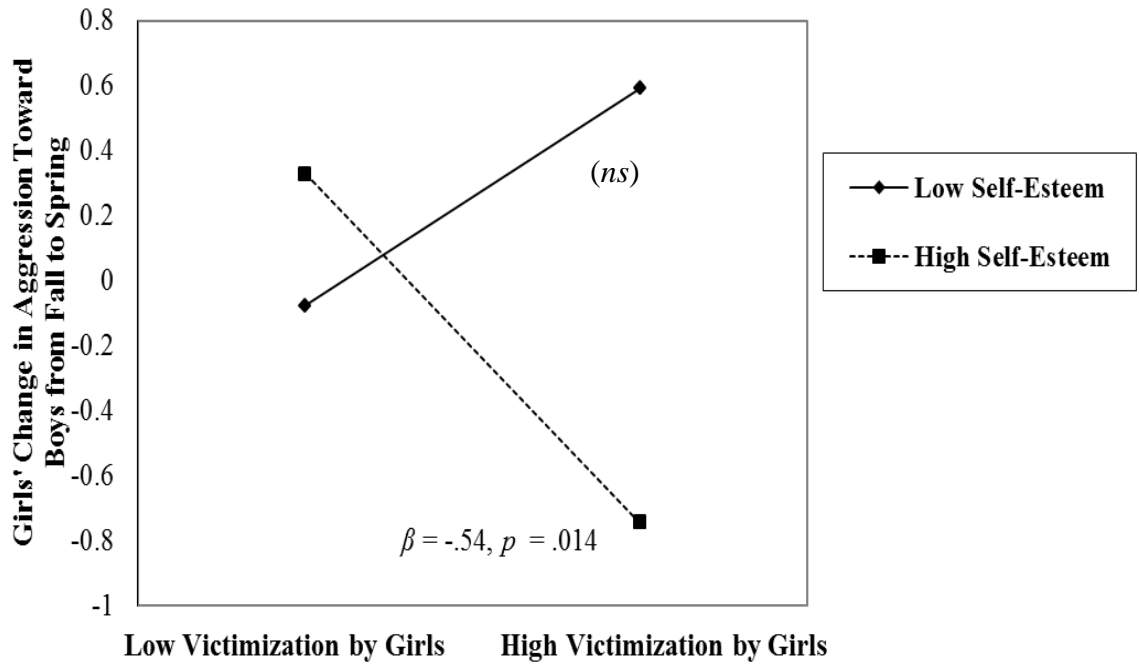


Figure 2. Change in Girls' Aggression Toward Boys from Fall to Spring as a Function of the Interaction of Victimization by Girls and Self-Esteem

APPENDICES

APPENDIX A

Childhood Narcissism Inventory (Thomaes, Stegge, Bushman, Olthof, Dennisen, 2008)

Instructions to Child:

OK, now this questionnaire asks you to tell some more things about yourself. There are 10 statements in this questionnaire. For each statement, tell us how true or not true the statement is for you. If the statement is never true, circle Not At All True! with the exclamation mark. If the statement is definitely true, circle Completely True! with the exclamation mark. Remember, this is not a test, but a survey. There are no right or wrong answers.

1. I think it's important to stand out.

Not At All True!	Not Really True	Sort of True	Completely True!
0	1	2	3

2. Kids like me deserve something extra.

Not At All True!	Not Really True	Sort of True	Completely True!
0	1	2	3

3. Without me, our class would be much less fun.

Not At All True!	Not Really True	Sort of True	Completely True!
0	1	2	3

4. It often happens that other kids get the compliments I actually deserve.

Not At All True!	Not Really True	Sort of True	Completely True!
0	1	2	3

5. I love showing all the things I can do.

Not At All True!	Not Really True	Sort of True	Completely True!
0	1	2	3

6. I am very good at making other people believe the things I want them to believe.

Not At All True!	Not Really True	Sort of True	Completely True!
0	1	2	3

7. I am a very special person.

Not At All True!	Not Really True	Sort of True	Completely True!
------------------	-----------------	--------------	------------------

