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ASSOCIATIONS AMONG FRIENDSHIP JEALOUSY, FRIENDSHIP QUALITIES,
RELATIONAL AGGRESSION, AND GENDER IN ADOLESCENCE

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Abstract

The present study investigated the associations among specific friendship qualities, friendship jealousy, and relational aggression among ninth graders. Friendship qualities and gender were explored as potential moderators of the association between relational aggression and friendship jealousy. Seventy-two participants completed self-report questionnaires about the characteristics of their closest friendship and their proneness to experiencing friendship jealousy. Regression analyses revealed significant main effects of intimate exchange and companionship and recreation in predicting friendship jealousy, but the results did not suggest that friendship qualities and gender act as moderators of the relationship between friendship jealousy and relational aggression. A significant three-way interaction among relational aggression, validation and caring, and friendship jealousy did emerge, and there were significant gender differences in particular friendship qualities. Findings are discussed in light of a traditional friendship development framework as well as more recent approaches to understanding gender differences in friendship behaviors and expectations.

Keywords: friendship jealousy, friendship qualities, relational aggression

Importance of Friendships in Adolescence

Friendships have enormous developmental significance in childhood and adolescence. Friendships constitute the basis of egalitarian relationships because children's other relationships are dominated by power differentials. For instance, teachers, parents, and older siblings are authority figures to children, and younger siblings are typically not considered equal peers by their older siblings. According to Hartup (1993), egalitarianism is one of the three core components of adolescent friendships, along with reciprocity and commitment. Reciprocity evolves from sharing material things and constructing imaginative play in childhood to sharing thoughts and disclosing personal information in adolescence. Another conceptual change from childhood to adolescence is the expectation that friends should be loyal and committed to each other. Research based on interviews with children and adolescents revealed that children rarely mentioned loyalty as an aspect of their friendships, but adolescents almost always mentioned loyalty when describing the characteristics of their best friends (Bigelow & LaGaipa, 1980). Selman (1980) suggests that there are two stages of friendship development during adolescence. The first stage is providing support and understanding, and the other is balancing closeness and individuality within friendships. Thus, friendships are contexts in which youth can practice important interpersonal and relational skills.

Friendships are particularly important for adolescents for many reasons. First, close friendships help adolescents develop their interpersonal skills (Buhrmester, 1996).

Friendships help adolescents learn how to meet others' needs and how to express their emotions in an appropriate manner. Having close friendships also helps adolescents achieve two important goals, gaining a sense of belonging in a social group and establishing one's identity. Friendships are more stable in adolescence than they are in elementary school, and youths increasingly rely on their friends for emotional support (Berndt, 1982; Bokhorst, Sumter, & Westenberg, 2010; Furman & Buhrmester, 1992). Feelings of closeness within friendships peaks in adolescence, as adolescents spend more time with their friends than with family members or alone (Laursen, 1996). Friendships also serve a protective function in that children without friends are far more likely to be victimized by other peers and to feel lonely than children who have at least one friend (Newcomb & Bagwell, 1996). Adolescents develop their identity through learning about different perspectives, exploring their autonomy, and engaging in social comparison. Adolescents are more likely than younger children to compare themselves to others, and they are also more concerned about their peers' evaluations of them (Harter, 2006; Somerville, 2013). Self-esteem is enmeshed with the social contexts adolescents experience, and social comparisons can lead youths to feel threatened by peers they perceive as superior.

Like other types of close relationships, friendships have positive and negative features, and conflict is unavoidable (Rubin, 1980). Friendship conflicts enable further development of interpersonal skills, and adolescents must learn how to manage disagreements with close friends in ways that preserve their friendships. Because of the

voluntary nature of friendships, equality is expected, and the only way for a conflict to be solved is to compromise so both members of the friendship are satisfied. Otherwise, the friendship will likely deteriorate (Laursen, 1993). Since friendships are embedded in a larger peer group, tensions can arise within dyadic friendships when the boundaries of the relationship are tested by the greater peer context, particularly when one member of the friendship has inflexible or "unrealistic" expectations regarding the friendship (Asher, Parker, & Walker, 1996; Lavalley & Parker, 2009; Selman & Schultz, 1990). Because a sense of belonging is so important, some adolescents are prone to experiencing jealousy whenever their closest friendships are threatened by the companionship of other peers, whom Parker and colleagues refer to as "interlopers" (Parker, Low, Walker, & Gamm, 2005). A close friend's interest in developing a friendship with an interloper might signal to an insecure adolescent that their friend thinks the interloper is superior to them in some way.

Friendship Jealousy

Though experiencing friendship jealousy does not harm a friendship on its own, expressing feelings of friendship jealousy in negative ways can lead to conflicts and threaten existing friendships. Jealousy's role in friendship conflicts has been demonstrated in a few studies. Lavalley and Parker's study of friendship jealousy in early adolescence revealed that youths who reported being prone to friendship jealousy also reported having more friendship conflicts and engaging in more negative behaviors toward their friends (Lavalley & Parker, 2009). In another study by Shulman (1993),

adolescents who were interviewed said that jealousy led to changes in the friendship, including disengagement and dissolution. An observational study of friendship dyads by Deutz Lansu, and Cillessen (2014) suggested that jealousy is associated with lower observed friendship quality and an absence of prosocial interactions. The participants in this study were 9 years old, but these findings might also apply to adolescents.

Individuals who are prone to experiencing friendship jealousy are also at risk of internalizing problems, including loneliness, depressive symptoms, low self-esteem, and rumination, and these symptoms likely exert an indirect influence on their friendships (Parker et al., 2005; Lennarz et al., 2017).

Jealous behavior is defined by Buunk and Bringle (1987) as an attempt to influence a friend or social situation to preserve the relationship, reduce uncertainty, or restore self-esteem. Adolescents' reactions to friendship jealousy depend on many factors. Some adolescents internalize their feelings, others try to overcompensate and redirect their friend's attention back to them, others might try to sabotage the newly formed friendship through acts of relational aggression, such as spreading rumors about the interloper. Since jealous individuals want to preserve their friendship, they are more likely to aggress covertly in order to avoid negative judgments from their friend.

Relational aggression might be more salient than overt aggression because a jealous individual can aggress covertly without being identified as the perpetrator.

According to a study by Lennarz and colleagues (2016), adolescent boys and girls are equally prone to engaging in social comparison and experiencing jealousy

(Lennarz, Lichtwarck-Aschoff, Finkenauer, & Granic, 2016). However, other recent studies have shown that adolescent girls are more prone to friendship jealousy than boys (Deutz, Lansu, & Cillessen, 2014; Kraft & Mayeux, 2016; Parker et al., 2010). This gender difference supports the findings of several studies that boys and girls engage in different behaviors with friends and have different expectations in their friendships. For instance, girls tend to endorse exclusivity in their friendships, but boys do not. Girls spend most of their time with friends in intimate conversations, and allowing other peers to join in on those interactions puts personal information at risk (Buhrmester & Furman, 1987; Camarena, Sarigiani, & Petersen, 1990; Rose & Rudolph, 2006). When a third party tries to tag along, girls might feel restricted to talking about less interesting topics. For this reason, girls might find dyadic interactions more enjoyable than group interactions. Boys, on the other hand, are far more likely to include a third party in their activities, perhaps because boys spend more of their time with larger groups of friends engaging in activities that they enjoy (sports, games) rather than talking about personal issues (Benenson, 1990; Eder & Hallihan, 1978; Zabatany, McDougall, and Hymel, 2000).

