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Influence of Leadership, Peer Status, and Social Goals on Overt and Relational Aggression during Early Adolescence

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Influence of Leadership, Peer Status, and Social Goals
on Overt and Relational Aggression during Early Adolescence

by

Casey Schick

A thesis submitted in partial fulfillment
of the requirements for the degree of
Education Specialist
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College of Education
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Abstract

Peer relationships are highly salient during early adolescence, especially during the first year of middle school. As a result, coolness (a facet of peer status) is prioritized and increasingly associated with aggression. Recent research indicates the relationship between peer status (coolness) and aggression is moderated by social goals (popularity, dominance, intimacy) and gender. Leadership among peers is also salient during early adolescence, although it is understudied in comparison to peer status (coolness). Leadership is worth additional investigation, as youth leaders are considered interpersonally competent and possess the social skills necessary to influence peer behavior. Research is needed to examine the extent to which peer status (coolness) and leadership are similar yet distinct constructs and the extent to which peer status and leadership influence subsequent aggression. Research is also needed to determine if the relationship between leadership and aggression is moderated by social goals and gender, as this may have implications for understanding antecedents to aggression. The current study examined the following: (1) the associations among peer-reported leadership and coolness in the fall with peer-reported aggression (overt and relational) in the spring of sixth grade, (2) the extent to which social goals (popularity, dominance, and intimacy) and gender moderate relations of leadership and coolness in the fall with aggression in the spring of sixth grade, (3) and the extent to which mean-level gender differences and study variables change across time. The sample was comprised of sixth-grade students from three middle schools in an urban, ethnically diverse setting ($N = 347$). Results revealed a significant association across both time points for leadership and coolness. Moreover, social goals and gender moderated the association between coolness, leadership, and aggression.

Chapter I: Introduction

Statement of the Problem

Early adolescence is a crucial time for youth, as the priority for peer status (coolness) and susceptibility to peer influence peaks during this time (Cillessen, Mayeux, Ha, de Bruyn, & LaFontana, 2014). Early adolescence is also a salient time for leadership among peers. However, research examining perceptions of peer leadership during early adolescence is scarce, and findings indicate leadership is associated with both prosocial and antisocial behavior. For example, aggressive children are considered leaders among peers in urban, ethnically diverse elementary school contexts (Waasdorp, Baker, Paskewich, & Leff, 2013) and during emerging adulthood (Lansu & Cillessen, 2011). Research also indicates the salience of leadership and its possible link with aggressive and antisocial behavior during adolescence, particularly among popular students (Cillessen et al., 2014). However, leadership is also associated with positive qualities during adolescence, such as modeling, mentorship, and strong moral character (Mortensen, Lichty, Foster-Fishman, Harfst, Hockin, & Warsinske, 2014). Furthermore, popular boys who exhibit prosocial behavior tend to be perceived as leaders (Cillessen et al., 2014; Rodkin, Farmer, Pearl, & Van Acker, 2000). However, less is known about the relationship between leadership and aggression (overt and relational), as research has focused mainly on peer status (Bellmore, Villarreal, & Ho, 2011; Rodkin, Farmer, Pearl, & Van Acker, 2006). Thus, it is important to examine leadership in relation to peer status (coolness) and aggression in order to clarify characteristics associated with this construct.

In addition to striving for leadership, early adolescents have other social motives, such as striving for popularity, dominance, and intimacy among peers (Jarvinen & Nicholls, 1996; Kiefer & Ryan, 2008). Social goals influence youths' behavior among peers, including prosocial and aggressive behavior (Kiefer & Ryan, 2008; Ojanen & Findley-Van Nostrand, 2014). Research reveals positive associations among popularity goals and aggression, and this relationship is stronger among cool youth (Cillessen et al., 2014; Dawes & Xie, 2014; Ojanen & Findley-Van Nostrand, 2014). However, not all social goals are positively related to aggression. For instance, intimacy goals have been found to have a null association with relational aggression and a negative association with overt aggression (Ojanen & Findley-Van Nostrand, 2014). Although research indicates social goals moderate associations among peer status (coolness) and aggression (Cillessen et al., 2014; Dawes & Xie, 2014; Ojanen & Findley-Van Nostrand, 2014), it is unknown whether dominance and intimacy goals moderate relations among leadership and peer status (coolness) with aggression. Examining these associations may provide insight into what characteristics of peer leadership and peer status (coolness) may enhance or diminish associations with aggression during early adolescence, and whether this differs for boys and girls. Findings may have theoretical implications regarding the nature of leadership during early adolescence, as well as practical implications for School Psychologists. For instance, understanding whether social goals enhance or diminish associations among leadership and peer status (coolness) with aggression for boys and girls will allow School Psychologists to tailor programs aimed at reducing aggression among certain youth with individual characteristics (social goals and gender).

Purpose of the Current Study

The current study examined the associations among leadership, coolness (a facet of peer status), aggression, and social goals during the fall and spring of sixth grade (first year of middle

school). Specifically, associations among leadership and coolness with aggression (overt and relational) were examined, as leadership and coolness are overlapping yet conceptually distinct constructs (Lansu & Cillessen, 2011; Ward & Ellis, 2008). In addition, the current study examined the moderation effects of social goals and gender on the association between leadership and coolness with aggression (overt and relational) across the sixth grade. Recent research with 14-year old youth indicates social goals moderate associations between peer status (coolness) and aggression, and that these associations differ by gender (Cillessen et al., 2014). However, little is known about whether social goals moderate associations among leadership and aggression, and whether these associations differ for boys and girls. Given the developmental salience of both peer status (coolness) and leadership during early adolescence, it is important to clarify their associated outcomes and what individual factors may put youth at risk for aggression. Third, previous studies have found mean-level gender differences in overt and relational aggression (Xie, Cairns, & Cairns, 2002) and social goals (Ojanen & Findley-Van Nostrand, 2014). Finally, key variables may change across the sixth grade due to shifting peer norms and the establishment of social status (Galván, Spatzier, & Juvonen, 2011; Kiefer & Ryan, 2011; Pellegrini & Long, 2002). The following research questions were addressed:

1. What are the associations among peer-reported leadership and coolness in the fall with peer-reported aggression (overt and relational) in the spring of sixth grade?
2. To what extent do social goals (popularity, dominance, and intimacy) and gender moderate relations of peer-reported leadership and coolness in the fall with peer-reported aggression in the spring of sixth grade?
3. To what extent are there mean-level gender differences and changes in study variables across time?

Hypotheses

First, it was hypothesized that leadership and coolness would be moderately correlated yet distinct constructs (Lansu & Cillessen, 2011; Prinstein & Cillessen, 2003; Rubin, Bukowski, & Parker, 2006; Ward & Ellis, 2008). It was anticipated that coolness would be positively associated with both forms of aggression, particularly relational aggression, as a means to maintain one's position in the social hierarchy (Bellmore et al., 2011; Bowker, Rubin, Buskirk-Cohen, Rose-Krasnor, & Booth-LaForce, 2010; LaFontana & Cillessen, 2010; Rose, Swenson, & Waller, 2004; Rubin et al., 2006). Finally, it was hypothesized that leadership would be positively associated with relational aggression in order to maintain a level of influence over peers (Rubin et al., 2006).

It was anticipated that social goals (popularity, dominance, and intimacy) would moderate the association between coolness and subsequent aggression. Specifically, it was anticipated that popularity goals would be associated with relational aggression for high status boys and girls (Dawes & Xie, 2014; Li & Wright, 2014; Ojanen & Findley-Van Nostrand, 2014). However, it was hypothesized that relational aggression would be more salient for girls, as they often engage in relational aggression to maintain their social status (Page, 2012; Xie et al., 2002). It was hypothesized that popularity and dominance goals would enhance the association between coolness and aggression, as youth may become aggressive to obtain social visibility during a transitional time in peer status (Bowker et al., 2010; Pellegrini & Long, 2002). Furthermore, it was anticipated that dominance goals would enhance the association between coolness and aggression (overt and relational), since youth may strive to maintain their level of visibility by increasing aggression towards peers (Bellmore et al., 2011; Bowker et al., 2010). Additionally, it was hypothesized that intimacy goals would enhance the association between coolness and subsequent relational aggression (Hawley, Little, & Rodkin, 2007; Kawabata,

Tseng, & Crick, 2013), as intimacy is essential for successful resource control (Hawley et al., 2007; Kawabata et al., 2013).

The current study also examined the extent to which social goals (popularity, dominance, and intimacy) moderate the association between leadership and subsequent aggression (overt and relational). It was hypothesized that leadership would be associated with subsequent relational aggression, and that this would be moderated by popularity goals. Popularity goals may serve as a moderator due to the link between relational aggression and status maintenance (Xie et al., 2002). It was anticipated that leadership would be associated with later overt aggression, and that this would be moderated by dominance or popularity goals (Dawes & Xie, 2014; Ojanen & Findley-Van Nostrand, 2014). Dominance or popularity goals may serve as moderators, given the links between overt aggression and status maintenance (Pellegrini & Bartini, 2001). Finally, it was hypothesized that intimacy would enhance the associations between leadership and relational aggression, as intimacy is necessary to effectively carry out relationally aggressive strategies (Hawley et al., 2007; Kawabata et al., 2013).

The current study examined mean-level gender differences and changes across the sixth grade for leadership, coolness, aggression, and social goals. Based on prior research, it was hypothesized that leadership in boys would be higher than leadership in girls (Lansu & Cillessen, 2011). Furthermore, it was anticipated that leadership in girls would remain stable over time (Cillessen & Mayeux, 2004) while leadership in boys would decrease (Bowker et al., 2010; Cillessen & Mayeux, 2004). Research indicates status (coolness) in girls is more stable than status (coolness) in boys (Cillessen & Mayeux, 2004), possibly because boys emphasize social preference which is less stable over time (Cillessen & Borch, 2006; Cillessen & Mayeux, 2004; Lansu & Cillessen, 2011). In terms of peer status (coolness), research indicates boys are more likely to be considered cool than girls (Lansu & Cillessen, 2011). However, it was anticipated

that girls would remain cool (Cillessen & Mayeux, 2004), while boys would exhibit a decrease in coolness levels over time (Bowker et al., 2010; Cillessen & Mayeux, 2004).

It was hypothesized that both genders would have similar levels of relational aggression at the beginning of the school year (Prinstein, Boergers, & Vernberg, 2001), and that girls would display an increase in relational aggression across the sixth grade (Crick & Grotpeter, 1995; LaFontana & Cillessen, 2010; Xie et al., 2002). Furthermore, boys would have higher mean-levels of overt aggression (Crick & Grotpeter, 1995; Xie et al., 2002) and both genders would display a decrease in overt aggression across the school year (Cillessen & Mayeux, 2004; Little, Jones, Henrich, & Hawley, 2003) with girls exhibiting a greater decrease (Crick & Grotpeter, 1995; Xie et al., 2002).

It was hypothesized that boys would have higher levels of dominance goals (Kiefer & Ryan, 2011), both genders would endorse similar levels of popularity goals (Cillessen et al., 2014), and girls would have higher levels of intimacy goals (Ojanen & Findley-Van Nostrand, 2014). Additionally, it was anticipated that cool boys and girls would display stable levels of popularity and dominance goals across the school year, as these youth may strive to maintain their status (Dawes & Xie, 2014; Kiefer & Ryan, 2008). It was also anticipated that intimacy goals would decrease for both genders across the school year (Kiefer & Ryan, 2008), given the high priority of peer status (coolness) during this time.

Definitions of Key Terms

Leadership. Despite its salience, the term leadership has varied meanings and is difficult to conceptualize. Leadership is a heterogeneous construct and is associated with both prosocial behavior (Lansu & Cillessen, 2011; Mortensen et al., 2014) and aggression (Cillessen et al., 2014; Miller-Johnson et al., 2003; Waasdorp et al., 2013). Leadership often involves social skills and interpersonal competencies, such as the ability to establish and maintain relationships, and to

skillfully make a difference in people's lives through the use of power, influence, and persuasion (Lee & Olszewski-Kubilius, 2006). Leadership may involve influencing others in order to achieve a common goal (Mortensen, Lichty, Foster-Fishman, Harfst, Hockin, Warsinske, & Abdullah, 2014). Therefore, early adolescent leaders have the ability to influence others through their interpersonal competence (Lee & Olszewski-Kubilius, 2006), maturity (Allen, Schad, Oudekerk, & Chango, 2014; Mullen & Tuten, 2004) and responsibility needed to accomplish a goal (Mortensen et al., 2014).