0 1 2 3

8. I am a great example for other kids to follow.

Not At All True!	Not Really True	Sort of True	Completely True!
0	1	2	3

9. I often succeed at getting admiration.

Not At All True!	Not Really True	Sort of True	Completely True!
0	1	2	3

10. I like to think about how incredibly nice I am.

Not At All True!	Not Really True	Sort of True	Completely True!
0	1	2	3

APPENDIX B

Self-Efficacy Questionnaire Instructions

This questionnaire assesses children's perceptions of self-efficacy for 23 behaviors in four domains (see key on next page). The behaviors are the same as those used in the prescriptive stereotypes importance ratings. A girls' form and the boys' form should be the same except for item 19 (change "pretty" to "handsome").

Instructions to Child:

For this questionnaire, we want you to tell us how hard or easy it is for you to do various things. You are to read each question carefully and imagine that you are doing what it says. Then circle how hard or how easy it would be for you to do the activity in question. This is not a test. There are no right or wrong answers. Just try to answer as honestly as possible. OK, look at this practice item.

When you are playing baseball (or softball), running the bases fast is _____ for me.

HARD!

Hard

Easy

EASY!

If running the bases fast is very hard for you, then circle **HARD!** in big letters and with the exclamation mark. If doing this is hard for you but not very hard, then circle **hard** in little letters. If doing this is easy for you but not very easy, then circle **easy** in little letters. If doing it is very easy for you, then circle **EASY!** in big letters and with the exclamation mark. Do you understand? OK, go ahead and circle your answer and then go on to do the rest of the items.

Self-Efficacy Questionnaire Key

1. DOM (Dominance)
2. ATH (Athletics)
3. APP (Appearance)
4. DOM
5. POP (Popularity)
6. DOM
7. APP
8. ATH
9. DOM
10. POP
11. ATH
12. DOM
13. APP
14. POP
15. DOM
16. APP
17. ATH
18. POP
19. DOM
20. ATH
21. POP
22. DOM

23. POP

DOM (Dominance): 1 4 6 9 12 15 19 22

ATH (Athletics): 2 8 11 17 20

APP (Appearance): 3 7 13 16

POP (Popularity): 5 10 14 18 21 23

1. Fighting back when challenged is _____ for me.

HARD!

Hard

Easy

EASY!

2. Throwing a ball far is _____ for me.

HARD!

Hard

Easy

EASY!

3. Feeling attractive is _____ for me.

HARD!

hard

Easy

EASY!

4. Forcing others to do things is _____ for me.

HARD!

hard

Easy

EASY!

5. Having a lot of friends is _____ for me.

HARD!

hard

Easy

EASY!

6. Doing risky activities is _____ for me.

HARD!

hard

Easy

EASY!

7. Looking good in a bathing suit is _____ for me.

HARD!

hard

Easy

EASY!

8. Winning at sports is _____ for me.

HARD!

hard

Easy

EASY!

9. Making others feel like I am in charge is _____ for me.

HARD!

hard

Easy

EASY!

10. Being well-known is _____ for me.

HARD! **hard** **Easy** **EASY!**

11. Learning a new sport quickly is _____ for me.

HARD! **hard** **Easy** **EASY!**

12. Doing cool and dangerous stunts is _____ for me.

HARD! **hard** **Easy** **EASY!**

13. Being good looking is _____ for me.

HARD! **hard** **Easy** **EASY!**

14. Being liked by my classmates is _____ for me.

HARD! **hard** **Easy** **EASY!**

15. Trying exciting but dangerous activities is _____ for me.

HARD! **hard** **Easy** **EASY!**

16. Being pretty is _____ for me.

HARD! **hard** **Easy** **EASY!**

17. Being good at sports is _____ for me.

HARD! **hard** **Easy** **EASY!**

18. Being sociable is _____ for me.

HARD! **hard** **Easy** **EASY!**

19. Bossing others around is _____ for me.

HARD!

hard

Easy

EASY!