Relational Aggression

Relational aggression is characterized by the intent to harm others' social relationships and social status (Crick & Grotpeter, 1995). Jealousy plays a large role in relationally aggressive behaviors such as social exclusion, spreading rumors, and gossip (Culotta & Goldstein, 2008). In a study by Pronk and Zimmer-Gembeck (2010), in

which adolescents were interviewed about personal experiences with relational aggression as well as motivations behind relational aggression, participants explained that peers who are perceived as threats to another peer's social status, friendship, or feelings of inclusion are likely to be socially denigrated by that peer through gossip and excluded (Pronk & Zimmer-Gembeck, 2010). Similarly, a study by Kuttler, Parker, and LaGreca (2002) revealed that younger adolescents consider gossip about other peers to be fueled by jealousy. Adolescent interviewees in Pronk and Zimmer-Gembeck's (2010) study described relationally aggressive peers as jealous of other peers' social status, friendships, material possessions, abilities, and personal characteristics. Further, these interviewees suggested that perpetrating acts of relational aggression helps jealous peers feel better because they damage the envied peer's self-esteem or social status. In studies of friendship quality, relationally aggressive peers reported higher levels of exclusivity in their friendships, meaning that they experience greater jealousy at the thought of their friend becoming friends with someone else (Grotzinger & Crick, 1996; Sebanc, 2003).

Though studies have found that both boys and girls exhibit relational aggression within their friendships, adolescent girls might be more sensitive to and aware of the harm that relational aggression can cause their friendships (Goldstein & Tisak, 2004; Paquette & Underwood, 1999). In a study by Goldstein and Tisak (2004), adolescents reported that they would feel worse if a friend gossiped about them than if their friend excluded them, perhaps because gossip is a more direct form of betrayal. In a study of

middle schoolers by Culotta and Goldstein (2008), friendship jealousy predicted relational aggression as well as proactive prosocial behavior, a goal-oriented form of prosocial behavior that lacks altruistic intentions (Boxer, Tisak, & Goldstein, 2004; Culotta & Goldstein, 2008).

Friendship Qualities

Because adolescents spend the majority of their time with their friends and rely on their friendships for emotional support, the quality of those friendships is thought to influence individuals' adjustment and well-being. Researchers generally categorize friendship qualities into positive features and negative features. Many studies have linked the positive qualities of friendships with positive adjustment outcomes, including higher self-esteem, more involvement in school, and better social competence (Berndt, Hawkins, & Jaio, 1999; Rubin et al., 2004). Likewise, negative friendship qualities have been linked to poorer adjustment (Berndt, 1996; Berndt & Miller, 1993; Berndt & Savin-Williams, 1993; Hartup, 1993). However, longitudinal studies on friendship quality and adjustment have yielded mixed results, suggesting that friendship qualities have a more indirect influence on adjustment and behaviors than previously thought (Berndt & Keefe, 1993; Vernberg, 1990). There is evidence that the qualities of friendships differ in significance across development, such that particular qualities are more indicative of a high-quality friendship depending on the age of the friends in question. For instance, intimate exchange is not a defining feature of a high-quality

friendship for children, but intimate exchange is a very important indicator of friendship quality for adolescents (Bagwell & Schmidt, 2011).

Six aspects of friendship quality were measured in this study using the Friendship Quality Questionnaire (Parker & Asher, 1993), a self-report questionnaire based on participants' perceptions of their relationship with their best friend. The positive qualities are validation and caring, companionship and recreation, help and guidance, intimate exchange, and conflict resolution. The negative dimension measured is conflict and betrayal. Validation and caring is the degree to which individuals feel their friend shows them affection and boosts their self-esteem. Companionship and recreation is based on the frequency with which friends spend time together and the degree to which friends enjoy their time together. Help and guidance is based on the help and advice friends give each other, as well as the ideas friends come up with together. Intimate exchange is based on the frequency with which friends talk to each other about their problems and share secrets. Conflict resolution is based on the ease with which friends are able to make amends after a disagreement or argument. Conflict and betrayal is based on the frequency of fights and conflicts that arise in the friendship. The subscales for the five positive friendship quality dimensions are positively correlated with each other, and conflict and betrayal has a negative correlation with the positive subscales (Parker & Asher, 1993). Scores for each subscale are calculated by taking the average of the participants' responses across items for each subscale.

Sullivan (1953) considered the need for intimacy to be the hallmark of adolescent friendships. Intimacy in friendships is defined as the ability to openly share thoughts and feelings (Savin-Williams & Berndt, 1991). In previous studies using self-report and interview techniques, girls generally reported higher levels of intimacy in their friendships than boys (Berndt, 1981; Fuhrman & Buhrmester, 1985). The results of many studies indicate that intimate disclosure is not a key aspect of boys' friendships, but some researchers argue that intimate disclosure is just as important to boys' friendships as it is to girls' friendships (Camarena et al., 1990; Way, 2011). Camarena and colleagues (1990) used path analysis to examine gender differences in the pathways to intimacy within adolescent friendships. They found that self-disclosure was a significant path to friendship intimacy for both adolescent boys and girls. Interestingly, shared experience was also a significant pathway to intimacy for boys, but it was not a significant pathway to intimacy for girls. These results suggest that although self-disclosure is important to both genders, boys might foster closeness in their friendships through a wider range of activities than self-disclosure alone (Camarena et al., 1990).

Conflict resolution is considered an important developmental task provided by friendships. Adolescents must learn how to express disagreements with friends in a constructive way, and this often entails trial and error. Older adolescents are likely to resolve conflicts with their closest friends in ways that preserve the friendship (Laursen, 1993). The ability to resolve conflicts in friendships depends on the type of transgression that led to the conflict in question. Some studies suggest that youths are

more likely to forgive their friends if the transgression did not directly violate their sense of loyalty and trust in the relationship (Asher, Parker, & Walker, 1996; Goldstein & Tisak, 2004).