Peer status (Coolness). Research indicates there are two primary types of peer status: sociometric popularity (peer acceptance) and perceived popularity (Cillessen & Mayeux, 2004; Cillessen Schwartz, & Mayeux, 2011). The current study examined the influence of perceived popularity and specifically focused on cool status. Although coolness is a facet of peer status (Cillessen & Mayeux, 2004; Cillessen et al., 2011; LaFontana & Cillessen, 2002), it does not include social network centrality which is characteristic of perceived popularity (Kiefer & Wang, 2016; Rodkin et al., 2006). Therefore, cool peer nominations were examined in order to measure peer status in a developmentally responsive way (Rodkin et al., 2006).

Aggression: Overt and Relational. There are two forms of aggression: overt aggression and relational aggression. Overt aggression includes behaviors meant to physically harm another student (Crick & Grotpeter, 1995). Early adolescent boys often display overt aggression towards other boys, whereas girls often use relational aggression against other girls (Crick & Grotpeter, 1995; Xie et al., 2002). Relational aggression encompasses behaviors that are both subtle and indirect (Xie et al., 2002) and are often used to socially harm someone through alienation, rumors, gossip, and threatening to end a friendship (Prinstein et al., 2001). The high prevalence of relational aggression among both sexes is indicative of the changing social norms in early adolescence (Prinstein et al., 2001).

Social goals: Popularity, Dominance, and Intimacy. There are two different theoretical approaches to understanding social goals. The first approach is the achievement goal framework, which focuses on broad goals to either develop or demonstrate competence (Dweck & Leggett, 1988). The second approach, and the approach that was used in this study, is the content goal approach. The content goal approach focuses on cognitive representations of *what* an individual is trying to achieve and often serves to direct their behavior towards outcomes (Ford, 1992; Wentzel, 2000). The content goal approach includes popularity, dominance, and intimacy goals (Jarvinen & Nicholls, 1996). The achievement goal framework and the content goal approach are two complementary approaches to understand social motivations among early adolescents (Kiefer & Ryan, 2008).

Popularity goals emphasize striving for status and recognition (Jarvinen & Nicholls, 1996; Kiefer & Ryan, 2008). Peer norms often shift during the beginning of middle school and emphasize the importance of popularity, reflecting an increased need to fit in with peers (Galván et al., 2011; Kiefer & Ryan, 2011). Early adolescents have a higher likelihood of valuing popularity compared to pre- or late adolescents given their developing understanding of peer group hierarchy and status dynamics (LaFontana & Cillessen, 2010). The high priority for popularity during early adolescence can cause students to become insecure with their own social status, and in turn, have a higher likelihood of setting social status goals (Bowker et al., 2010).

Dominance goals emphasize striving for power over peers and forcing others to comply by instilling fear (Jarvinen & Nicholls, 1996; Kiefer & Ryan, 2008). Dominance goals are associated with high self-esteem, narcissism, peer rejection, and aggression (Ojanen & Findley-Van Nostrand, 2014). Dominance goals are positively associated with relational aggression, especially if the adolescent is already popular (Ojanen & Findley-Van Nostrand, 2014).

Increasing associations among dominance goals and overt aggression may be due to students navigating a social hierarchy that is in flux during the sixth grade (Pellegrini & Bartini, 2001).

Intimacy goals emphasize striving for peer relationships characterized by mutual support and understanding (Jarvinen & Nicholls, 1996; Kiefer & Ryan, 2008), and are associated with positive peer perceptions, prosocial behavior, and peer acceptance (Ojanen & Findley-Van Nostrand, 2014). Furthermore, intimacy goals are negatively associated with overt aggression and have a null association with relational aggression (Ojanen & Findley-Van Nostrand, 2014).

Contributions to the Literature

The current study may have theoretical and practical implications for School Psychologists, as well as provide insight into social motivation and adjustment during early adolescence (Cillessen et al., 2014; Ojanen & Findley-Van Nostrand, 2014; Xie et al., 2002). The findings may provide greater insight into the relationship between leadership and peer status (coolness) and their unique associations with later aggression (Cillessen et al., 2014). These findings may be especially pertinent for leadership, which is an important yet relatively understudied construct. It is possible that the findings will clarify mixed associations in literature.

Examining social goals and gender as moderators may help to explain more variance in the associations among leadership and status (coolness) with subsequent aggression and provide insight into underlying mechanisms and how they may differ for boys and girls. Gender norms may moderate the association between coolness and leadership with aggression. Literature has previously highlighted that boys and girls may partake in different forms of aggression based on what is characteristic of their own gender (Crick & Grotpeter, 1995; Xie et al., 2002).

Additionally, research has highlighted that gender may play a role in the prioritization of popularity, as it has been found that males are more likely to pursue a high social status

(LaFontana & Cillessen, 2010). These studies suggest that gender may moderate not only the types of aggression used, but the likelihood of resorting to aggression in order to achieve social goals. Finally, the current study may contribute to our understanding of social development during the first year of middle school by examining changes in key constructs.

Regarding practical implications, the current study may assist school personnel in understanding the social goals youth strive for and their implications for later overt and relational aggression, especially among those who are considered cool or leaders. The examination of social goals as potential moderators may provide insight into the extent to which social motivation has implications for future behavior and allow for the early identification of youth who may be at-risk for aggression. Further, emphasizing the importance of adaptive social goals such as intimacy may help to reduce aggression among cool youth and youth leaders. Interventions informing youth about the importance of leadership may help decrease aggression in cool youth and youth leaders. Finally, interventions targeting aggression among cool youth and youth leaders may consider particular variables (social goals and gender) in order to increase effectiveness. In conclusion, the current study may produce critical findings that assist in the formation of interventions targeting leadership, coolness, and social goals in order to reduce aggression among cool youth and youth leaders.

Chapter II: Literature Review

This chapter reviews literature in the areas of leadership, peer status (coolness), and aggression in order to provide further insight into the associations among these variables and inform the current study. First, two separate leadership constructs (individualist and collectivist) as well as positive and negative leadership behaviors across development are presented. Second, associated correlates and outcomes for coolness are reviewed as well as the limited literature examining associations of coolness with leadership and aggression. Third, an investigation of the characteristics and outcomes associated with overt and relational aggression is provided, as well as associations among leadership and coolness with these two forms of aggression. Finally, social goals and gender are examined as moderators of the associations among leadership and coolness with overt and relational aggression.

Leadership

This section includes a review of research and theory regarding the various approaches to youth leadership. A general conceptualization of leadership was used in the current study in order to examine the perspectives of sixth-grade students. However, literature indicates youth may value an individualistic (Miller-Johnson, Costanzo, Coie, Rose, Browne, & Johnson, 2003; Mullen & Tuten, 2004) or collectivistic approach to leadership (Carter & Spotanski, 1989; Mortensen et al., 2014). Research conceptualizing leadership in adults tends to focus on individual leadership (Lord, Brown, & Harvey, 2001), or one person successfully leading a group. A collectivistic approach is also highlighted in literature on adult leadership and emphasizes one person's ability to achieve a particular goal by engaging in collective action

(Mortensen et al., 2014). Although these two approaches to leadership have not been examined among children and adolescents, research indicates youth value positive (Carter & Spotanski, 1989; Mortensen et al., 2014; Mullen & Tuten, 2004) and negative traits in leaders (Miller-Johnson et al., 2003; Moffitt, 1993). For instance, youth leaders may individually influence peers through antisocial behavior (Miller-Johnson et al., 2003; Moffitt, 1993), or work collectively with peers by engaging in prosocial behavior in order to achieve a goal (Carter & Spotanski, 1989; Mortensen et al., 2014).

Youth may value multiple characteristics of perceived maturity as indicators of leadership (Allen, 2014), including dedication to a specific cause (Mortensen et al., 2014) and independence from adults (Ward & Ellis, 2008). However, there is a lack of research investigating leadership among youth, indicating a need to further conceptualize leadership during early adolescence. Notably, early adolescents experience a shift in peer relationships that increases the salience of high status (Galván et al., 2011). Therefore, this shift in the prioritization of high status makes the sixth grade a critical time to examine the correlates and outcomes associated with leadership.

The Individualistic Approach to Leadership. An individualistic approach to leadership characterizes leaders as having the ability to lead a group successfully and reach a positive outcome. This positive outcome is enhanced when the leader is perceived to be responsible (Lord et al., 2001; Maurer & Lord, 1991; Phillips & Lord, 1981). For this leadership approach, the leader's ability to reach a positive outcome is emphasized and the contributions of other group members are de-emphasized.

Although youth may perceive leadership as a primary individual making a difference (Miller-Johnson et al., 2003; Mullen & Tuten, 2004), the outcome is not always positive. For instance, theory and research indicate youth leaders who rebel against adult authority are often

the most influential (Miller-Johnson et al., 2003; Moffitt, 1993). Moffitt's (1993) maturity gap theory proposes that the gap between adolescents' biological development and their limited responsibilities and role in society contribute to adolescence-limited antisocial behavior. For example, rebellious early adolescents influence peers because their behavior allows them to escape adult authority and feel mature (Moffitt, 1993). This maturity gap lessens as youth age, because many older adolescents recognize that mature behavior is living as a responsible adult rather than impressing peers through antisocial behavior (Allen et al., 2014; Mullen & Tuten, 2004). Therefore, youth entering later adolescence and adulthood may perceive antisocial behaviors as negative, thereby decreasing their motivation to partake in these behaviors (Allen et al., 2014; Moffitt, 1993). The maturity gap theory was used in this study to guide a general understanding of leadership in early adolescence, and to examine the extent to which leadership is associated with aggression.

Research conducted by Allen and colleagues (2014) has implications regarding the maturity gap and leadership in early adolescents. A community sample of 184 seventh and eighth-grade adolescents (86 males and 98 females) were followed over a 10-year period (ages thirteen to twenty-three; Allen et al., 2014). Pseudomature behavior was examined in the study, and includes minor delinquency, early involvement in romantic relationships, and choosing friends based on physical appearance (Allen et al., 2014). The cross sectional findings indicated pseudomature behavior was associated with an increased desire for popularity and social success. However, longitudinal results disproved an adolescent-limited affect. For instance, social status influences subsequent antisocial behavior, as early adolescents who exhibit pseudomature behavior are often considered high status amongst their peers. Despite the social rewards of pseudomature behavior during early adolescence, pseudomature behavior is associated with social functioning difficulties over time, such as criminal behavior (drug and alcohol use) and

decline in social status (Allen et al., 2014). Therefore, pseudomature behavior may play a prominent role in peer status and aggression during early adolescence, which may have implications for leadership during this time.

The Collectivist Approach to Leadership. Leaders embodying a collectivist approach avoid coercing others by responding to a shared need (Chemers, 2001). In this approach, three main elements of a good leader are emphasized: “image management, relationship development, and resource deployment” (p. 379). Image management highlights the importance of projecting an image of trust and commitment to the group, whereas relationship development emphasizes the leader’s ability to motivate and obtain a relationship with others (Chemers, 2001). The final element, resource deployment, highlights the need for the group and leader to possess “effort, energy, and knowledge” in order to accomplish the task (Chemers, 2001, pp. 385-386). Each of these elements illustrate the importance of a trustworthy and committed leader who has the ability to work effectively with others and accomplish a common goal.

A collectivist approach includes a relational component of leadership, which focuses on one’s neutrality and trustworthiness, as well as how status is conveyed to group members (Lord et al., 2001; Tyler & Lind, 1992). This relational component influences the extent to which group members are aware of their individual position within the group (Lord et al., 2001; Tyler & Lind, 1992). Group member awareness influences leadership effectiveness by determining the extent to which members choose to comply with orders and accept group norms and values (Lord et al., 2001). Although the individual leader role is considered essential for goal attainment, the opinion of group members determines whether or not a leader’s views and decisions will be accepted. For instance, high school students who influence peers and serve in leadership roles accomplish individual goals by valuing responsibility and connecting with others (Mullen & Tuten, 2004).