20. Enjoying talking about sports is _____ for me.

HARD!

hard

Easy

EASY!

21. Being popular is _____ for me.

HARD!

hard

Easy

EASY!

22. Getting even with people you're mad at is _____ for me.

HARD!

hard

Easy

EASY!

23. Being cool is _____ for me

HARD!

hard

Easy

EASY!

APPENDIX C

This questionnaire measures and felt pressure to avoid other-gender behavior (7 items).

Instructions to child:

This questionnaire contains some statements about how you, your parents, or your friends might feel about some things that concern you. Again, there are no right or wrong answers. Since kids are very different from each other, each of you may be putting down something different.

First let me explain how these questions work. There is a sample question on the first page marked PRACTICE QUESTION. I'll read it and you can follow along with me. (Researcher reads practice question.)

PRACTICE QUESTION:

My parents would get upset if I didn't do well in school.	Not at all true for me	A little true for me	Pretty true for me	Very true for me
---	---------------------------	-------------------------	-----------------------	---------------------

Now, your job is to circle how true that statement is for you. You have four choices (read them to the child), and you circle the one closest to how true that statement is for you.

OK, can you try this? Any questions? Remember, only the researcher will see your answers. So please answer as honestly as you can. OK, let's begin with the real questions now.

What I am Like Part II
Key

- | | |
|---------------------------------------|----------|
| 1. FPOG (Felt Pressure: Other Gender) | 6. FPOG* |
| 2. FPOG | 7. FPOG |
| 3. FPOG | |
| 4. FPOG | |
| 5. FPOG | |

* = reverse scored

FPOG: 1, 2, 3, 4, 5, 6*, 7

(Girls' Form)

- | | | | | |
|---|------------------------|----------------------|--------------------|------------------|
| 1. The girls I know would be upset if I wanted to play with boys' toys. | Not at all true for me | A little true for me | Pretty true for me | Very true for me |
| 2. My parents would be upset if they saw me acting like a boy. | Not at all true for me | A little true for me | Pretty true for me | Very true for me |
| 3. I think it would be wrong for me to play with boys' toys or do boys' activities. | Not at all true for me | A little true for me | Pretty true for me | Very true for me |
| 4. The girls I know wouldn't like it if I wanted to learn an activity that boys usually do. | Not at all true for me | A little true for me | Pretty true for me | Very true for me |
| 5. I wouldn't like myself if I heard myself talking or laughing like a boy. | Not at all true for me | A little true for me | Pretty true for me | Very true for me |
| 6. I would still like myself if I saw myself acting like a boy. | Not at all true for me | A little true for me | Pretty true for me | Very true for me |
| 7. My parents wouldn't like it if I wanted to learn an activity that only boys do. | Not at all true for me | A little true for me | Pretty true for me | Very true for me |

(Boys' Form)

- | | | | | |
|---|------------------------|----------------------|--------------------|------------------|
| 1. The boys I know would be upset if I wanted to play with girls' toys. | Not at all true for me | A little true for me | Pretty true for me | Very true for me |
| 2. My parents would be upset if they saw me acting like a girl. | Not at all true for me | A little true for me | Pretty true for me | Very true for me |
| 3. I think it would be wrong for me to play with girls' toys or do girls' activities. | Not at all true for me | A little true for me | Pretty true for me | Very true for me |
| 4. The boys I know wouldn't like it if I wanted to learn an activity that girls usually do. | Not at all true for me | A little true for me | Pretty true for me | Very true for me |
| 5. I wouldn't like myself if I heard myself talking or laughing like a girl. | Not at all true for me | A little true for me | Pretty true for me | Very true for me |
| 6. I would still like myself if I saw myself acting like a girl. | Not at all true for me | A little true for me | Pretty true for me | Very true for me |
| 7. My parents wouldn't like it if I wanted to learn an activity that only girls do. | Not at all true for me | A little true for me | Pretty true for me | Very true for me |

APPENDIX D

Sexist Ideology Questionnaire Instructions

This instrument assesses Traditional Attitudes Toward Sex Roles (24 items, with three subscales of 8 items each).