Research suggests that girls are more vulnerable than boys to negative feelings about their friends and friendships. This is likely due to the tendency for girls to hold their friends to higher standards than boys, particularly in the realms of emotional support and empathetic understanding (Clark & Ayers, 1993). In a study by MacEvoy and Asher (2012), participants responded to vignettes that portrayed friendship transgressions. The girls in this study interpreted the actions of the friend in the vignette more negatively, and reported more anger in response to the vignettes than the boys did. Bowker (2011) asked early adolescents to report friendship transgressions that had occurred in the past year and distinguish whether those transgressions resulted in a downgrade friendship dissolution or a complete friendship dissolution. Downgrade dissolutions occur when a 'best' friendship downgrades to a good friendship, and complete dissolutions occur when a friendship is completely terminated. Bowker (2011) found that boys reported more anger in response to downgrade dissolutions than girls, but both boys and girls exhibited more sadness than anger in response to downgrades and dissolutions.

Friendship Qualities and Relational Aggression

Relational aggression has been linked to both positive and negative friendship qualities in many studies, which suggests that relational aggression does not necessarily

hinder relationships. However, these mixed findings indicate that our understanding of the associations among relational aggression and friendship qualities remains somewhat unclear. Hawley, Little, and Card (2007) compared friendship qualities among groups of adolescents who were categorized by resource control subtypes. They found that peers reported the highest levels of closeness and companionship with friends who exhibited both prosocial and coercive strategies, such as relational aggression and overt aggression in their friendships. Contrary to the findings of Hawley and colleagues, adolescents in a different study who reported being high in relational aggression rated their friendships as lower in companionship, closeness, and helping behaviors (Cillessen, Jiang, & West, 2005). A study by Remillard and Lamb (2005) showed that friendship closeness is positively correlated with the level of hurt that is felt when a girl is the victim of relational aggression by that close friend (Remillard & Lamb, 2005). Evidence suggests that friendships characterized by relational aggression also reinforce relationally aggressive behaviors by both members of the friendship, such that individuals exhibit more relational aggression over time (Grotzinger & Crick, 1996; Sijtsemam, Ojanen, & Veenstra, 2009).

Conflict is a negative friendship quality that typically is positively associated with relational aggression (Cillessen et al., 2005; Grotzinger & Crick, 1996). A longitudinal study on the links between friendship qualities, behaviors, and adjustment showed that having high-conflict friendships leads to an increase in individuals' disruptive behavior across the school year, especially when those friendships also have

positive characteristics, such as companionship (Berndt & Keefe, 1995). Similarly, another longitudinal study examining the stability of relational aggression revealed that negative friendship qualities, such as exclusivity and victimization enhance the stability of relational aggression over time (Kawabata, Crick, & Hamaguchi, 2010). A recent study of preadolescents also showed that conflict and betrayal within friendships has a mediating effect on the association between callous-unemotional traits and relational aggression (Kokkinos, Voulgaridou, & Markos, 2016).

Other positive friendship qualities that are closely linked with relational aggression are intimate exchange and validation. Relational aggression is thought to contribute to intimacy and validation in friendships in a few ways. First, gossip, a relationally aggressive behavior, enables friends to share personal opinions with each other, as well as to validate each other's opinions (Banny, Heilbron, Ames, & Prinstein, 2011). Sharing personal opinions also establishes a sense of trust in the friendship (Buhrmester & Prager, 1995). One study suggests that increases in intimate disclosure by close friends is associated with greater relational aggression for girls over time (Murray-Close, Ostrov, & Crick, 2007). Relationally aggressive behaviors, in general, function in part to affirm group membership, thus, engaging in relational aggression together against other peers might boost the sense of alliance or partnership between friends (Cillessen et al., 2005; Owens, Shute, & Slee, 2000; Werner & Crick, 2004). Relational aggression and intimacy are also positively associated with each other because relational aggression is fueled by intimate knowledge of other people. For

instance, spreading rumors or gossiping about someone would be most effective for the aggressor who knows many personal details about the victim because they could use the victim's insecurities and secrets to damage their social reputation and relationships (Underwood & Buhrmester, 2007). Thus, intimate exchange makes friendships stronger, but it can also be the sword upon which estranged friendships fall.

Potential Gender Differences

Differences between girls' and boys' friendships have been supported by many studies over the years, to the point that many researchers have adopted a "two cultures" perspective on friendship development. The two cultures or two worlds perspective is based on the premise that girls and boys typically engage in segregated same-sex friendships from toddlerhood until early adolescence, and same-sex socialization causes girls and boys to engage in different behaviors with friends and have different needs and expectations in their friendships. The two cultures perspective addresses gender differences in friendships at many levels, including peer group structures, socialization activities and behaviors, emotional needs, and conflict management. Girls tend to maintain friendships in smaller groups at higher levels of intimacy than boys. Girls' friendships are based on mutual self-disclosure and emotional support (Maccoby, 1990; Buhrmester & Prager, 1995). Boys tend to disclose less personal information to each

other and spend more time engaging in shared interests and activities than girls (Buhrmester, 1996; Clark & Ayers, 2003).

Recently, researchers have begun to question whether girls' and boys' friendships are truly as different as previous research suggests. Information about the characteristics of boys' friendships is scarce in the friendship literature, perhaps, in part, because survey methods are unable to capture the complexities of boys' friendships, or the behaviors that characterize boys' friendships are understudied (Rose & Rudolph, 2006; Way, 2011). Several studies have noted that girls and boys tend to report similar levels of satisfaction and stability in their friendships, even though the behavioral characteristics of boys' and girls' friendships differ (Furman & Buhrmester, 1985; Parker & Asher, 1993). Rose and Asher (2016) suggest that boys might even handle certain friendship tasks better than girls do, such as forgiving friends for transgressions and having realistic expectations of their friendships. Camarena and colleagues (1990) used path analysis to examine whether there are gender differences in the pathways to intimacy within friendships (Camarena, Sarigiani, & Petersen, 1990). They found that self-disclosure was a significant path to friendship intimacy for both adolescent boys and girls. Interestingly, for boys the pathway of shared experiences was also significant, but shared experiences was not a significant pathway to intimacy for girls. These results and those of others suggest that boys, compared to girls, might have a broader range of experiences and behaviors to foster closeness in their friendships (Camarena et al., 1990; McNelles & Connolly, 1999).

In a recent study, Rose, Smith, Glick, and Schwartz-Mette (2016) found that adolescent boys and girls used different strategies when talking about their problems with friends. Specifically, girls exhibited more engagement when responding to friends' problems, and boys tended to use humor when responding to friends' problems. Interestingly, humor predicted increased closeness for boys, but not for girls.

Several studies have found that gender differences in aggression increase with age, and peak in adolescence, at which point girls are considered more relationally aggressive than boys (Prinstein & Cillessen, 2003; Smith, et al., 2010; Zimmer-Gembeck, Geiger, & Crick, 2005). However, results from other studies suggest that there are no significant gender differences in relational aggression (Card, Sawalani, Stucky, & Little, 2008; Xie, Farmer, & Cairns, 2003; Zimmer-Gembeck et al., 2005). A handful of studies have even found that boys are more relationally aggressive than girls (Salmivalli & Kaukiainen, 2004). Clearly, both boys and girls engage in relational aggression, and some research suggests that boys and girls engage in relational aggression for different reasons. For instance, Pronk and Zimmer-Gembeck (2010) noted that boys were more likely to engage in relational aggression in larger group settings in order to exclude and discourage less masculine boys from taking part in group activities. Unlike boys, the girls in their study tended to engage in relational aggression in order to manipulate close friendships and enhance their position within their friend group by excluding other girls.