Youth may value a collective approach to leadership, which places an emphasis on working for the common good and prioritizing the needs of others (Mortensen et al., 2014). Research examining youth narratives indicates that youth view leadership as a way to solve problems in the community and make a difference through collective action (Mortensen et al., 2014). Youth view leaders as being responsible for taking on several roles, including providing guidance, mentorship, and pursuing the needs of the greater community (Mortensen et al., 2014). One context where youth may value a collective approach to leadership is in student organizations, as they foster “cooperation, citizenship, self-confidence, and personal development” (Carter & Spotanski, 1989, p. 34). Although research has suggested that youth value particular aspects related to a collective leadership approach (Mortensen et al., 2014), literature in this area does not consider associations among leadership and adolescents’ behavior.

Bistrategic Approach to Leadership. Literature examining the influence of youth leaders suggests that early adolescents exhibiting particular behavior traits are more likely to impact peer behavior and maintain a level of leadership (Coie, Dodge, & Coppotelli, 1982; Miller-Johnson et al., 2003). For instance, youth who possess positive and negative traits are often those in positions of leadership and power (Coie et al., 1982; Miller-Johnson et al., 2003). Controversial status youth (individuals exhibiting both prosocial and antisocial behavior) were most likely to promote behavior change in peers among seventh-grade students (Miller-Johnson et al., 2003). Controversial youth are often highly disliked by a number of their peers and perceived as aggressive and disruptive (Coie et al., 1982; Miller-Johnson et al., 2003). However, these early adolescents have excellent interpersonal skills, persuade and influence others to avoid rejection (Miller-Johnson et al., 2003), and emerge as leaders among peers (Coie et al., 1982). The charming and rebellious behavior exhibited by controversial status youth may shift peer attitudes by promoting risk-taking behavior (Miller-Johnson et al., 2003). Although controversial

youth were found to have a greater likelihood of setting trends and influencing others, highly popular youth who exhibited fewer problem behaviors were often rated by peers as leaders and those who are fit to be in charge (Miller-Johnson et al., 2003). However, controversial youth had a much higher likelihood of influencing others in comparison to conventional leaders (leaders displaying prosocial behavior; Miller-Johnson et al., 2003). Therefore, controversial youth may have the ability to maintain a degree of influence over their peers, and their aggression and interpersonal skills may allow them to successfully persuade others to engage in risk-taking and aggressive behavior.

Peer Status (Coolness)

Shifting peer norms during the beginning of middle school emphasize the importance of popularity, indicating that youth have an increased need to fit in with peers and obtain a high social status (Cillessen et al., 2011; Galván et al., 2011). Peer status can be measured in terms of sociometric popularity (acceptance) and perceived popularity (Cillessen et al., 2011; Cillessen & Mayeux, 2004). Acceptance is the extent to which someone is liked by others, whereas perceived popularity is possession of high status or social centrality (Rubin et al., 2006) through the maintenance of power and control (Cillessen & Rose, 2005). These types of status are uniquely associated with social adjustment. Accepted youth are perceived by peers as kind, trustworthy, and cooperative (Cillessen & Rose, 2005; Parkhurst & Hopmeyer, 1998). In contrast, perceived popular youth are generally viewed as unfriendly and aggressive (Farmer, Pearl, & Van Acker, 2000; LaFontana & Cillessen, 2002; Rodkin et al., 2000).

In addition to acceptance and perceived popularity, cool peer reputation is an indicator of peer status (Adler, Kless, & Adler, 1992; Allen et al., 2014; Bellmore et al., 2011; Jamison Wilson, & Ryan, 2015; Kiefer & Wang, 2016; Rodkin et al., 2006). Similar to perceived popularity, youth who are considered cool are socially visible, maintain a high status, and are not

necessarily likeable or socially preferred among peers (Cillessen et al., 2011; Cillessen & Mayeux, 2004; Kiefer & Wang, 2016; LaFontana & Cillessen, 2002). Furthermore, coolness is associated with overt and relational aggression (Bellmore et al., 2011; Hoff, Reese-Weber, Schneider, & Stagg, 2009; Kiefer & Wang, 2016; Rodkin et al., 2013; Rose, Swenson, & Waller, 2004).

Despite its similarity to perceived popularity, coolness highlights individual characteristics (Jamison et al., 2015; Kiefer & Wang, 2016) while perceived popularity is indicative of a central position within the peer group (Xie et al., 2002). The term ‘cool’ is used in the current study, as there is a need to further examine coolness in the literature. Additionally, peer-nominated coolness is a developmentally appropriate measure of status during early adolescence (Jamison et al., 2015; Rodkin et al., 2006). The concept of coolness is dynamic, as children socially construct coolness (Adler & Adler, 1998; Rodkin et al., 2006). Therefore, the current study utilized cool peer nominations (instead of providing a static definition for coolness) and indirectly asked about cool characteristics via peer nominations that relied on the student to apply his or her own conceptualization of coolness.

Aggression

Two forms of aggression, overt (hitting, pushing, verbal threats) and relational aggression (rejection and exclusion), are distinct yet related constructs (Little et al., 2003; Prinstein et al., 2001). Adolescents are able to distinguish between the two forms of aggression (Prinstein et al., 2001); however, children typically utilize one of these forms, which provides additional and unique insight into the social behavior of aggressive youth (Crick & Grotpeter, 1995). Early adolescents utilizing both prosocial and aggressive behavior to control social resources are able to build social relationships through prosocial behavior and maintain friendships and social status through aggression (Hawley et al., 2007; Wurster & Xie, 2014).

Overt Aggression. Overt aggression includes physical or verbal behaviors such as hitting, pushing, or threatening to injure others (Crick & Grotpeter, 1995). Overt aggression tends to be used in contexts where there are low friendship levels (Little et al., 2003), meaning that aggressors and victims do not share a close relationship. Early adolescents who exhibit overt aggression are often perceived as popular (LaFontana & Cillessen, 2002; Parkhurst & Hopmeyer, 1998), and perceived popular youth may act aggressively to obtain their goals (LaFontana & Cillessen, 2002). However, other findings indicate that high status youth do not only partake in overt aggression, and overt aggression alone does not lead to increased social status (Rose et al., 2004). Overt aggression may be a less effective means of achieving high status during early adolescence, as it becomes increasingly socially sanctioned by peers over time (Björkqvist, Österman, & Kaukiainen, 1992; Rose et al., 2004). Overt aggression may be related to social-psychological maladjustment and a lack of academic success, as overt aggression negatively predicts the social-psychological adjustment of youth (Prinstein et al., 2001; Xie et al., 2002). Overt aggression is also related to increased rates in school dropout and a tendency to form groups with other aggressive youth who support deviant behaviors (Xie et al., 2002).

Relational Aggression. Those who engage in relational aggression harm others by manipulating and damaging peer relationships through rejection and exclusion (Crick & Grotpeter, 1995; Little et al., 2003; Prinstein et al., 2001). Unlike overt aggression, which is visible through physical and verbal behaviors, relational aggression is often indirect (Crick & Grotpeter, 1995; Xie et al., 2002). Relational aggression is more socially acceptable, as it is an indirect way to express anger or disdain and establish one's position in the social hierarchy (Prinstein et al., 2001). One particular study concluded that relational aggression was related to an increase in perceived popularity over time for seventh and ninth-grade adolescent girls, but not girls in the third and fifth-grades (Rose et al., 2004). These findings suggest that overt

aggression may not be as developmentally appropriate as relational aggression during early adolescence, which allows the aggressor to remain unnoticed (Rose et al., 2004).

Youth who engage in relational aggression have a higher likelihood of experiencing social-psychological maladjustment, including distressing peer relationships, peer disliking (Crick & Grotpeter, 1995), and loneliness and depression (Little et al., 2003). Researchers have formed multiple explanations for the heightened social-psychological maladjustment in relationally aggressive youth. For instance, Crick and Grotpeter (1995) postulate that the devious nature of relational aggression causes youth to be disliked. Alternatively, peer rejection or psychological distress may increase relational aggression (Crick & Grotpeter, 1995). However, additional research suggests that relational aggression is not associated with future adjustment problems (Xie et al., 2002). Specifically, only overt aggression was linked to low academic competence and school dropout after researchers identified relational and overt aggression patterns from youth interviews with two cohorts of students in grades four and seven ($N = 510$; Xie et al., 2002). Therefore, inconclusive research indicates the relationship between these variables (social-psychological adjustment and relational aggression) requires further investigation.

Bistrategic Youth. Bistrategic youth may implement prosocial and coercive strategies such as cooperation and reciprocation in order to increase cohesion in peer relationships as well as utilize high levels of aggression in order to control social resources (Hawley et al., 2007). Youth who employ both overt and relational aggression have a higher likelihood of obtaining peer perceived popularity (LaFontana & Cillessen, 2002) and resource control (Hawley et al., 2007).

Aggression is considered an effective way for bistrategic controllers to control resources and achieve goals, including controlling and manipulating social relationships, although it is

often considered antisocial (Hawley et al., 2007). Bistrategic youth tend to exhibit overt aggression towards lower status peers to prevent the victim from successfully retaliating (Wurster & Xie, 2014). However, bistrategic youth employ relational aggression (Rose et al., 2004) to control resources and achieve goals. For instance, bistrategic youth tend to employ relationally aggressive tactics against high status peers, as this indirect behavior allows the aggressor to compete for social resources and decreases the chances of retaliation (Wurster & Xie, 2014). Thus, bistrategic youth select prosocial and antisocial strategies depending on the targeted peer and the intended goal (Wurster & Xie, 2014). Bistrategic youth successfully navigate peer relationships by identifying the appropriate behavior within a peer context.

Measurements of Aggression

This section will provide a brief description of the three main ways to measure overt and relational aggression: self-reports, teacher-reports, and peer-nominations. The strengths and limitations are discussed, as well as the appropriate contexts for each type of measurement. Peer nominations were used in the current study, as this form of measurement is frequently utilized in research examining aggression and results in lower levels of biased responses (Monks, Smith, & Swettenham, 2003; Pellegrini & Bartini, 2000).

Self-Report Measures. Self-report measures are often utilized to assess overt and relational aggression (Little et al., 2003; Prinstein et al., 2001). Although self-reports are essential when analyzing students' perceptions and particular reasons for engaging in aggression, they encourage youth to disclose personal information which increases the likelihood of biased responses (Pellegrini & Bartini, 2000). Secondly, many self-report measures have neglected examining overt and relational aggression separately, which may conflate the forms (overt and relational) and functions (proactive and reactive) of aggression (Little et al., 2003). For instance, measures often include the overt act of aggression (e.g. "I will punch, hit, or kick

others to get my way”) without indicating if these behaviors are functioning in a proactive or reactive manner (Little et al., 2003).

Teacher-Report Measures. Teacher reports are another measure of aggression (Crick et al., 1999; Ladd & Profilet, 1996; Monks et al., 2003; Whitney & Smith, 1993). Teacher reports can be beneficial for a number of reasons. First, literature indicates that teacher reports are a reliable and useful measure (Ladd & Profilet, 1996; Monks et al., 2003). Second, these measures give teachers an opportunity to reflect on their views regarding aggressive behavior, allowing them to become more aware of youth aggression in particular situations (Whitney & Smith, 1993). However, in a study with children and adolescents (ages 8-16), nearly half of the victims failed to notify a teacher about their experience, reducing teacher awareness of aggression (Whitney & Smith, 1993). Although teacher reports serve as a reliable method for receiving teacher input, teachers’ awareness of aggression may be restricted. For instance, teacher reports often fail to include subtle methods of aggression that teachers may not be exposed to (Pellegrini & Bartini, 2000). Therefore, teachers’ restricted awareness may indicate bias, as they are unaware of the subtle methods of aggression among students.

Peer-Report Measures. Peer nominations are a frequently used measure of overt and relational aggression (Crick & Grotpeter, 1995; Rose et al., 2004). In smaller contexts, such as small schools, researchers may present a list of classmates and instruct participants to circle those who best fit the description (Bellmore, Jiang, & Juvonen, 2010; Rose et al., 2004). However, providing a list of all classmates is not the best form of measurement to utilize in larger schools, schools with higher rates of student mobility, and secondary schools without self-contained classrooms (Bellmore et al., 2010). Similar to prior research (Bellmore et al., 2010), participants in the current study were required to generate their own nominations because it was unlikely that they would be familiar with all of their grade-level peers. Examples of peer

nominated items for overt aggression include: “hit, kick, or punch others,” and “say mean things to others to insult them” (Crick & Grotpeter, 1995). Examples of peer nominated items for relational aggression include: “try to make another classmate not like others by spreading rumors or talking behind their backs,” “ignore or stop talking to someone,” and “keep certain people from being in their group” (Crick & Grotpeter, 1995). Peer nominations can also be used to identify bistrategic controllers, who may use both relational and overt aggression in addition to prosocial behavior (Hawley et al., 2007). Finally, peer reports are one of the most frequently used measures of aggression because of the lower level of biased responses that frequently occur in self-reported measures (Monks et al., 2003; Pellegrini & Bartini, 2000).