Instructions to Child:

This questionnaire contains a lot of statements about boys and girls and about men and women. Your job is to read each statement and decide how much you agree with it or disagree with it. If you look on the front page of your questionnaire, you will see a practice item.

PRACTICE ITEM: Girls usually make a better babysitter than boys do.

Disagree	Disagree	Neither agree	Agree	Agree
Strongly!	a little	nor disagree	a little	Strongly!

Now, your job is to tell how much you agree or disagree with this statement. For each statement, you circle one (and only one) answer, depending on how you feel about it.

Let's read the five answers you can choose from. If you disagree strongly with the statement you circle the first answer. If you disagree a little with the statement, you circle the second answer. If you neither agree nor disagree with the statement (or if you can't make up your mind about it), you circle the middle answer where it says neither agree nor disagree. If you agree a little with the statement, then you circle that answer. And if you agree strongly with the statement, then you circle the last answer choice over on the right side OK, do you understand how to do these? Now, it's important to

understand something: There are no right or wrong answers to these statements.

Different children have different feelings about each of these statements. You almost certainly will agree with some statements and disagree with others, and the statements that you agree or disagree with may very well be different from the statements that other children agree or disagree with, AND THAT IS OK. The most important thing is that you honestly tell for each statement your true feelings about how much you agree with it or disagree with it.

Sexist Ideology Questionnaire Key

1. WS (Work Sexism)
2. PS (Parenting Sexism)
3. DS (Dating Sexism)
4. WS*
5. DS
6. PS
7. DS*
8. WS
9. PS*
10. WS*
11. PS
12. DS
13. WS
14. PS
15. DS*
16. WS*
17. DS
18. PS*
19. WS*
20. PS*
21. DS*
22. PS*

23. WS

24. DS*

WS (Work Sexism): 1, 4*, 8, 10*, 13, 16*, 19*, 23

PS (Parenting Sexism): 2, 6, 9*, 11, 14, 18*, 20*, 22*

DS (Dating Sexism): 3, 5, 7*, 12, 15*, 17, 21*, 24*

* = reverse-scored item

1. Because women are so sensitive and caring, only women should be grade school teachers or nurses.

Disagree Strongly!	Disagree a little	Neither agree nor disagree	Agree a little	Agree Strongly!
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2. In a marriage, it is more important for the husband to have a job than for the wife to have a job.

Disagree Strongly!	Disagree a little	Neither agree nor disagree	Agree a little	Agree Strongly!
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3. On a date, the girl should let the boy decide where to go and what to do.

Disagree Strongly!	Disagree a little	Neither agree nor disagree	Agree a little	Agree Strongly!
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4. A woman can run a business just as well as a man.

Disagree Strongly!	Disagree a little	Neither agree nor disagree	Agree a little	Agree Strongly!
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5. A girl should treat her boyfriend like he's the boss.

Disagree Strongly!	Disagree a little	Neither agree nor disagree	Agree a little	Agree Strongly!
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6. Important family decisions should be made by the husband rather than the wife.

Disagree Strongly!	Disagree a little	Neither agree nor disagree	Agree a little	Agree Strongly!
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7. On a date, the girl should not allow the boy to make all the decisions.

Disagree Strongly!	Disagree a little	Neither agree nor disagree	Agree a little	Agree Strongly!
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8. Some jobs should only be open to men, like joining the army or being a firefighter.

Disagree Strongly!	Disagree a little	Neither agree nor disagree	Agree a little	Agree Strongly!
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9. A wife has the same right as her husband to take a job outside the home.

Disagree Strongly!	Disagree a little	Neither agree nor disagree	Agree a little	Agree Strongly!
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10. A woman could do just as good a job being President of the U.S. as a man.

Disagree Strongly!	Disagree a little	Neither agree nor disagree	Agree a little	Agree Strongly!
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11. A woman's place is in the home.