Contributions to the Literature

The outcomes related to friendship qualities and aggressive behaviors have been studied extensively over the years. However, the complex interplay among friendship jealousy, friendship qualities, and relational aggression has yet to be investigated. In this study we will explore how particular friendship qualities might moderate the relationship between jealousy and relational aggression, as well as potential gender differences in these associations. In addition, we will use longitudinal analyses to explore potential changes in the associations between relational aggression and friendship jealousy from eighth grade to ninth grade, when adolescents transition from middle school to high school. Some studies have shown that having high quality close friendships during transitional years is especially important for children's adjustment (Berndt et al., 1999; Aikins, Bierman, & Parker, 2005).

Summary & Hypotheses

The primary goal of this study is to explore the ties among multiple components of friendship quality, gender, friendship jealousy, and relational aggression. We expect a positive correlation between friendship jealousy and relational aggression because relationally aggressive peers tend to exhibit exclusivity in their friendships (Grotzinger & Crick, 1996). We expect that the friendship qualities of validation and caring, help and guidance, and companionship will be positively associated with friendship jealousy and negatively associated with relational aggression. We expect intimate exchange to be positively associated with relational aggression and friendship jealousy because

intimate exchange provides fuel for relationally aggressive behaviors, and the potential of losing a friend who knows many of an individual's personal secrets might be especially threatening to adolescents (Murray-Close, Ostrov, & Crick, 2007). We expect conflict resolution to be positively associated with relational aggression and positively associated with friendship jealousy because high levels of conflict in friendships are often tied to relationally aggressive behaviors and jealousy (Cillessen et al., 2005; Lavallee & Parker, 2009), and relationally aggressive peers in previous studies reported higher exclusivity in their friendships (Grotmeter & Crick 1996; Sebanc, 2003). On the other hand, we expect conflict and betrayal will be negatively associated with friendship jealousy because adolescents might feel less threatened by the potential loss of a disloyal friend who has hurt them in the past. We expect a positive association between conflict and betrayal and relational aggression since relational aggression is a behavior that is known to cause conflicts within friendships.

In regard to gender, girls are expected to report higher levels of intimate exchange, caring and validation, help and guidance, and conflict and betrayal than boys. On the other hand, boys are expected to report higher levels of companionship and recreation and conflict resolution than girls. These hypotheses about gender differences are based on previous research supporting the two cultures perspective of friendship development. Many studies have noted that girls engage in more intimate disclosure and caring in their friendships than boys (McNelles & Connolly, 1999; Underwood & Buhrmester, 2007). Because girls are more likely to open up to each other about their

problems, girls have more opportunities to provide help and guidance to their friends. Despite these positive friendship characteristics, girls in previous studies reported less friendship stability and more friendship dissolutions than boys (Benenson & Christakos, 2003; Bowker, 2011). Girls are also more sensitive to potential friendship transgressions and interpret friendship transgression in a more negative manner than boys, which suggests that girls experience feelings of conflict and betrayal within their closest friendships more frequently than boys (MacEvoy & Asher, 2012). One friendship quality expected to be higher for boys than girls is companionship and recreation due to findings in previous studies that boys have different pathways to closeness in friendships than girls, and boys spend more time doing recreational activities with friends than girls do (McNelles and Connolly, 1999). Conflict resolution is thought to be higher for boys than girls because boys seem to be less sensitive to potential friendship transgressions, and they tend to have lower expectations of their friends (Clark & Ayers, 1993; MacEvoy & Asher, 2012).

The second goal of this study is to explore friendship qualities as moderators of the association between relational aggression and friendship jealousy. We anticipate that the relationship between friendship jealousy and relational aggression will be strongest for individuals who report higher levels of intimate exchange, validation and caring, help and guidance, and companionship in their closest friendship. We also expect conflict resolution to be a moderator of the relationship between friendship jealousy and relational aggression because high levels of conflict resolution indicate

that the friendship must have positive qualities that entice the members of the friendship to remain friends, despite their occasional disagreements, and low levels of conflict resolution could indicate friendship stability and a lack of conflicts. We expect conflict and betrayal to be a moderator of the relationship between relational aggression and friendship jealousy, such that high levels of conflict and betrayal have a positive association with relational aggression and friendship jealousy, and low levels of conflict and betrayal have a positive association with friendship jealousy and a negative association relational aggression. Since betrayals hinder the sense of loyalty and trust between friends, it makes sense that friends who experience conflict and betrayal might engage in behaviors that are associated with friendship jealousy, such as surveillance and gossip. If conflict and betrayal does not characterize a friendship, then the use of relational aggression might be low.

We will explore gender as a further moderator of the associations among friendship qualities, friendship jealousy, and relational aggression. We expect that girls and boys might show different patterns of influence regarding particular friendship qualities. For instance, previous studies suggest friendship jealousy might arise out of fear of having one's secrets exposed (Underwood & Buhrmester, 2007), and because girls engage in more intimate exchange with their friends than boys, we expect the relationship between friendship jealousy and relational aggression to be strongest for girls who report high levels of intimate exchange in their closest friendship.

Method

Participants

Data were collected at a charter high school in the midwestern United States during the fall. Students were given consent forms written in English and Spanish to take home to their parents. The students whose parents signed the form and who provided their own assent were allowed to participate. The consent rate was 50%. The 72 participants (37 girls, 35 boys) were in ninth grade. The scores of the 46 participants who also completed this study during their 8th grade year were used for longitudinal analyses. Though information on individual ethnic background was not collected, the student body of the school is 90% Hispanic. Roughly 93% of the students are eligible to receive a discounted or free lunch.

Procedure

A research assistant distributed the questionnaire and a roster of names and code numbers to the participants in the classroom. The roster contained the names of every student in the grade and an individual code number for each student. The roster of names and code numbers was used as an effort to increase the confidentiality of participants' responses to the peer nomination items (described below). If a child were to look at another peer's survey nominations, they would not be able to immediately identify the peers listed, like they would if peers' names were written down. Participants were instructed to write code numbers on the survey, rather than the names of their peers. They identified themselves by writing their code name on the front of their

survey packet. Participants were given a 45-minute class period to complete the questionnaire. The following constructs were measured.

Relational aggression. Two peer nomination items were used to measure relational aggression. On the first item, participants were told to write down the code numbers of the students who *exclude others from their social group*. The second item instructed participants to write down the code numbers of the students who *gossip or spread rumors about other kids*. For each item, the number of nominations received by each student were counted and standardized to a z-score with a mean of 0 and a standard deviation of 1. A continuous measure of relational aggression was obtained for each participant by computing the mean of the two standardized items. The relational aggression items were strongly correlated with each other ($r = .64, p < .001$).