Associations among Leadership, Peer Status (Coolness), and Aggression

Literature examining the relationship between leadership and aggression is scarce, with the majority of studies focusing on the relationship between peer status and aggression (Bellmore et al., 2011; Bowker et al., 2010). These findings suggest a positive association between high peer status (coolness) and aggression; however, the relationship between leadership and aggression is less clear (Bowker et al., 2010; Mortensen et al., 2014; Ward & Ellis, 2008). Studies have emphasized a possible relationship among leadership and high peer status (Bowker et al., 2010; Cillessen et al., 2011; Ward & Ellis, 2008) and indicate that leadership and aggression may share a relationship (Bowker et al., 2010). Additional studies highlight the importance of positive characteristics in youth leadership, such as social support (Ward & Ellis, 2008) and commitment and dedication to a particular cause (Mortensen et al., 2014). Thus, these studies imply that youth may also value certain positive leadership characteristics. The literature examining leadership, peer status (coolness), aggression, and the relationships among these variables will be discussed in the following section.

Associations among Leadership and Peer Status (Coolness). Research indicates leadership and peer status are related (Cillessen et al., 2014; Lansu & Cillessen, 2011; Rodkin et al., 2000), yet distinct concepts (Mortenson et al., 2014; Mullen & Tuten, 2004; Ward & Ellis, 2008). The relation between leadership and status may be explained by the behaviors exhibited by high status leaders. Lansu and Cillessen (2011) examined the distinction between preference and popularity in late adolescence and early adulthood ($N = 235$, ages 18-25). Using sociometric peer nominations, researchers found an association between high social status (e.g., acceptance or sociometric popularity) and prosocial leadership (e.g., when a leader helps and shows interest in others; Lansu & Cillessen, 2011). Youth who demonstrate genuine interest in the well-being of peers may be considered both high status and leaders because of their ability to influence others in a positive manner and obtain peer attention (Lansu & Cillessen, 2011).

In an additional study, participants ages 12-13 ($N = 180$) read eight written messages from a hypothetical leader and completed a sociometric measure examining their preference for that particular leader (Ward & Ellis, 2008). Researchers found that, along with social support, social status was the most preferred leadership trait (Ward & Ellis, 2008). These findings assert that social status is a determining factor in preferred leaders, most likely because followers will strive to increase their social status by associating with high status leaders (Ward & Ellis, 2008). Research utilizing sociometric peer nominations indicates that high status youth who prioritize popularity also have a high level of leadership (Cillessen et al., 2014). High status youth are also often nominated by peers as leaders (Rodkin et al., 2000), indicating that peer status may influence leadership.

However, analysis of youth narratives ($N = 219$) pertaining to leadership characteristics revealed that adolescents perceive leadership as a way to improve community conditions rather than build a higher social status (Mortensen et al., 2014). This finding encompasses the goals and

behaviors inherent in leadership which are meant to impact others and the community. These goals and behaviors may be at odds with a focus on social visibility and prestige, or characteristics of high status. However, it is important to note that peer status (coolness) was not examined in the study. Therefore, it is unclear as to whether or not positive characteristics of leadership are associated with coolness (e.g., visibility and prestige). Further research examining the relations between peer status (coolness) and leadership is needed to provide insight into the associated correlates and outcomes of these variables.

Associations among Peer Status (Coolness) and Aggression. Youth may obtain a higher status through aggression (Bellmore et al., 2011; Bowker et al., 2010; LaFontana & Cillessen, 2002; Merten, 1997; Parkhurst & Hopmeyer, 1998; Rose et al., 2004). Thus, aggression may be prevalent during times of social transition, such as the beginning of middle school, when youth establish and maintain their social status in a new peer environment (Bellmore et al., 2011; LaFontana & Cillessen, 2002; Merten, 1997; Pellegrini & Long, 2002; Rose et al., 2004). Studies using peer nominations to investigate the stability of status found that youth who maintained their high status across the first year of middle school were more aggressive (Bellmore et al., 2011; Bowker et al., 2010). These findings are applicable to youth who enter middle school without a history of high status, because they are able to gain respect and popularity through aggressive behavior (Bowker et al., 2010).

Overt Aggression. The relationship between status and overt aggression is mixed. Studies have emphasized a positive relationship between overt aggression and high status (LaFontana & Cillessen, 2002; Waasdorp et al., 2013). Specifically, researchers examined fourth-eighth grade children's perceptions of popularity in two separate studies (LaFontana & Cillessen, 2002). The first study measured popularity through peer nominations ($N = 408$), while the second study included qualitative descriptions of what youth believe makes girls and boys popular ($N = 92$;

LaFontana & Cillessen, 2002). Study results suggest that popular youth were depicted as overtly and relationally aggressive while simultaneously possessing the interpersonal skills necessary to obtain their goals. Further literature supports this positive relationship after researchers analyzed peer identification of popular students among 727 middle school students (Parkhurst & Hopmeyer, 1998). Results indicated that early adolescents who were nominated as popular were also more likely to start fights (Parkhurst & Hopmeyer, 1998). Thus, this line of research suggests high status youth may be willing to exhibit overt aggression in order to obtain their status goals.

However, additional research suggests the majority of high status youth do not solely exhibit overt aggression, and that these two variables (high status and overt aggression) are not always related (Xie et al., 2002). For instance, overt aggression does not include subtle tactics (ignoring, excluding, spreading rumors) that may increase social status (Rose et al., 2004). Research demonstrating mixed results regarding overt aggression and status suggest that overt aggression may be a less mature form of aggression, with adolescents displaying less overt aggression and more indirect aggression over time (Little et al., 2003). For instance, youth had significantly higher levels of relational aggression (but not overt aggression) in the fifth, seventh, and ninth grades if they initially had a high peer status (Rose et al., 2004). Thus, this line of research suggests a stronger correlation between high status and increased relational aggression, whereas the relation between high status and overt aggression is less clear.

Relational Aggression. Based on peer reports, youth occupying a central position in their social network are more likely to exhibit relational aggression (Xie et al., 2002) to protect their position within the social hierarchy (LaFontana & Cillessen, 2002; Merten, 1997; Rose et al., 2004). The interpersonal skills that high status youth possess may help them achieve their goals through engagement in subtle behaviors such as ignoring, excluding, and spreading rumors

(LaFontana & Cillessen, 2002; Merten, 1997; Rose et al., 2004). Relational aggression may increase peer status through the sophisticated tactics that allow the aggressor to remain anonymous while manipulating the social relationships and reputations of others (Rose et al., 2004). Thus, high peer status may be maintained by those who possess the social savviness needed to manipulate and harm others while remaining unnoticed (Rose et al., 2004).

Associations among Leadership and Aggression. Influencing the perceptions and behaviors of others through direct or indirect means constitutes the essential qualities of a leader. Thus, it is possible that leaders may use aggression to effectively carry out this role. However, research on leadership and the forms of aggression (relational and overt) is scarce at this time, with most studies addressing leadership and aggression in general (Cillessen et al., 2014; Miller-Johnson et al., 2014; Mullen & Tuten, 2004; Rodkin et al., 2000; Waasdorp et al., 2013). Although prosocial behaviors are related to leadership (Mortensen et al., 2014), aggressive youth are often considered leaders amongst peers (Cillessen et al., 2014; Waasdorp et al., 2013), suggesting that aggressive children may achieve their goals by influencing others.

Leadership and aggression may be associated during early adolescence. For example, Miller-Johnson and colleagues (2003) examined ratings of peer status, deviant peer involvement, and peer group leadership in order to gain further insight into the associations among peer status, peer group social influences, and risk-taking behavior among urban middle school students ($N = 647$). A sociometric survey was conducted in order to identify controversial youth (e.g., students rated the highest for most and least liked), who often set trends for peers (Miller-Johnson et al., 2003). Controversial youth are referred to as unconventional leaders, as they may influence peer behavior through their aggressive, yet charismatic, nature (Miller-Johnson et al., 2003). Controversial youth are often highly disliked but possess the ability to persuade others into

taking risks and establishing a level of independence from parents (Ward & Ellis, 2008) and other adults (Miller-Johnson et al., 2003).

Mullen and Tuten (2004) also found a potential relationship between leadership and aggression after administering a survey assessing adolescent leadership development among high school students ($N = 115$) and their teachers ($N = 6$). Researchers conducted teacher interviews on three topics: personal definitions of leadership, impressions of developing student leaders, and ideas about increasing student leadership (Mullen & Tuten, 2004). According to survey and interview responses, youth who possess strong leadership skills are “aggressive, center-stage, and action oriented” (Mullen & Tuten, 2004, p. 12). These findings indicate that high status may be crucial in order to obtain the visibility needed to be considered a leader, and that aggression may be a critical factor for influencing the behavior of others.

There appears to be a relationship among leadership and aggression (Cillessen et al., 2014; Miller-Johnson et al., 2003), particularly among urban, elementary school youth (Waasdorp et al., 2013). It is possible that this association is related to what characteristics are valued by peers, as aggressive youth are only considered leaders if they possess certain traits (Rodkin et al., 2000). For instance, elementary school age, high status boys who exhibit prosocial behavior have a greater likelihood of being nominated as leaders in contrast to aggressive or troubled boys (Rodkin et al., 2000). Perhaps high status boys with low levels of aggression may be considered leaders due to their ability to interact effectively with peers and influence others without force.

A study examining adolescents’ leadership ideas through narrative completion in a year-long leadership development program found that youth viewed leadership as a way to guide others without forcing them to partake in activities (Mortensen et al., 2014). A total of 130 participants (ages 12-19) were instructed to take pictures and write narratives describing what

leadership looks like and what makes someone a leader (Mortensen et al., 2014). Narrative analyses indicated that participating youth tended to view leaders as models and mentors who have the ability to work effectively with others. These results suggest that aggression may not be the sole determining factor for youth leadership. Instead, youth who have social skills, the ability to work with others effectively, and serve as role models and mentors may stand out from their peers in terms of leadership ability.

Social Goals as Moderators

This study examined social goals as moderators among leadership, coolness, and aggression. Recent research indicates social goals, especially popularity goals, moderate associations among peer status (coolness) and aggression (Cillessen & Mayeux, 2004; Dawes & Xie, 2014; Kiefer & Wang, 2016; Li & Wright, 2014; Ojanen & Findley-Van Nostrand, 2014). However, little is known about the extent to which social goals moderate associations among leadership and aggression. This section provides an overview of the content goal approach to studying social goals (popularity, dominance, and intimacy) as well as how these goals may moderate associations of leadership and coolness with aggression.

One approach to understanding adolescents' social motivation is the content goal approach, which focuses on the cognitive representations of a particular goal and the subsequent behavior used to achieve the goal (Ford, 1992; Wentzel, 2000). This approach allows investigators to examine the various situations from which goals arise, such as personal goals and those that are socially derived, and allows for the possibility of multiple goals in a given situation (Wentzel, 2000). The content goal approach is utilized in the current study as it focuses on what the child is striving for in a particular situation (Ford, 1992; Wentzel, 2000). A complementary approach to studying social goals, the achievement goal orientation, focuses on reasons *why* an individual is attempting to achieve a goal (Ryan & Shim, 2008).

The current study examined three social goals (popularity, dominance, and intimacy) using the content goal approach. Popularity goals emphasize striving for social status and recognition among peers, dominance goals emphasize striving for power over others by instilling fear, and intimacy goals focus on striving for mutual support and understanding in peer relationships (Jarvinen & Nicholls, 1996). Because students may display behavior aligning with a particular social goal (popularity, dominance, or intimacy; Kiefer & Wang, 2016), this study will examine social goals as moderators to determine whether or not leadership and high status are associated with subsequent aggression.