Disagree Strongly!	Disagree a little	Neither agree nor disagree	Agree a little	Agree Strongly!
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12. It is OK for a boy to be mean to his girlfriend if she doesn't listen to him.

Disagree Strongly!	Disagree a little	Neither agree nor disagree	Agree a little	Agree Strongly!
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13. Men should be chosen over women when being hired or promoted for a job.

Disagree Strongly!	Disagree a little	Neither agree nor disagree	Agree a little	Agree Strongly!
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14. A wife should do what her husband says.

Disagree Strongly!	Disagree a little	Neither agree nor disagree	Agree a little	Agree Strongly!
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15. On a date, the girl should have as much say as the boy in deciding on the activity.

Disagree Strongly!	Disagree a little	Neither agree nor disagree	Agree a little	Agree Strongly!
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16. Just about any job can be done equally well by both men and women.

Disagree Strongly!	Disagree a little	Neither agree nor disagree	Agree a little	Agree Strongly!
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17. On a date, the girl should go along with whatever the boy decides.

Disagree Strongly!	Disagree a little	Neither agree nor disagree	Agree a little	Agree Strongly!
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18. Cooking and taking care of children are jobs that should be done by both husbands and wives.

Disagree Strongly!	Disagree a little	Neither agree nor disagree	Agree a little	Agree Strongly!
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19. Women can make just as much money as men.

Disagree Strongly!	Disagree a little	Neither agree nor disagree	Agree a little	Agree Strongly!
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20. It is fine if a wife earns as much money as her husband.

Disagree Strongly!	Disagree a little	Neither agree nor disagree	Agree a little	Agree Strongly!
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21. It is OK for a girl to disagree with her boyfriend.

Disagree Strongly!	Disagree a little	Neither agree nor disagree	Agree a little	Agree Strongly!
-----------------------	----------------------	-------------------------------	-------------------	--------------------

22. It is OK for a wife to disagree with her husband's decisions.

Disagree Strongly!	Disagree a little	Neither agree nor disagree	Agree a little	Agree Strongly!
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23. There are some jobs that only men should do and some jobs that only women should do.

Disagree Strongly!	Disagree a little	Neither agree nor disagree	Agree a little	Agree Strongly!
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24. On a date, the boy should not make all the important decisions.

Disagree Strongly!	Disagree a little	Neither agree nor disagree	Agree a little	Agree Strongly!
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APPENDIX E

This questionnaire contains three scales measuring Within-Gender Typicality (5 items), Gender Contentedness (5 items), and Global Self-Worth (6 items).

Instructions to child:

This questionnaire contains some statements that describe things about kids, such as who they are, what they like to do, and how they feel about various things. As you can see from the top of your sheet where it says, “What I Am Like,” we are interested in what each of you is like, what kind of person you are like. This is a survey, not a test. There are no right or wrong answers. Since kids are very different from one another, each of you will be putting down something different.

First let me explain how these questions work. There is a sample question on the first page marked PRACTICE QUESTION. I’ll read it aloud and you can follow along with me. (Researcher reads practice question.)

PRACTICE QUESTION

Some kids are good at
playing cards

BUT

Other kids aren’t good at
playing cards.

Very true Sort of
for me true for me

Sort of Very true
true for me for me

This question talks about two kinds of kids, and we want to know which kids are most like you.

1. So, what I want you to decide first is whether you are more like the kids on the left side who are good at playing cards or are you more like the kids on the right side who aren’t good at playing cards. Don’t mark anything yet, but first decide which kind of kid is most like you and go to that side of the sentence.
2. Now, the second thing I want you to think about, now that you have decided which kind of kid is most like you, is to decide whether that is only sort of true for you, or very true for you. If it’s only sort of true for you, then circle “sort of true for me”; if it’s very true for you, then circle “very true for me”.
3. For each question, you only circle one statement. Sometimes it will be on one side of the page, and other times it may be on the other side of the page. You can only circle one statement per question. You don’t circle one on both sides, just the one side most like you.
4. OK, that one was just for practice. Now we have some more questions which I’m going to read aloud. For each one, just circle the statement, the one that goes with what is true for you, what you are most like. Remember that no one else at the school will see your answers, and it is very important that you answer each question honestly.