Friendship Jealousy. To assess individuals' proneness to jealousy, we administered the Friendship Jealousy Questionnaire. The FJQ was created to assess friendship jealousy at various ages and is appropriate for use with adolescents (Parker et al., 2005). The FJQ is comprised of 15 vignettes based on hypothetical situations with a best friend and an interloper. We excluded one of the vignettes from this study due to concerns that it was inappropriate for use with a very low-income sample, leaving 14 vignettes. Participants were told to imagine themselves and their best friend in the situation illustrated in each vignette, and report the level of jealousy they would feel in the situation using a 5-point scale that ranges from (0) *would never be jealous* to (4) *would definitely be very jealous*. The presence of an interloper poses a threat to the

exclusivity of the relationship between the target and their best friend. The actions in these vignettes are ambiguous in the sense that no blatant rejection is expressed by the best friend, but participants could interpret the best friend's behavior as choosing or preferring the interloper over the target. An example of a vignette is: "How jealous would you be if you called your best friend to talk and he or she couldn't talk because another kid from your group was waiting and they were going to hang out together?" The internal consistency of the items on the FJQ has been reported at $\alpha = .93$ in previous studies (Parker et al., 2005; Parker et al., 2010). In this study the internal consistency was $\alpha = .94$. Friendship jealousy scores were computed by averaging across these 14 items.

Friendship Quality Questionnaire. The Friendship Quality Questionnaire (FQQ) was developed by Parker and Asher (1993). It was originally intended for use with children, but it has been adapted for use with adolescents as well. The FQQ is comprised of 39 items and six subscales based on key dimensions of friendships: validation and caring (10 items; $\alpha = .75$), intimate exchange (6 items; $\alpha = .80$), companionship and recreation (5 items; $\alpha = .73$), help and guidance (8 items; $\alpha = .84$), conflict resolution (3 items; $\alpha = .74$), and conflict and betrayal (7 items; $\alpha = .73$). The following item from the original questionnaire was excluded from the survey: "We help each other with chores." Participants were instructed to write the code number of their "very best friend" at the top of the page, and rate how true each of the items is about

their relationship with that friend. Responses were measured using a Likert scale from (0) *not at all true* to (4) *really true*.

Results

Preliminary Analyses

The means, standard deviations, and intercorrelations among relational aggression, friendship jealousy, and each of the friendship qualities are presented in Table 1. For boys, friendship jealousy had a positive correlation with intimate exchange ($r = .37, p < .01$), help and guidance ($r = .36, p < .01$), and conflict resolution ($r = .42, p < .01$). However, there were no significant correlations among friendship jealousy and the friendship quality variables for girls. Intimate exchange was positively correlated with help and guidance ($r = .62, p < .001$) and conflict resolution ($r = .49, p < .001$) for girls and caring and validation for boys ($r = .37, p < .01$). Relational aggression had only weak and non-significant associations with the friendship quality variables and friendship jealousy for both genders.

A multivariate analysis of variance (MANOVA) with gender as the independent variable and the six dimensions of friendship from the FQQ, intimate exchange, caring and validation, companionship and recreation, help and guidance, conflict resolution, and conflict and betrayal, as the dependent variables was conducted to test for gender differences. Gender was coded as a dichotomous variable (1 = girls, 0 = boys). The results of the MANOVA showed that there were significant differences between boys

and girls in friendship qualities. Specifically, girls reported more caring and validation $F(1,69) = 13.83, p < .001$, intimate exchange $F(1,69) = 28.29, p < .001$, help and guidance $F(1,69) = 14.32, p < .001$, and conflict resolution $F(1,69) = 8.83, p < .01$, in their friendships than boys. There were no significant gender differences in companionship and recreation and conflict and betrayal.

Next, we ran two one-way ANOVAs to assess gender differences in friendship jealousy and relational aggression. The results of the one-way ANOVAs did not show a significant difference between boys and girls in friendship jealousy, but boys did receive more peer nominations for relational aggression than girls $F(1, 140) = 3.96, p < .05$.

Associations Among Jealousy, Friendship Quality, and Relational Aggression

A series of hierarchical multiple regressions was conducted in order to investigate the associations of friendship qualities with relational aggression and jealousy, as well as the moderating role of friendship qualities and gender in the link between relational aggression and friendship jealousy. In the majority of friendship quality studies thus far, researchers have grouped friendship qualities along positive and negative dimensions for analysis (Heilbron & Prinstein, 2008). Because the primary interest of this study was to examine each friendship quality as a potential moderator, regressions were conducted separately for each of the friendship quality variables (intimate exchange, companionship and recreation, caring and validation, help and guidance, conflict resolution, and conflict and betrayal). Friendship jealousy was the

dependent variable in these analyses. The regression models consisted of the following steps: In step 1, gender, relational aggression, and one of the friendship quality variables (intimate exchange, companionship and recreation, caring and validation, help and guidance, conflict resolution, or conflict and betrayal) were entered as predictors. In step 2, the two-way interactions of relational aggression, gender, and one of the friendship quality variables were entered. In step 3, the three-way interaction of Relational Aggression x Gender x Friendship Quality was entered. Friendship jealousy and each of the friendship quality variables were centered prior to analysis. Relational aggression was a standardized variable with a mean of zero, so no centering was needed. Gender was dummy coded (girls=1, boys = 0).

Help and guidance. In the hierarchical regression exploring help and guidance as a potential moderator of the relationship between friendship jealousy and relational aggression, the specified model explained 9% of the variance in friendship jealousy. Significant main effects and interactions were absent in steps 1 and 2, but help and guidance emerged as a significant predictor of friendship jealousy in step 3 ($\beta = .40, p < .05$). See table 2. Help and guidance became a positive predictor of friendship jealousy after the variance in friendship jealousy was accounted for by the other variables in the model.

Intimate exchange. In the hierarchical regression exploring intimate exchange as a potential moderator of the relationship between friendship jealousy and relational aggression, intimate exchange was a significant predictor of friendship jealousy in step

1 ($\beta = .38, p < .01$) and step 3 ($\beta = .42, p < .01$). Intimate exchange had a significant positive association with friendship jealousy, as expected. The model accounted for 12% of the variance in friendship jealousy. There were no other significant main effects or interactions among the variables. Results of this analysis are presented in Table 3.

Companionship and recreation. The analysis examining companionship and recreation as a potential moderator of the relationship between relational aggression and friendship jealousy showed companionship and recreation as a significant main effect predictor of friendship jealousy in step 1 ($\beta = .28, p < .05$). This effect nearly approached significance in step 3 ($\beta = .35, p = .055$). This model accounted for 7% of the variance in friendship jealousy. There were no other significant main effects or interactions among the variables (See Table 4).