Popularity Goals. Popularity goals have received a considerable amount of attention in comparison to dominance and intimacy goals, and research indicates popularity goals influence adolescents' aggressive behavior (Bellmore et al., 2011; Cillessen et al., 2014; Dawes & Xie, 2014; Li & Wright, 2014). For instance, high status youth who pursue certain popularity goals have higher subsequent levels of peer-reported relational aggression, because they are particularly likely to prioritize 'fitting in' with peers (Cillessen et al., 2011; Kiefer & Wang, 2016). Moreover, early adolescents may prioritize popularity goals because of shifting peer norms that promote an increased salience of peer status, especially during the first year of middle school (Bellmore et al., 2011; Kiefer & Wang, 2016).

Research findings highlight the relationship between the popularity goal and aggression (Cillessen et al., 2014; Dawes & Xie, 2014). In one study, researchers examined self-reports and peer nominations completed by sixth-grade students ($N=314$) during the fall (Time 1) and spring (Time 2; Dawes & Xie, 2014). Self-reports assessed popularity goals and popularity-driven behavior, and peer nominations assessed aggression (Time 1) and perceived popularity (Times 1 and 2; Dawes & Xie, 2014). Study results indicated that greater use of aggression during Time 1 was associated higher popularity status during Time 2 in initially high status youth with high

popularity goals (Dawes & Xie, 2014). In another study, 14-year old participants ($N=288$) completed a sociometric instrument and an assessment of how much they prioritized popularity in comparison to other personal goals (Cillessen et al., 2014). Results from the study indicated that popular adolescents who prioritized popularity were among the most aggressive (Cillessen et al., 2014). Although recent findings suggest that prioritizing high peer status is associated with aggression (Cillessen et al., 2014; Dawes & Xie, 2014), literature examining leadership and its association with aggression – and social goals as a potential moderator of this relationship – is scarce, illustrating a need for further exploration.

Dominance Goals. Youth may endorse dominance goals during the sixth-grade transition as a way to navigate the unfamiliar social system (Kiefer & Wang, 2016; Pellegrini & Long, 2002). For instance, initially low status youth who possess dominance goals may increase their social status through aggression (Ojanen & Findley-Van Nostrand, 2014). Moreover, high status youth who prioritize dominance have higher levels of subsequent aggression (Kiefer & Wang, 2016; Ojanen & Findley-Van Nostrand, 2014) to control social resources (Hawley et al., 2007). Furthermore, aggressive youth who endorsed dominance goals experienced an increase in later peer status (Ojanen & Findley-Van Nostrand, 2014). These findings indicate that aggressive youth with high dominance goals may climb the social ladder, especially when peers notice their behavior (Ojanen & Findley-Van Nostrand, 2014).

Intimacy Goals. Research has suggested intimacy goals are associated with positive behavior towards peers (Kiefer & Wang, 2016; Ojanen, Grönroos, & Salmivalli, 2005) and satisfaction with peer relationships (Jarvinen & Nicholls, 1996). Intimacy goals are negatively associated with overt aggression across time, as this goal values a level of closeness among peers (Ojanen & Findley-Van Nostrand, 2014). However, intimacy goals do not lead to decreases in relational aggression across time; rather, the two variables share a null association (Ojanen &

Findley-Van Nostrand, 2014). Thus, a degree of intimacy, or closeness, is needed in order for youth to be able to maintain their peer status or friendships with others. Researchers suggest that intimacy goals promote cohesion (Cillessen et al., 2011; Hawley et al., 2007; Kiefer & Wang, 2016) and that popularity and dominance goals may be used for resource control (Hawley et al., 2007; Kawabata et al., 2013; Kiefer & Wang, 2016).

Gender as a Moderator

The investigation of gender as a moderator is essential, as there are often differences in aggression among boys and girls in regards to status and aggression (Bowker et al., 2010; Cillessen & Mayeux, 2004; LaFontana & Cillessen, 2010; Lansu & Cillessen, 2011). However, gender differences in leadership have been understudied, indicating a need to better understand how gender may serve as a moderator between leadership and subsequent aggression.

The social cognitive theory may describe the extent to which gender serves as a moderator between social cognition and subsequent behavior. According to social cognitive theory, gender differences in social-cognitive styles promote gender-specific behavior (Rose & Rudolph, 2006; Ruble, Martin, & Berenbaum, 2006). For instance, social-cognitive styles may highlight gender differences in emotional and behavioral development (Rose & Rudolph, 2006). Girls tend to be more concerned with the approval and evaluation of others and have a higher likelihood of defining themselves based on their relationships (Rose & Rudolph, 2006). This greater emphasis on relationships may result in a variety of emotional problems, such as anxiety, depression, and jealousy when friendships are potentially in danger (Rose & Rudolph, 2006). However, girls' higher level of empathy and value placed on relationships may moderate aggression levels because they may be hesitant to harm others (Rose & Rudolph, 2006).

Boys, on the other hand, tend to prioritize peer status and dominance, possibly moderating levels of aggression (Rose & Rudolph, 2006). In particular, boys are found to have a

greater likelihood of prioritizing peer status over relationships with others and pursuing a higher status through antisocial behavior (LaFontana & Cillessen, 2010). Although boys' relative lack of concern regarding relationships is adaptable in terms of achieving a high status compared to girls (Rose & Rudolph, 2006), researchers posit that boys are more willing to sacrifice relationships through damaging behavior than girls (LaFontana & Cillessen, 2010). However, boys may also experience distress in their interpersonal relationships, but deal with their feelings by choosing to end friendships with others or focusing on their well-being instead of relying on the evaluations of others (Rose & Rudolph, 2006).

Results of the current study may provide insight into how leadership and peer status (coolness), as well as social goals, may lead to different types of social adjustment (relational and overt aggression) for boys and girls. For example, gender may moderate associations among coolness and aggression, with stronger associations among status and overt aggression for boys (Kiefer & Wang, 2016; Rodkin et al., 2006) and stronger associations among coolness and relational aggression for girls (Cillessen & Mayeux, 2004; Eder, 1985; Kiefer & Wang, 2016; Merten, 1997). This is consistent with prior research indicating relational aggression is more prevalent among girls (Cillessen & Mayeux, 2004; Eder, 1985, Kiefer & Wang, 2016; Merten, 1997), and overt aggression is more prevalent among boys (Kiefer & Wang, 2016; Rodkin et al., 2006). Furthermore, gender may serve as a moderator for leadership and aggression, as the form of aggression viewed as a suitable method for obtaining or maintaining a leadership position may differ for boys and girls. For instance, boys have a higher likelihood of exhibiting overt aggression, whereas girls tend to exhibit relational aggression. The current study may have implications for reducing aggression in leaders and/or cool boys and girls.

Mean-Level Gender Differences

Leadership. Although little research has systematically investigated mean-level gender differences in leadership, findings suggest the nature of leadership may differ by gender (Mullen & Tuten, 2004; Lansu & Cillessen, 2011). For instance, late adolescent girls demonstrated their leadership ability through roles in the community and by organizing events and activities, whereas boys gained leadership positions in athletics and other school organizations (Mullen & Tuten, 2004). These findings highlight possible gender differences regarding the value of leadership positions in particular contexts. Additional research indicates that prosocial leadership, or being a kind leader, is valued more by boys than girls (Lansu & Cillessen, 2011). Furthermore, boys may have higher levels of leadership, as they often prioritize dominance (LaFontana & Cillessen, 2010; Rose & Rudolph, 2006) and pursue social visibility, whereas girls tend to focus on relationship enhancement (LaFontana & Cillessen, 2010). Due to gender differences in leadership outlined in the literature, the current study explored mean-level differences in leadership for boys and girls (Mullen & Tuten, 2004; Lansu & Cillessen, 2011).

Peer Status (Coolness). Research findings indicate that boys have a greater likelihood of being high status (Lansu & Cillessen, 2011). However, other studies suggest that girls are more likely to obtain and maintain a high peer status (coolness) in middle school (Cillessen & Mayeux, 2004). Boys may have greater difficulty maintaining their peer status (coolness) because they value social preference, which is less stable than perceived popularity (Cillessen & Borch, 2006; Cillessen & Mayeux, 2004; Lansu & Cillessen, 2011). Additionally, researchers posit that boys may exhibit friendliness towards peers, whereas girls are more likely to resort to socially manipulative behavior and relational aggression in order to maintain their high status (Cillessen & Mayeux, 2004). Therefore, based on the differences outlined in the literature, it was expected that boys would have a greater likelihood of being considered cool (Lansu & Cillessen,

2011), but girls would have a higher likelihood of maintaining their coolness across the school year (Cillessen & Mayeux, 2004).

Aggression. Research indicates there are mean-level gender differences for relational and overt aggression (Cillessen & Mayeux, 2004; Crick & Grotpeter, 1995; Xie et al., 2002). Girls tend to have higher levels of relational aggression compared to boys, whereas boys tend to have higher levels of overt aggression than girls (Crick & Grotpeter, 1995; Page, 2012; Xie et al., 2002). Girls may employ relational aggression because of the benefits involved, such as the indirect and subtle behaviors (Crick & Grotpeter, 1995; Page, 2012) that allow for social status maintenance (Cillessen & Mayeux, 2004). However, relational aggression may lead to decreased social preference (Cillessen & Mayeux, 2004), which may explain research findings highlighting an association between relational aggression and high levels of distress (Page, 2012).

Lower levels of overt aggression in girls may have possible implications. For instance, girls who exhibit overt aggression may draw attention to themselves as this form of aggression is in contrast to gender norms (Cillessen & Mayeux, 2004; Rose & Rudolph, 2006). Additionally, girls who employ overt aggression may be consistent in their actions, possibly explaining the higher level of stability in overt aggression in girls (Cillessen & Mayeux, 2004). Finally, overt aggression may not be as unacceptable to girls as initially believed, as research suggests girls have a higher likelihood of considering overt aggression to be acceptable if they find relational aggression to be acceptable (Page, 2012). Although girls tend to have lower levels of overt aggression than their male counterparts, it appears that those who are generally aggressive are more comfortable exhibiting both relational and overt aggression.

Social Goals. Research indicates there are gender differences in social goals (Cillessen et al., 2014; Kiefer & Ryan, 2008; Ojanen & Findley-Van Nostrand, 2014). For instance, boys endorse dominance goals more than girls (Kiefer & Ryan, 2008), whereas girls endorse intimacy

goals more than boys (Ojanen & Findley-Van Nostrand, 2014). However, gender differences are less clear with popularity goals. Multiple studies suggest there are no mean-level gender differences (Cillessen et al., 2014; Li & Wright, 2014), whereas others indicate that boys have a higher likelihood of endorsing popularity goals (Kiefer & Ryan, 2008; Kiefer & Wang, 2016). However, social status is highly prioritized in early adolescence (Cillessen et al., 2011; Galván et al., 2011), which suggests that popularity goals will be commonly endorsed by both genders. It was also anticipated that girls would endorse intimacy goals more than boys, because they have a higher likelihood of prioritizing relationships with others (LaFontana & Cillessen, 2010; Rose & Rudolph, 2006). Finally, it was hypothesized that boys would endorse more dominance goals than girls because of their need to remain socially visible (LaFontana & Cillessen, 2010; Rose & Rudolph, 2006).

Changes Over Time

The current study examined changes over time in leadership, coolness, aggression (overt and relational), and social goals (popularity, dominance, and intimacy) among boys and girls. First, given that leadership and peer status (coolness) are related but distinct constructs (Lansu & Cillessen, 2011; Prinstein & Cillessen, 2003; Rubin et al., 2006; Ward & Ellis 2008), it was anticipated that changes over time would be similar for both constructs. It was expected that girls would have stable leadership levels over time, as status tends to remain stable in girls (Cillessen & Mayeux, 2004). It was hypothesized that boys would exhibit a decrease in status across the sixth grade (Bowker et al., 2010; Cillessen & Mayeux, 2004) as they may emphasize social preference, which is not stable over time (Cillessen & Borch, 2006; Cillessen & Mayeux, 2004; Lansu & Cillessen, 2011). In terms of aggression, it was expected that girls would display an increase in relational aggression across the sixth grade (Crick & Grotpeter, 1995; LaFontana & Cillessen, 2010; Xie et al., 2002) in order to maintain their position in the social hierarchy

(LaFontana & Cillessen, 2002; Merten, 1997; Rose et al., 2004). However, both genders may exhibit a decrease in overt aggression (Cillessen & Mayeux, 2004; Little et al., 2003), particularly girls (Crick & Grotpeter, 1995; Xie et al., 2002), as overt aggression is socially sanctioned over time (Björkqvist, Österman, & Kaukiainen, 1992; Rose et al., 2004). Finally, it was anticipated that popularity and dominance goals would remain highly endorsed and stable for boys and girls in order to maintain peer status (Dawes & Xie, 2014; Kiefer & Ryan, 2008). Both genders may exhibit a decrease in intimacy goals across the sixth grade, as youth tend to prioritize peer status (coolness) during this time (Cillessen et al., 2011).