Key

1. GSW (Global self-worth)
2. GC (Gender contentedness)*
3. WGT (Within-gender typicality)*
4. GSW*
5. GC
6. WGT
7. GSW
8. GC*
9. WGT*
10. GSW
11. GC
12. WGT*
13. GSW*
14. GC*
15. WGT*
16. GSW*

GSW (Global self-worth): 1, 4*, 7, 10, 13*, 16*

GC (Gender contentedness): 2, 5, 8*, 11, 14*

WGT (Within-gender typicality): 3, 6, 9*, 12*, 15*

* = reverse-scored item

(Girls' Form)

- | | | | |
|----|--|------------|--|
| 1. | Some kids are often <u>unhappy</u> with themselves | BUT | Other kids are pretty <u>pleased</u> with themselves. |
| | Very true for me Sort of true for me | | Sort of true for me Very true for me |
| 2. | Some girls are happy that they were born a girl | BUT | Other girls are not happy they were born a girl. |
| | Very true for me Sort of true for me | | Sort of true for me Very true for me |
| 3. | Some girls feel that the things they like to do in their spare time are <u>similar</u> to what most girls like to do in their spare time | BUT | Other girls feel that the things they like to do in their spare time are <u>different</u> from what most girls like to do in their spare time. |
| | Very true for me Sort of true for me | | Sort of true for me Very true for me |
| 4. | Some kids are <u>happy</u> with themselves as a person | BUT | Other kids are often <u>not</u> happy with themselves. |
| | Very true for me Sort of true for me | | Sort of true for me Very true for me |
| 5. | Some girls wish they didn't have to be a girl all their life | BUT | Other girls are glad they'll be a girl all their life. |
| | Very true for me Sort of true for me | | Sort of true for me Very true for me |
| 6. | Some girls feel they are <u>different</u> from other girls | BUT | Other girls feel they are <u>similar</u> to other girls. |
| | Very true for me Sort of true for me | | Sort of true for me Very true for me |

- | | | | |
|-----|---|------------------------|---|
| 7. | Some kids are <u>not</u> very happy with the way they do things | BUT | Other kids think the way they do things is <u>fine</u> . |
| | Very true
for me | Sort of
true for me | Sort of
true for me |
| | | | Very true
for me |
| 8. | Some girls are glad they'll grow up to be a woman | BUT | Other girls wish they could grow up to be a man. |
| | Very true
for me | Sort of
true for me | Sort of
true for me |
| | | | Very true
for me |
| 9. | Some girls have the same feelings that other girls have | BUT | Other girls <u>don't</u> have the same feelings that other girls have. |
| | Very true
for me | Sort of
true for me | Sort of
true for me |
| | | | Very true
for me |
| 10. | Some kids <u>don't</u> like the way they're leading their life | BUT | Other kids <u>do</u> like the way they're leading their life. |
| | Very true
for me | Sort of
true for me | Sort of
true for me |
| | | | Very true
for me |
| 11. | Some girls don't like being a girl | BUT | Other girls don't mind being a girl. |
| | Very true
for me | Sort of
true for me | Sort of
true for me |
| | | | Very true
for me |
| 12. | Some girls like to play with the same toys that other girls do | BUT | Other girls <u>don't</u> like to play with the same toys that other girls do. |
| | Very true
for me | Sort of
true for me | Sort of
true for me |
| | | | Very true
for me |

- | | | | |
|-----|--|------------------------|---|
| 13. | Some kids like the kind of person they are | BUT | Other kids often wish they were someone else. |
| | Very true
for me | Sort of
true for me | Sort of
true for me Very true
for me |
| 14. | Some girls feel lucky that they are a girl | BUT | Other girls don't feel lucky that they are a girl. |
| | Very true
for me | Sort of
true for me | Sort of
true for me Very true
for me |
| 15. | Some girls have the same interests that other girls have | BUT | Other girls <u>don't</u> have the same interests that other girls have. |
| | Very true
for me | Sort of
true for me | Sort of
true for me Very true
for me |
| 16. | Some kids are very <u>happy</u> being the way they are | BUT | Other kids wish they were <u>different</u> . |
| | Very true
for me | Sort of
true for me | Sort of
true for me Very true
for me |