Conflict resolution. The analysis examining conflict resolution as a moderator of the relationship between friendship jealousy and relational aggression accounted for 8% of the variance in friendship jealousy. Conflict resolution had a significant positive association with friendship jealousy in step 1 ($\beta = .25, p < .05$) and step 3 ($\beta = .46, p < .05$). There were no other significant predictors or interaction effects (See Table 5).

Conflict and betrayal. In the analysis examining conflict and betrayal as a potential moderator of the relationship between relational aggression and friendship jealousy, the specified model explained 4% of the variance in friendship jealousy. Gender emerged as a significant main effect predictor of friendship jealousy ($\beta = .25, p < .05$) in step 1, but it lost its predictive strength once other variables were added to the

model. No significant main effects or interactions emerged in steps 2 and 3 (See Table 6).

Validation and caring. The regression model exploring caring and validation as a moderator of the relationship between friendship jealousy and relational aggression accounted for 7% of the variance in friendship jealousy. There were no significant main effects or two-way interactions among the variables in steps 1 and 2. However, the three-way interaction among gender, caring and validation, and relational aggression was significant ($\beta = -.48, p < .05$). Results of this analysis are presented in Table 7.

This significant three-way interaction was explored using prototypical plots in the manner described by Aiken and West (1991). This procedure involves categorizing the moderator variables—in this case validation and caring and gender—into low, medium, and high levels, based on $\pm 1SD$. This procedure gives a clearer view of the associations between relational aggression and friendship jealousy at different levels of caring and validation. Regression lines were plotted separately for boys and girls (See Figure 1).

The prototypical plots revealed opposite directions of associations for boys and girls. For girls with high levels of caring and validation in their friendship, the association between relational aggression and friendship jealousy is negative, such that higher friendship jealousy is associated with lower relational aggression. Contrary to girls, for boys with high levels of caring and validation in their friendship, the association between relational aggression and friendship jealousy was positive, such

that lower friendship jealousy was associated with lower relational aggression and higher friendship jealousy was associated with higher relational aggression. At high levels of validation and caring, simple slope analyses indicated a significant gender difference in the association between relational aggression and friendship jealousy ($t = -2.25, p < .05$). Girls with low levels of caring and validation in their friendship showed a positive association between friendship jealousy and relational aggression, such that higher relational aggression was associated with higher friendship jealousy and lower relational aggression was associated with lower friendship jealousy. Again, contrary to girls, for boys with low levels of caring and validation in their friendship, the association between friendship jealousy and relational aggression was negative. Lower friendship jealousy was associated with higher relational aggression and higher friendship jealousy is associated with lower relational aggression. At low levels of caring and validation, the simple slopes for boys and girls were not significantly different from each other ($t = 1.72, ns$). The simple slopes for girls at high and low levels of caring and validation were not significantly different from each other ($t = -1.62, ns$). However, the simple slopes analyses indicated that the associations between relational aggression and friendship jealousy for boys were significantly different from each other at high and low levels of validation and caring in the friendship ($t = 2.22, p < .05$). The simple slopes for high caring and validation boys and low caring and validation girls were not significantly different from each other ($t = 1.05, ns$).

Friendship Qualities. Since none of the two-way interactions in the six hierarchical regression models was significant, we conducted a multiple regression to examine the individual contributions of the friendship quality variables in predicting friendship jealousy. The six friendship quality variables were simultaneously entered into the model. This model excluded gender, relational aggression, and potential interaction effect variables. Together, these predictors accounted for 18% of the variance in friendship jealousy. Intimate exchange ($\beta = .39, p < .01$) and companionship and recreation ($\beta = .27, p < .05$) were the only significant predictors of friendship jealousy in this model, and they were positively associated with friendship jealousy. The results of this analysis are available on Table 9.

Longitudinal Analyses

Longitudinal analyses were conducted to assess potential developmental differences in the association between relational aggression and friendship jealousy from 8th grade to 9th grade in a subsample of participants for whom two waves of data were available ($N = 46$). Paired t-tests were conducted to compare participants' peer nominations for relational aggression and self-reported friendship jealousy from eighth grade to ninth grade. The analysis for relational aggression produced a significant t-value $t(46) = -2.15, p < .05$. An examination of the means revealed that nominations for relational aggression were higher in ninth grade ($M = .02$) than in eighth grade ($M = -.18$). The correlation between relational aggression in eighth grade and ninth grade was

moderate and significant ($r = .43, p < .01$). Another paired t-test was conducted to compare self-reported friendship jealousy from eighth grade to ninth grade. This analysis produced a significant t-value $t(44) = 3.15, p < .005$. Examination of the means showed that self-reported friendship jealousy was higher in eighth grade ($M = 1.85$) than in ninth grade ($M = 1.56$). The correlation between self-reported friendship jealousy in eighth grade and ninth grade was strong and significant ($r = .86, p < .001$). This suggests that proneness to friendship jealousy might be a highly stable emotional trait. The small size of the longitudinal sample was not adequate for more extensive statistical analyses.

Discussion

The present study investigated the roles of friendship qualities and gender in the associations among relational aggression and friendship jealousy. Ultimately, the results support the notion that girls' and boys' friendships have a few different characteristics and needs.

In line with our hypotheses and the findings of several studies, girls reported caring and validation, intimate exchange, and conflict resolution in their friendships than boys. We expected girls to report greater conflict and betrayal in their friendships, but there were no significant differences between boys and girls. Though we expected boys to report greater companionship and recreation in their friendships than girls, there were no

significant gender differences in companionship and recreation. One novel finding in this study was the lack of a significant difference between boys and girls in self-reported friendship jealousy. Only one other study has suggested that girls and boys experience a similar degree of proneness to jealousy (Lennarz et al., 2016). Intimate exchange has typically been viewed as less important to boys' friendships than girls' friendships, but our results suggest that intimate exchange is indeed an important aspect of boys' friendships that should not be overlooked. For instance, the correlation between intimate exchange and caring and validation is significant and moderate for boys ($r = .37, p < .01$), but this association is not significant for girls. Also, the correlation between intimate exchange and friendship jealousy is significant and moderate for boys ($r = .37, p < .01$), but this association is weaker and not significant for girls ($r = .30, ns$). Previous findings suggest that boys and girls increase personal disclosure behaviors with their friends from ninth to tenth grade, and considering that boys engage in lower levels of intimate exchange to begin with, it is possible that this increase in behavior might partially explain the similarity in self-reported friendship jealousy among girls and boys in ninth grade (McNelles & Connolly, 1999). Of course, without more longitudinal studies examining the developmental shifts in friendship behaviors, this is only speculation.