Leadership. Literature examining changes in leadership over time is scarce, as studies examining leadership stability have focused mainly on peer status and aggression (Cillessen et al., 2014), indicating a need for additional exploration. For instance, researchers examining social goals found that high status youth were more likely to be considered leaders and aggressive when they prioritized popularity goals (Cillessen et al., 2014). Therefore, high status (cool) youth who highly prioritize popularity may have a higher likelihood of being considered leaders amongst their peers. However, research provides no indication that leadership is maintained over time. Therefore, this study addressed a gap in the literature by exploring the stability of peer nominated leadership across the sixth-grade school year.

Peer Status (Coolness). Peer status tends to remain stable over time, even across the first year of middle school (Bowker et al., 2010; Dawes & Xie, 2014; Jamison et al., 2015). One explanation for status stability is aggression (Bellmore et al., 2011; Cillessen et al., 2014; Ojanen & Findley-Van Nostrand, 2014), which may serve as a way to control social resources (Hawley et al., 2007) and maintain social centrality (Xie et al., 2002). However, other studies have indicated that youth are able to maintain their status without aggression, which suggests that they possess additional appealing qualities such as attractiveness, wealth, or athletic ability (Adler &

Adler, 1998). In contrast to research indicating that status maintenance is possible for a majority of youth, other studies have found that a number of youth are not able to maintain their high status over the elementary-middle school transition, particularly boys (Bowker et al., 2010). These results suggest that girls may have a higher likelihood of maintaining a high status over time, possibly due to their need for peer approval (Bowker et al., 2010; Cillessen & Mayeux, 2004; Rose & Rudolph, 2006). Therefore, it was anticipated that cool girls would have a higher likelihood of maintaining a high peer status than boys over the sixth grade school year.

Aggression. Overt and relational aggression tend to increase over time when students are motivated to obtain a higher peer status (Bellmore et al., 2011; Bowker et al., 2010; Cillessen et al., 2014). For instance, students striving to maintain their status tend to exhibit increases in overt aggression across the school year (Bellmore et al., 2011). However, overt aggression does not always increase across the school year, as relational aggression becomes the more socially preferred and sophisticated form of aggression for status maintenance (Björkqvist et al., 1992; Rose et al., 2004). Furthermore, levels of relational aggression in the fall predicted a maintenance of relational aggression in the spring among adolescents who remained ‘cool’ across the sixth grade (Bellmore et al., 2011). Therefore, it was anticipated that relational aggression would increase across the school year (Rose et al., 2004), whereas overt aggression would decrease (Cillessen & Mayeux, 2004; Little et al., 2003). Notably, aggression levels may be influenced by the type of measurement used (self-report or peer-nomination). For instance, self-reported data may result in greater bias due to personal disclosure (Pellegrini & Bartini, 2000) and peer nominations may indicate that students have become acquainted with classmates who were not encountered at the beginning of the school year (Bellmore et al., 2010).

Social Goals. Research indicates students report an increase in popularity and dominance goals and a decrease in intimacy goals across the first year of middle school (Kiefer & Ryan,

2008; Kiefer & Wang, 2016). The decrease in intimacy goals may be due to shifting peer norms during early adolescence that promote status and antisocial behavior (Cillessen & Mayeux, 2007; Galván et al., 2011; Kiefer & Ryan, 2011), particularly in boys (Kiefer & Ryan, 2008). These findings support the view that girls tend to place higher importance on close relationships (Rose & Rudolph, 2006), whereas boys tend to place increasing importance on power and status (LaFontana & Cillessen, 2010). Therefore, considering the highlighted literature findings, it was anticipated that both genders would exhibit an increase in popularity and dominance social goals over the school year (Kiefer & Ryan, 2008; Kiefer & Wang, 2016), whereas both genders would display a decrease in intimacy goals over the school year (Cillessen & Mayeux, 2007; Kiefer & Ryan, 2011).

Due to gaps in the literature, this study examined the associations among leadership, coolness, aggression, and social goals during the fall and spring of the sixth grade. In order to analyze the relationship among these variables, the following research questions were addressed:

1. What are the associations among peer-reported leadership and coolness in the fall with peer-reported aggression (overt and relational) in the spring of sixth grade?
2. To what extent do social goals (popularity, dominance, and intimacy) and gender moderate relations of peer-reported leadership and coolness in the fall with peer-reported aggression in the spring of sixth grade?
3. To what extent are there mean-level gender differences and changes in study variables across time?

Based upon previous research findings, it was anticipated that both peer-reported leadership and coolness in the fall would be associated with subsequent relational aggression in the spring (Bellmore, et al., 2011; Bowker et al., 2010; LaFontana & Cillessen, 2010; Rose et al., 2004; Rubin et al., 2006). However, it was not anticipated that levels of overt aggression would

increase from fall to spring (Björkqvist et al., 1992; Rose et al., 2004). It was also hypothesized that social goals (popularity, dominance, and intimacy) and gender would moderate these associations, given the high priority for popularity during this time (Cillessen et al., 2011; Galván et al., 2011), and differing gender social norms (Rose & Rudolph, 2006; Ruble et al., 2006). Finally, it was expected that the study variables would change over time, particularly due to gender differences (Bowker et al., 2010; Cillessen & Borch, 2006; Cillessen & Mayeux, 2004; Crick & Grotpeter, 1995; Kiefer & Ryan, 2008; Kiefer & Wang, 2016; LaFontana & Cillessen, 2010; Lansu & Cillessen, 2011; Rose & Rudolph, 2006; Xie et al., 2002).

Chapter III: Method

This chapter presents the methodology used for the current study. First, participant demographics are considered, and following information includes a discussion on the measures used for each of the major variables (leadership, peer status, aggression, social goals). Finally, the preliminary analyses and the predictive regression analyses for the current study are reviewed, and ethical considerations regarding the participants and the data are discussed.

Participants

An archival dataset was used for the current study. Data were collected as part of a larger longitudinal study examining motivation across the transition from elementary school to middle school conducted by Dr. Sarah Kiefer (PI). Students who participated at both time points (fall and spring of the sixth grade) were included in the study (see Table 1). The sample was diverse (56% White, 22% Latino, 10% Multi Racial, 7% Asian, and 5% African American) and consisted of 347 students (49% females). Across the three schools, approximately 31% of the students were eligible for free or reduced fee lunch, and there was an average mobility rate of 20% (average percentage of students transferring in or out of school during the school year; Kiefer & Wang, 2016).

Measures

All measures were assessed in both waves (T1 = fall, T2 = spring) with self-reported measures using a 5-point scale (1 = *not at all true*; 5 = *very true*) and peer-reported measures. Self-reported measures were positively worded (i.e., higher scores indicated higher degrees of a given attribute).

Table 1. *Student Population Demographics*

	School 1	School 2	School 3	Total
Sex				
Male	31 (50%)	49 (52%)	78 (50%)	158 (51%)
Female	31 (50%)	45 (48%)	78 (50%)	154 (49%)
Race				
Caucasian	38 (61%)	33 (35%)	102 (66%)	173 (55%)
Latino	12 (19%)	38 (40%)	16 (10%)	66 (21%)
Multi-Racial	5 (8%)	11 (12%)	17 (11%)	33 (11%)
Asian	4 (7%)	4 (4%)	12 (8%)	20 (6%)
African American	3 (5%)	7 (8%)	5 (3%)	15 (5%)
Other	-	1 (1%)	4 (2%)	5 (2%)
Free or Reduced Fee Lunch	30%	52%	13%	32%
Average Mobility Rate	-	-	-	20%

Note. $N = 347$

Leadership. Grade-based peer nominations were used to examine leadership (Crick & Grotpeter, 1995). Participants answered the question, “Which students in your grade are a good leader?” (Crick & Grotpeter, 1995). Participants could nominate up to three peers in their grade

(same or cross-gender). Students who were nominated but did not have consent to participate in the study were dropped. Nominations were summed for each participant and standardized by dividing the total number of nominations in the sixth grade in each school.

Peer Status (Coolness). Grade-based peer nominations were used to examine coolness, an indicator of peer status (Rodkin et al., 2000). Participants answered the question, “Which students in your grade are really cool?” Participants could nominate up to three peers in their grade (same or cross-gender). Students who were nominated but did not have consent to participate in the study were dropped. Nominations were summed for each participant and standardized by dividing the total number of nominations in the sixth-grade in each school.

Overt and Relational Aggression. Crick and Grotpeter’s (1995) peer nomination measure was used to assess aggression. Participants answered the question, “Which students in your grade get into physical fights, threaten to beat up or bully other students?” and “Which students in your grade spread rumors, gossip, or exclude friends when mad at them?” Students could nominate up to three grade-level peers (same or cross-gender) for each question. The total number of nominations for each participant was summed and standardized by the number of sixth grade nominators in each school. For the fall and spring, the correlation between the two forms of aggression for boys and girls was calculated, aligned with prior research (Cillessen & Mayeux, 2004, 2007).

Social Goals. The Social Goals Questionnaire (Jarvinen & Nicholls, 1996) was used to assess social goals (popularity, dominance, and intimacy). A total of three scales were created using the mean of corresponding four items for that scale (popularity, dominance, and intimacy goals). All items included the stem, “When I’m with people my own age, I like it when...,” which allowed students to focus on outcomes eliciting positive feelings (Jarvinen & Nicolls, 1996). Popularity goals focused on outcomes related to high social status (e.g., “I like it when I’m the

most popular”). Dominance goals emphasized gaining power over others (e.g., “I like it when I make them do what I want”). Finally, intimacy goals emphasized the establishment of personal and supportive friendships (e.g., “I like it when I really know someone’s feelings”). The scales have been found to be reliable, valid, and associated with social and academic adjustment in early adolescence (Kiefer & Ryan, 2008; Kiefer & Wang, 2016; Ryan, Hicks, & Midgley, 1997).

Procedure

Data collection occurred during the fall and spring of the first year of middle school (sixth-grade) in three separate middle schools serving an ethnically diverse, urban community. Active parental consent and participant assent were obtained prior to data collection, with an average consent return rate of 57%. To encourage participation, every student who returned the parent consent form was given a raffle ticket for a gift certificate to the local movie theater. Three students at each school received a certificate. Participants represented demographics within each school and overall district demographics. Surveys were administered during the school day, with instructions and items read aloud. Each student who completed the survey was given a mini dual pen and highlighter as an incentive. Students were told the surveys were meant to examine motivation and peer relationships. Researchers administered surveys one additional day in the fall and spring to allow absent students to participate.

Analysis Plan

Descriptive Analyses. First, preliminary analyses were conducted, including means, standard deviations, and correlations. Additionally, preliminary analyses examined Research Question 3 (To what extent are there mean-level gender differences and changes in study variables across time?) by reporting mean-level comparisons and effect sizes (Cohen’s *d*). Additionally, the distribution of variables, reliabilities (Cronbach’s alpha), multicollinearity (high intercorrelations), and linearity were examined.

Hierarchical Regression Analyses. Separate hierarchical regression analyses were conducted to examine the associations among peer-reported leadership and coolness in the fall with peer-reported aggression (overt and relational) in the spring of sixth-grade (Research Question 1), and the extent to which social goals (popularity, dominance, and intimacy) and gender moderate the relationship between leadership and coolness in the fall with aggression in the spring of sixth-grade (Research Question 2). Variables were entered simultaneously as a block at each step (Aiken & West, 1991). Gender was entered as a dichotomous variable (1 = female; 0 = male) at Step 1. Baseline levels of overt and relational aggression in the fall were also entered at Step 1. Leadership in the fall was entered at Step 2. Coolness in the fall was entered at Step 3. Social goals (popularity, dominance, and intimacy) in the fall were entered at Step 4. The association between leadership and coolness was examined in Step 5. Step 6 examined gender as a moderator for coolness and leadership (leadership x gender, coolness x gender). Finally, the interactions among social goals, leadership, and coolness (leadership x popularity, leadership x dominance, leadership x intimacy, coolness x popularity goals, coolness x dominance goals, coolness x intimacy goals) were examined in Step 7. Calculation of the predicted values with unstandardized regression coefficients and simple slope tests were conducted to interpret significant interactions (Aiken & West, 1991). Interactions were deemed significant if the r-squared (R^2) displayed a significant increase and there was a significant beta coefficient ($p < .01$, $p < .05$, $p < .10$).