(Boys' Form)

- | | | | |
|----|--|------------|--|
| 1. | Some kids are often <u>unhappy</u> with themselves | BUT | Other kids are pretty <u>pleased</u> with themselves. |
| | Very true for me Sort of true for me | | Sort of true for me Very true for me |
| 2. | Some boys are happy that they were born a boy | BUT | Other boys are not happy they were born a boy. |
| | Very true for me Sort of true for me | | Sort of true for me Very true for me |
| 3. | Some boys feel that the things they like to do in their spare time are <u>similar</u> to what most boys like to do in their spare time | BUT | Other boys feel that the things they like to do in their spare time are <u>different</u> from what most boys like to do in their spare time. |
| | Very true for me Sort of true for me | | Sort of true for me Very true for me |
| 4. | Some kids are <u>happy</u> with themselves as a person | BUT | Other kids are often <u>not</u> happy with themselves. |
| | Very true for me Sort of true for me | | Sort of true for me Very true for me |
| 5. | Some boys wish they didn't have to be a boy all their life | BUT | Other boys are glad they'll be a boy all their life. |
| | Very true for me Sort of true for me | | Sort of true for me Very true for me |
| 6. | Some boys feel they are <u>different</u> from other boys | BUT | Other boys feel they are <u>similar</u> to other boys. |
| | Very true for me Sort of true for me | | Sort of true for me Very true for me |

- | | | | |
|-----|---|------------------------|---|
| 7. | Some kids are <u>not</u> very happy with the way they do things | BUT | Other kids think the way they do things is <u>fine</u> . |
| | Very true
for me | Sort of
true for me | Sort of
true for me Very true
for me |
| 8. | Some boys are glad they'll grow up to be a man | BUT | Other boys wish they could grow up to be a woman. |
| | Very true
for me | Sort of
true for me | Sort of
true for me Very true
for me |
| 9. | Some boys have the same feelings that other boys have | BUT | Other boys <u>don't</u> have the same feelings that other boys have. |
| | Very true
for me | Sort of
true for me | Sort of
true for me Very true
for me |
| 10. | Some kids <u>don't</u> like the way they're leading their life | BUT | Other kids <u>do</u> like the way they're leading their life. |
| | Very true
for me | Sort of
true for me | Sort of
true for me Very true
for me |
| 11. | Some boys don't like being a boy | BUT | Other boys don't mind being a boy. |
| | Very true
for me | Sort of
true for me | Sort of
true for me Very true
for me |
| 12. | Some boys like to play with the same toys that other boys do | BUT | Other boys <u>don't</u> like to play with the same toys that other boys do. |
| | Very true
for me | Sort of
true for me | Sort of
true for me Very true
for me |

- | | | | | |
|-----|--|------------------------|---|---------------------|
| 13. | Some kids like the kind of person they are | BUT | Other kids often wish they were someone else. | |
| | Very true
for me | Sort of
true for me | Sort of
true for me | Very true
for me |
| 14. | Some boys feel lucky that they are a boy | BUT | Other boys don't feel lucky that they are a boy. | |
| | Very true
for me | Sort of
true for me | Sort of
true for me | Very true
for me |
| 15. | Some boys have the same interests that other boys have | BUT | Other boys <u>don't</u> have the same interests that other boys have. | |
| | Very true
for me | Sort of
true for me | Sort of
true for me | Very true
for me |
| 16. | Some kids are very <u>happy</u> being the way they are | BUT | Other kids wish they were <u>different</u> . | |
| | Very true
for me | Sort of
true for me | Sort of
true for me | Very true
for me |

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