Relational aggression, in particular, provided unexpected results in the analyses. We were surprised to see that the boys in our study were nominated by peers for relational aggression more frequently than the girls. This finding is somewhat surprising

considering that relational aggression is thought to be higher for girls in general, and this trend has been shown to increase with age. Also, relational aggression had no significant associations with any of the friendship qualities or friendship jealousy (See Table 1). This lends support to the several studies on friendship jealousy and friendship downgrades and losses suggest that feelings of loneliness and sadness are more salient to friendship problems than externalizing behaviors, such as aggression (Bowker, 2011; Lavalley & Parker, 2009).

Contrary to our hypotheses, the majority of the friendship qualities in this study did not exhibit a moderating effect on the relationship between relational aggression and friendship jealousy. The only significant interaction predicting friendship jealousy was a three-way interaction among relational aggression, caring and validation and gender. The prototypical plots of this interaction revealed opposite association patterns for boys and girls, which suggest that boys and girls are more or less prone to experiencing jealousy and relational aggression in their friendships in accordance with the level of validation and caring that characterizes their friendships. There was a positive association between relational aggression and friendship jealousy for girls that had low levels of validation and caring in their friendship. One possible explanation for this is that girls might react strongly and negatively when their closest friendship lacks the level of emotional support and reassurance that they expect and need. If girls perceive that their closest friend does not genuinely care about them, they might act out their

frustration and disappointment by engaging in relational aggression and comparing themselves to potential interlopers.

For girls who have high levels of caring and validation in their friendship, the association between relational aggression and friendship jealousy was negative. This is consistent with the idea that girls who are prone to friendship jealousy and who have a very caring and supportive friendship will make an effort to preserve the friendship with prosocial behaviors, rather than engaging in relational aggression that could make their best friend think less of them.

For boys who had high levels of validation and caring their friendship, the association between relational aggression and friendship jealousy was positive. In fact, boys with high levels of validation and caring in their friendships were the highest in self-reported jealousy. Recently, researchers have begun to explore the role of humor in aggression and friendships. One study found a significant positive association between relational aggression and humor for boys, and boys whose friends were highly relationally aggressive (Bowker & Etkin, 2014). A study by Rose and colleagues (2016) examining gender differences in talking about problems with friends provided evidence that humor is a unique contributor to feelings of closeness in friendships for boys, but not for girls. Humor during adolescence often entails making fun of peers and close friends, so it might explain why high levels of validation and caring have a positive association with relational aggression for adolescent boys. Another possible explanation for this relationship is that relationally aggressive boys are highly territorial about their

most important friendships, and they maintain the exclusivity of their closest friendship by keeping potential interlopers at a distance. For boys with low levels of validation and caring in their friendship, the association between relational aggression and friendship jealousy was negative. At high levels of relational aggression, friendship jealousy was extremely low, and at low levels of relational aggression, friendship jealousy was barely above average. Perhaps boys who experience low validation and caring in their best friendship distance themselves from that friendship by having low expectations, especially if their friendship is characterized by relational aggression and conflicts.

Strengths, Limitations, and Conclusions

This study had a number of strengths, such as the use of multiple informants and a sociometric assessment of relational aggression. This study was the first, to our knowledge, to examine the connections among specific friendship qualities and friendship jealousy. There are a number of limitations to this study. First, the smaller sample size in this study ($N = 71$) might have limited the detectability of moderation effects in the analyses. Regardless, the directions of the associations among variables were in line with our hypotheses. This study used a cross-sectional, correlational design and does not enable the study of developmental processes or causal links between the variables studied. Particularly, when investigating behaviors such as relational aggression and friendship jealousy, it would be extremely helpful to know who the targets of these behaviors are in terms of their relationship with the perpetrator and the larger peer group. Though we did collect data at two time points, the long-term

outcomes related to the constructs cannot be properly addressed without additional waves of data with larger samples. The longitudinal data was also limited by the sizeable participant attrition rate. The school from which the participants were recruited was unique in that it was community oriented and there was high parental involvement. It is possible that students at this school exhibit less aggression overall, compared to other samples of adolescents.

In light of recent studies highlighting the differences between boys and girls in talking about problems with friends and dealing with conflicts in friendships, it would be beneficial to use these findings to update questionnaire items representing friendship quality constructs, such as conflict resolution, in order to accurately reflect the different strategies that boys and girls use. For instance, on the FQQ (Parker & Asher, 1993), the three items for conflict resolution are "Make up easily when we have a fight", "Get over arguments very quickly", and "Talk about how to get over being mad at each other". Boys are less likely to talk to each other about how to mend their friendship than girls are, so it seems that this item does not accurately capture what conflict resolution might look like in boys' friendships.

Future research on the links between friendship qualities and friendship jealousy would benefit from including reciprocal best friendship nominations in their measures. Longitudinal studies that could track changes in best friend dyads and friendship qualities as well as friendship jealousy would help clarify the causal associations among these variables. Another interesting avenue for exploration would be to examine

whether the number of close cross-sex friendships an individual has influences their friendship qualities and propensity for exhibiting friendship jealousy. For instance, Zarbatany and colleagues (2000) found in their study of preadolescents that having cross-sex friendships increased intimate exchange for boys within their same-sex friendships, but this association was not seen in girls. Though the two cultures perspective of friendship development has been a prevailing framework for friendship researchers for many years, the complex nuances of boys' and girls' friendship behaviors leave much to be explored.

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Table 1

Inter-correlations among Friendship Qualities, Friendship Jealousy, and Relational Aggression By Gender

	1.	2.	3.	4.	5.	6.	7.	8.	Girls M (SD)	Boys M (SD)
1. Intimate Exchange	—	-.02	.3	.62**	.49**	-.01	.30	.03	3.50 (.75)	2.48 (.85)
2. Companionship	.16	—	-.02	.46**	.22	.01	.27	.31	3.19 (.87)	2.98 (.78)
3. Caring & Validation	.37*	.35*	—	.33	.14	-.08	.00	.10	3.43 (.46)	2.98 (.53)
4. Help & Guidance	.28	.57**	.47**	—	.47**	-.06	.07	.28	3.31 (.59)	2.76 (.63)
5. Conflict Resolution	.23	.27	.37*	.46**	—	.12	.09	.18	2.99 (.93)	2.36 (.86)
6. Conflict & Betrayal	-.25	-.04	-.13	-.08	-.10	—	.21	.04	1.27 (.71)	1.30 (.70)
7. Friendship Jealousy	.37*	.31	.20	.36*	.42*	-.09	—	-.02	1.87 (1.01)	1.43 (.99)
8. Relational Aggression	.18	.05	.08	-.09	-.14	.13	.12	—	-0.15 (.55)	0.15 (1.13)

Note. Correlations for girls are presented above the diagonal.