Ethical Considerations

Potential ethical issues include peer norms, particularly aggression. Peer norms may be particularly problematic when included at the end of the survey, because participants may focus on the nominations given to classmates and share their nomination choices with others (Crick & Grotpeter, 1995). This issue was minimized by including peer nominations in the middle of the

survey, reducing the possibility that participants' answers would be discussed afterwards. In order to meet guidelines outlined by the University of South Florida Institutional Review Board (IRB), researchers emphasized that participant responses would be kept confidential and participation was voluntary. To enhance confidentiality, each participant was given an empty folder by the research team to use as a screen. At least two administrators were present during survey administration, with one administrator reading survey items aloud and the other circulating the room to answer questions and ensure integrity. Finally, administrators were trained with IRB certification, and data are stored in a secure location.

Chapter IV: Results

Chapter 4 describes the preliminary and primary results for the current study. The first section reports the attrition rate of the sample. The next section discusses the preliminary analyses, including normality (skewness and kurtosis), means, standard deviations, and correlations among the major variables in the study (leadership, coolness, aggression, and social goals). Finally, results of the primary analyses, separate hierarchical regressions, are presented.

Attrition Analyses

Independent samples t-tests were conducted to examine the difference between students who participated in both the fall (Time 1) and spring (Time 2) semesters and those who participated in the fall semester only (Table 2). According to the results, 73 students withdrew from the study after the fall semester (Time 1). Students who participated at Time 1 only ($N = 420$) endorsed a significantly higher level of dominance goals ($M = 1.5042$) compared to students who participated in both the fall and spring ($N = 347$; $M = 2.3096$; $t = -21.280$; $p < .01$). Moreover, students who participated at Time 1 ($N = 420$) endorsed a significantly higher level of intimacy goals ($M = 3.8795$) in comparison to those who participated at both time points ($N = 347$; $M = 3.2056$; $t = 14.721$; $p < .01$). However, there were no significant differences in leadership, coolness, overt aggression, relational aggression, and popularity social goals. Chi-Square tests were conducted to determine if there were any significant differences between these two groups in terms of gender or race. Although there were no significant differences in gender between these two groups, Chi-Square results indicate that minority students were significantly more likely to withdraw from the study ($\chi^2 = 22.831(2)$, $p = .000$).

MANOVA tests were conducted to determine if the major variables differed significantly across the three schools. In the fall, there were no significant differences in leadership [$F(2, 341)$

= 2.523, $p = .082$], coolness [$F(2, 341) = .197, p = .821$], and dominance goals [$F(2, 341) = 1.762, p = .173$].

Table 2. Mean-Level Differences over Time

		Leadership	Coolness	Popularity Goals	Dominance Goals	Intimacy Goals	Overt Aggression	Relational Aggression
Fall	<i>M</i>	0.04	0.03	2.82	1.50	3.88	0.01	0.03
	<i>SD</i>	0.87	0.91	1.15	1.15	0.90	0.97	0.97
Spring	<i>M</i>	0.03	0.01	2.91	2.31	3.21	0.05	0.03
	<i>SD</i>	0.91	0.84	1.19	0.65	0.71	1.13	0.95
	<i>t</i>	0.17	0.48	-1.51	-21.28***	14.72***	-0.77	0.03

Note. *M* = Mean, *SD* = Standard Deviation * $p < .05$, ** $p < .01$, *** $p < .001$

However, there were significant differences in popularity goals across the three schools [$F(2, 341) = 3.038, p = .049$]. Tukey HSD test results indicated that students in School C endorsed more popularity goals in the fall ($M = 2.98, SD = 1.21$) than students in School A ($M = 2.65, SD = 1.06$) and students in School B ($M = 2.69, SD = 1.10$). There were also significant differences in intimacy goals across the three schools [$F(2, 341) = 9.406, p < .001$]. Tukey HSD test results indicated that students in School C endorsed more intimacy goals in the fall ($M = 4.027, SD = 0.845$) than students in School A ($M = 3.493, SD = 0.897$) and students in School B ($M = 3.951, SD = 0.909$).

Finally, there were significant differences in overt aggression [$F(2, 341) = 3.389, p = .035$] and relational aggression [$F(2, 341) = 3.965, p = .020$] across the three schools. Tukey HSD test results indicated that students in School B had significantly higher levels of overt

aggression in the fall ($M = 0.185$, $SD = 1.55$) than students in School A ($M = -0.197$, $SD = 0.200$) and students in School C ($M = -0.002$, $SD = 0.699$). Furthermore, Tukey HSD test results indicated that students in School C had significantly higher levels of relational aggression in the fall ($M = 0.153$, $SD = 1.188$) than students in School A ($M = -0.22$, $SD = 0.476$) and students in School B ($M = 0.02$, $SD = 0.819$). However, in the spring, there were no significant differences in overt aggression [$F(2, 341) = .754$, $p = .471$] or relational aggression [$F(2, 341) = .916$, $p = .401$] across the three schools.

Descriptive Analyses

Frequency checks were conducted on the grade-level peer nomination data (leadership, coolness, and aggression). New variables of the total frequency count were created and standardized by school to account for differences in the number of participants in the three different middle schools. Then, each of the variables were standardized using z-scores to assist with the skewed distribution of each of the major variables (leadership, coolness, and aggression). Means, standard deviations, and normality were calculated in SPSS. The results for each variable and its components (means, standard deviations, skewness, and kurtosis) in the fall (Time 1) and spring (Time 2) are described below and in Table 3.

Leadership. Grade-based peer nominations were used to examine leadership (Crick & Grotpeter, 1995). Participants answered the question, “Which students in your grade are a good leader?” (Crick & Grotpeter, 1995). Participants nominated up to three peers in their grade (same or cross-gender). The sample means revealed that students received an average of 0 leader nominations in the fall ($M = 0$, $SD = 0.87$) and spring ($M = 0$, $SD = 1$). Leadership nominations ranged from -0.46 to 7.32 in the fall, and -0.49 to 5.54 in the spring. Skewness and kurtosis results for the fall (skewness = 3.52, kurtosis = 18.55) and spring (skewness = 2.54, kurtosis = 7.72) were positive. Although skewness and kurtosis results fell outside the accepted range, the

non-normal distribution correctly reflects the proportion differences in peer nominations across the three schools.

Peer Status (Coolness). Grade-based peer nominations were used to examine coolness an indicator of peer status (Rodkin et al., 2000). Participants answered the question, “Which students in your grade are really cool?” Participants nominated up to three peers in their grade (same or cross-gender). The sample means revealed that students received an average of 0 coolness nominations in the fall ($M = 0$, $SD = 1$) and the spring ($M = 0$, $SD = 0.84$). Coolness nominations ranged from -0.48 to 7.65 in the fall, and -0.41 to 6.57 in the spring. Skewness and kurtosis results for the fall (skewness = 3.70, kurtosis = 21.00) and spring (skewness = 4.09, kurtosis = 21.81) were positive. Although skewness and kurtosis results fell outside the accepted range, the non-normal distribution correctly reflects the proportion differences in peer nominations across the three schools.

Aggression. Crick and Grotpeter’s (1995) peer nomination measures were used to assess aggression. Participants answered the questions, “Which students in your grade get into physical fights, threaten to beat up or bully other students?” and “Which students in your grade spread rumors, gossip, or exclude friends when mad at them?” Students nominated up to three grade-level peers (same or cross-gender) for each question. The sample means indicated that students received an average of 0 overt aggression nominations in the fall ($M = 0$; $SD = 1$) and spring ($M = 0$; $SD = 1.13$). Overt aggression nominations ranged from -0.24 to 12.40 in the fall, and -0.22 to 15.48 in the spring. Skewness and kurtosis results for the fall (skewness = 7.87, kurtosis = 84.11) and spring (skewness = 9.42, kurtosis = 112.04) revealed a positive distribution that fell outside the accepted range. The sample means indicated that students received an average of 0 relational aggression nominations in the fall ($M = 0$; $SD = 1$) and spring ($M = 0$; $SD = 1$). Relational aggression nominations ranged from -0.36 to 9.46 in the fall, and -0.29 to 11.73 in the

spring. Skewness and kurtosis results for the fall (skewness = 4.66, kurtosis = 31.26) and spring (skewness = 7.67, kurtosis = 79.37) revealed a positive distribution that fell outside of the accepted range. Although skewness and kurtosis results fell outside the accepted range, the non-normal distribution correctly reflects the proportion differences in peer nominations across the three schools.

Social Goals. The Social Goals Questionnaire (Jarvinen & Nicholls, 1996) was used to assess social goals (popularity, dominance, and intimacy). A total of three scales were created using the mean of corresponding four items for that scale (popularity, dominance, and intimacy goals). Reliabilities were good for popularity (T1: $\alpha = 0.81$; T2: $\alpha = 0.82$), dominance (T1: $\alpha = 0.74$; T2: $\alpha = 0.78$), and intimacy (T1: $\alpha = 0.73$; T2: $\alpha = 0.73$). The Social Goals Questionnaire included a total of eighteen items, with five items included in the popularity subscale, six items in the dominance subscale, and seven items in the intimacy subscale. All items included the stem, “When I’m with people my own age, I like it when...,” which allowed students to focus on outcomes eliciting positive feelings (Jarvinen & Nicolls, 1996). Popularity goal items focused on outcomes related to high social status (e.g., “I like it when I’m the most popular”). The popularity components demonstrated a normal distribution with skewness figures ranging between +1 and -1 kurtosis figures ranging between +3 and -3. Items that assessed for Dominance goals emphasized power over others (e.g., “I like it when I make them do what I want”). Skewness and kurtosis results for both the fall (skewness = 2.16, kurtosis = 5.66) and spring (skewness = 1.64, kurtosis = 3.03) demonstrated a positive distribution that fell slightly outside of the accepted range. Finally, intimacy goal items emphasized the establishment of personal and supportive friendships (e.g., “I like it when I really know someone’s feelings”). Although the results were negatively skewed, the skewness figures ranged between +1 and -1 and kurtosis figures ranged between +3 and -3.

Table 3. *Descriptive Statistics of Variables*

	Variables	N	Mean	SD	Skewness	Kurtosis
Time 1						
	Leadership	347	0	0.87	3.52	18.55
	Coolness	347	0	1	3.70	21.00
	Overt Aggression	347	0	1	7.87	84.11
	Relational Aggression	347	0	1	4.66	31.26
	Popularity Goals	343	2.82	1.16	0.20	-0.94
	Dominance Goals	345	1.50	0.74	2.16	5.66
	Intimacy Goals	344	3.88	0.90	-0.56	-0.51
Time 2						
	Leadership	347	0	1	2.54	7.72
	Coolness	347	0	0.84	4.09	21.81
	Overt Aggression	347	0	1.13	9.42	112.04
	Relational Aggression	347	0	1	7.67	79.37
	Popularity Goals	337	2.91	1.19	0.22	-1.01
	Dominance Goals	339	2.30	0.65	1.64	3.03
	Intimacy Goals	337	3.21	0.71	-0.48	-0.38

Note. N = 347 (T1 and T2)

Correlational Analyses

Correlations among variables were generally consistent with the current literature (Cillessen et al., 2014; Ojanen & Findley-Van Nostrand, 2014; Waasdorp et al., 2013) and

hypotheses of the study, with some exceptions (see Table 4). Correlations were examined among variables in the fall (Time 1) and spring (Time 2) of the sixth grade. Associations among leadership and coolness with social goals (popularity, dominance, and intimacy) were also examined.

Leadership. As expected, leadership was positively associated with coolness in the fall ($r = .616, p < .01$) and coolness in the spring ($r = .516, p < .01$). The association between leadership and overt aggression was not significant in the fall ($r = .034$), but was significant in the spring ($r = .144, p < .01$). Finally, leadership and relational aggression were significantly associated in the fall ($r = .353, p < .01$) and in the spring ($r = .411, p < .01$).