* $p < .01$; ** $p < .001$

Table 2

Predicting Friendship Jealousy: Gender, Relational Aggression, and Help and Guidance

	β	t	p	Adj. R^2	ΔR^2
Step 1.				.07*	.05*
Gender	.15	1.21	.23		
Help and Guidance	.24	1.83	.07		
RA	.03	.27	.80		
Step 2.				.06	.03
Gender X Help and Guidance	-.19	-1.12	.27		
RA X Help and Guidance	-.13	-.10	.92		
Gender X RA	-.02	-.54	.59		
Step 3.				.09	.04
Gender \times Help and Guidance X RA	-.36	-1.73	.09		

Note. * $p < .05$, ** $p < .01$

Table 3

Predicting Friendship Jealousy: Gender, Relational Aggression, and Intimate Exchange

	β	t	p	Adj. R^2	ΔR^2
Step 1.				.14**	.11**
Gender	.05	.39	.70		
Intimate Exchange	.38	2.89	.005		
RA	.02	.15	.88		
Step 2.				.13	.03
Gender X Intimate Exchange	.02	.14	.89		
RA X Intimate Exchange	.22	1.45	.15		
Gender X RA	-.25	-1.25	.22		
Step 3.				.12	.01
Gender \times Intimate Exchange X RA	-.14	-1.25	.51		

Note. * $p < .05$, ** $p < .01$

Table 4

Predicting Friendship Jealousy: Gender, Relational Aggression, and Companionship and Recreation

	β	t	p	Adj. R^2	ΔR^2
Step 1.				.10*	.08*
Gender	.22	1.93	.06		
Companionship	.28	2.42	.02		
RA	.16	.95	.34		
Step 2.				.09	.02
Gender X Companionship	.01	.08	.94		
RA X Companionship	.12	.81	.42		
Gender X RA	-.24	-1.28	.21		
Step 3.				.07	.00
Gender \times Companionship X RA	-.04	-.18	.90		

Note. * $p < .05$, ** $p < .01$

Table 5

Predicting Friendship Jealousy: Gender, Relational Aggression, and Conflict Resolution

	β	t	p	Adj. R^2	ΔR^2
Step 1.				.09*	.06*
Gender	.17	1.40	.17		
Conflict Resolution	.25	2.07	.04		
RA	.05	.40	.70		
Step 2.				.09	.05
Gender X Conflict Resolution	-.26	-1.40	.17		
RA X Conflict Resolution	.04	.24	.82		
Gender X RA	-.19	-.97	.34		
Step 3.				.08	.00
Gender \times Conflict Resolution X RA	.007	.04	.97		

Note. * $p < .05$, ** $p < .01$

Table 6

Predicting Friendship Jealousy: Gender, Relational Aggression, and Conflict and Betrayal

	β	t	p	Adj. R^2	ΔR^2
Step 1.				.03	.01
Gender	.25	2.14	.04		
Conflict and Betrayal	.05	.46	.65		
RA	.05	.38	.70		
Step 2.				.02	.04
Gender X Conflict and Betrayal	.21	1.22	.23		
RA X Conflict and Betrayal	-.10	-.77	.44		
Gender X RA	-.16	-.94	.35		
Step 3.				.04	.03
Gender \times Conflict and Betrayal X RA	.19	1.36	.18		

Note. * $p < .05$, ** $p < .01$

Table 7

Predicting Friendship Jealousy: Gender, Relational Aggression, and Caring and Validation

	β	t	p	Adj. R^2	ΔR^2
Step 1.				.04	.01
Gender	.21	1.63	.11		
Caring and Validation	.04	.84	.41		
RA	.11	.35	.73		
Step 2.				.01	.02
Gender X Caring and Validation	-.38	-.74	.46		
RA X Caring and Validation	.15	.35	.73		
Gender X RA	-.33	-.67	.51		
Step 3.				.07*	.07*
Gender × Caring and Validation X RA	-.48	-2.23	.03		

Note. * $p < .05$, ** $p < .01$

Table 8

Multiple Regression: Six Friendship Qualities predicting Friendship Jealousy

	β	t	p	Adj. R^2	ΔR^2
Intercept		.11	.91	.18**	.25**
Intimate Exchange	.39	2.77	.007		
Caring and Validation	-.02	-.12	.91		
Conflict Resolution	.13	.95	.35		
Help and Guidance	-.12	-.68	.50		
Companionship	.27	2.10	.04		
Conflict and Betrayal	-.10	.89	.38		

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

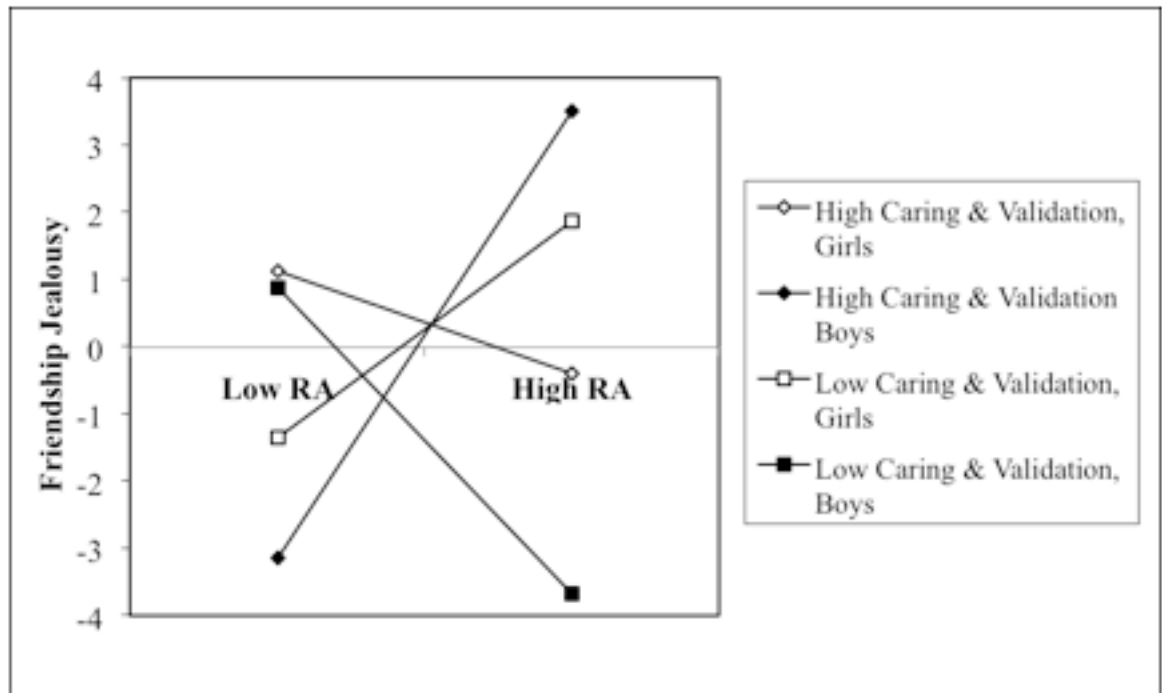


Figure 1. Three-way interaction predicting friendship jealousy: Relational Aggression X Validation a