Peer Status (Coolness). Correlation results revealed a significant association across time points for coolness and both forms of aggression. Specifically, coolness was significantly associated with overt aggression in the fall ($r = .394, p < .01$) and in the spring ($r = .401, p < .01$). Coolness and relational aggression were also significantly associated in the fall ($r = .524, p < .01$) and in the spring ($r = .604, p < .01$).

Popularity Goals. Leadership and popularity goals were not significantly associated in the fall ($r = .081$), but there was a small association in the spring ($r = .040, p < .05$). Coolness and popularity goals were associated in the fall ($r = .113, p < .05$) but were not significantly associated in the spring ($r = .084$). The association between popularity goals and overt aggression was non-significant in the fall ($r = .089$) and there was a small association in the spring ($r = .119, p < .05$). Finally, popularity goals and relational aggression were significantly associated in the fall ($r = .183, p < .01$) and were not associated in the spring ($r = .064$).

Dominance Goals. There was a non-significant association between leadership and dominance goals in the fall ($r = -.032$) and a small association in the spring ($r = .107, p < .05$). There was a non-significant association between coolness and dominance goals in the fall ($r = -$

.003) and a small association in the spring ($r = .114, p < .05$). There was also a non-significant association between overt aggression and dominance goals in the fall ($r = .115$) and a significant association in the spring ($r = .274, p < .01$). Finally, there was a non-significant association between dominance goals and relational aggression in the fall ($r = .087$) and spring ($r = .060$).

Intimacy Goals. The association between leadership and intimacy goals was nonsignificant in the fall ($r = .104$) and spring ($r = .061$). Coolness and intimacy goals were not significantly associated in the fall ($r = -.037$) or in the spring ($r = .018$). Moreover, results reveal a non-significant association between intimacy goals and both types of aggression (overt and relational). Specifically, there was a non-significant association between intimacy goals and overt aggression in the fall ($r = -.076$) and spring ($r = .032$). There was also a non-significant association between intimacy and relational aggression in the fall ($r = .021$) and spring ($r = .051$).

Gender Differences Analyses

Tests of between-subjects effects revealed significant gender differences for all social goals: popularity goals [$F(1, 331) = 7.89, p = .005$], dominance goals [$F(1, 335) = 13.42, p = .000$], and intimacy goals [$F(1, 332) = 32.39, p = .000$]. Specifically, boys endorsed more popularity goals than girls in the fall ($M = 3.01, SD = 1.12$) and spring ($M = 3.04, SD = 1.21$). Boys also endorsed more dominance goals in the fall ($M = 1.65, SD = 0.83$) and spring ($M = 2.40, SD = 0.75$), whereas girls endorsed more intimacy goals in the fall ($M = 4.11, SD = 0.80$) and spring ($M = 3.40, SD = 0.66$). Moreover, tests of between-subjects revealed significant gender differences in overt [$F(1, 345) = 13.48, p = .000$] and relational aggression [$F(1, 345) = 17.70, p = .000$].

Table 4. Zero-Order Correlations among Major Study Variables

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. LW1	-													
2. CW1	.616**	-												
3. PW1	.081	.113*	-											
4. DW1	-.032	-.003	.467**	-										
5. IW1	.104	-.037	.167**	-.100*	-									
6. OAW1	.034	.394**	.089	.115	-.076	-								
7. RAW1	.353**	.524**	.183**	.087	.021	.286**	-							
8. LW2	.633**	.607**	.086	-.031	.081	.096*	.384**	-						
9. CW2	.114*	.456**	.171**	.102*	-.033	.289**	.221**	.516**	-					
10. PW2	.040	.125*	.532**	.257**	.009	.076	.097	.119*	.084	-				
11. DW2	.048	.104*	.310**	.507**	.009	.121*	.090	.107*	.114*	.456**	-			
12. IW2	.045	.043	.108*	.039	.481**	.040	.053	.061	.018	.181**	.166**	-		
13. OAW2	.039	.252**	.118*	.191**	.009	.409**	.133**	.144**	.401**	.119*	.274**	.032	-	
14. RAW2	.037	.250**	.119*	.052	.042	.043	.432**	.411**	.604**	.064	.060	.051	.174**	-

Note. W1= wave 1; W2= wave 2; L= leadership; C= coolness; P= popularity; D= dominance; I= intimacy; OA= overt aggression; RA= relational aggression * $p < .05$, ** $p < .01$

Specifically, girls received more peer nominations for relational aggression in the fall ($M = 0.22$, $SD = 1.22$) and spring ($M = 0.23$, $SD = 1.27$), while boys received more peer nominations for overt aggression in the fall ($M = 0.15$, $SD = 1.29$) and spring ($M = 0.25$, $SD = 1.55$).

Table 5. Mean-Level Gender Differences over Time

	Leadership	Coolness	Popularity Goals	Dominance Goals	Intimacy Goals	Overt Aggression	Relational Aggression
Fall							
<i>M(SD)</i>							
Boys	0.01(0.93)	0.04(1.03)	3.01(1.12)	1.65(0.83)	3.66(0.93)	0.15(1.29)	-0.16(0.59)
Girls	0.06(0.80)	0.02(0.76)	2.63(1.16)	1.36(0.61)	4.11(0.80)	-0.14(0.39)	0.22(1.22)
Spring							
<i>M(SD)</i>							
Boys	-0.05(0.83)	0.03(0.93)	3.04(1.21)	2.40(0.75)	3.02(0.72)	0.25(1.55)	-0.17(0.35)
Girls	0.11(0.98)	-0.00(0.73)	2.79(1.16)	2.22(0.51)	3.40(0.66)	-0.16(0.23)	0.23(1.27)
<i>F</i>	1.52	0.08	7.89**	13.42***	32.39***	13.48***	17.70***

Note. M = Mean, SD = Standard Deviation * $p < .05$, ** $p < .01$, *** $p < .001$

Hierarchical Regression Analyses

Separate hierarchical regression analyses were conducted to examine the associations among peer-reported leadership and coolness in the fall with peer-reported aggression (overt and relational) in the spring of sixth grade (See Table 6), and the extent to which social goals

(popularity, dominance, and intimacy) and gender moderated the relationship between leadership and coolness in the fall with aggression in the spring of sixth grade (Table 6). Variables were entered simultaneously as a block at each step (Aiken & West, 1991). Gender was entered as a dichotomous variable (1 = female; 0 = male) at Step 1. Baseline levels of overt and relational aggression in the fall were also entered at Step 1. Leadership in the fall was entered at Step 2. Coolness in the fall was entered at Step 3. Social goals (popularity, dominance, and intimacy) in the fall were entered at Step 4. The association between leadership and coolness was examined in Step 5. Step 6 examined gender as a moderator for leadership and coolness (leadership x gender, coolness x gender). Finally, the interactions among leadership, coolness, and social goals (leadership x popularity, leadership x dominance, leadership x intimacy, coolness x popularity goals, coolness x dominance goals, coolness x intimacy goals) were examined in Step 7.

Calculation of the predicted values with unstandardized regression coefficients and simple slope tests were conducted to interpret significant interactions (Aiken & West, 1991). Main effect terms were standardized before computing interaction terms to avoid multicollinearity and aid interpretation of beta coefficients. Interactions were deemed significant if the r-squared (R^2) displayed a significant increase and there was a significant beta coefficient. All non-significant interactions were deleted from the initial model, and non-significant interactions with the smallest betas were removed first. All main effects for leadership, coolness, and social goals and only statistically significant interaction terms were included in the final models (see Table 6). The final models varied for the different dependent variables (i.e., overt and relational aggression). The significant interactions were interpreted by calculating the predicted values with unstandardized regression coefficients and conducting simple slopes tests. Figures were created for the predicted values of the outcome variables (i.e., overt and relational

aggression) using leadership, coolness, and social goal scores one standard deviation above and below the mean.

Overt Aggression. The final regression model for overt aggression in the spring was significant $F(11, 330) = 21.43, p < .001$ (see Table 6). The final regression model included five steps, as nonsignificant interaction terms were excluded. In Step 1, gender and overt aggression in the fall were significantly associated with overt aggression in the spring. In Step 2, there was a non-significant association between leadership in the fall and overt aggression in the spring. In Step 3, there was also a non-significant association between coolness in the fall and overt aggression in the spring. In Step 4, dominance goals in the fall were significantly associated with overt aggression in the spring. However, popularity and intimacy goals in the fall were not significantly associated with overt aggression in the spring. The association between leadership and coolness (Step 5) was nonsignificant in the initial model. Therefore, this interaction was excluded from the final regression model. Similarly, gender was a non-significant moderator for leadership and coolness (Step 6) in the initial model. As a result, these interactions were also excluded from the final regression model.

In Step 7, dominance goals moderated the association between leadership and subsequent overt aggression in the final model (Figure 1). Simple slope analyses indicated that non-leaders who highly endorsed dominance goals in the fall had significantly higher levels of overt aggression than non-leaders who did not endorse dominance goals in the fall ($\beta = 0.20, t = 1.94, p < .05$). In contrast, there was a non-significant negative association for students who were nominated as leaders ($\beta = -0.21, t = -1.53, p = 0.13$). Dominance goals also moderated the association between coolness and overt aggression in the final model (Figure 2). Simple slope analyses indicated that cool youth who highly endorsed dominance goals in the fall had significantly higher levels of overt aggression than cool youth who did not endorse dominance

goals in the fall ($\beta = 1.13, t = 7.3, p < .000$). However, low-cool youth who highly endorsed dominance goals in the fall had significantly lower levels of overt aggression in comparison to low-cool youth who did not endorse dominance goals in the fall ($\beta = -0.63, t = -4.96, p < .000$).

Popularity goals were a non-significant moderator for leadership and subsequent overt aggression in the initial model (Step 7). As a result, this interaction was excluded from the final regression model. However, popularity goals moderated the association between coolness and overt aggression (Figure 3). Simple slope analyses confirmed that low-cool youth who highly endorsed popularity goals in the fall had significantly higher levels of overt aggression than low-cool youth who did not endorse popularity goals in the fall ($\beta = 0.51, t = 4.19, p < .000$). In contrast, there was a non-significant association for cool youth who endorsed popularity goals in the fall ($\beta = -0.01, t = -.11, p = 0.91$).

Finally, in Step 7, intimacy goals moderated the association between coolness and subsequent overt aggression (Figure 4). Simple slope analyses indicated that cool youth who highly endorsed intimacy goals in the fall had significantly higher levels of peer-reported overt aggression than cool youth who did not endorse intimacy goals in the fall ($\beta = 0.42, t = 3.5, p < .0005$). However, there was a non-significant association for low-cool youth who endorsed intimacy goals in the fall ($\beta = 0.09, t = 0.89, p = 0.37$).

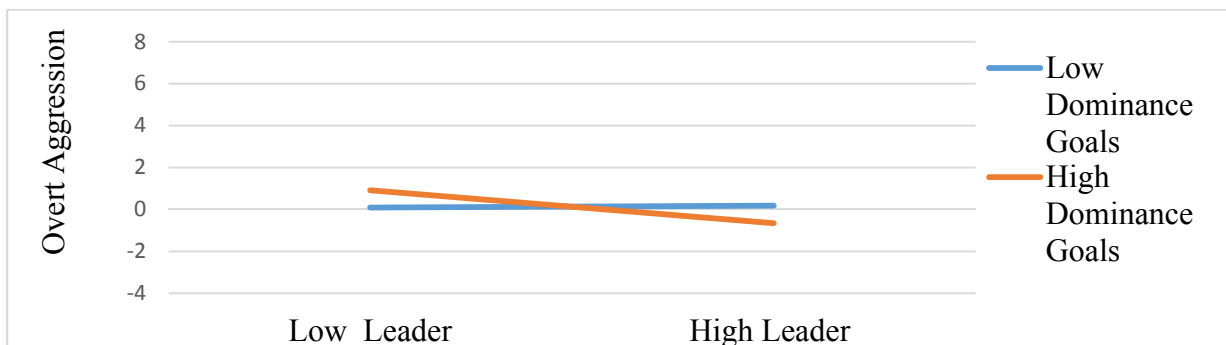


Figure 1. Leadership and Dominance Goals, Interaction for Overt Aggression.

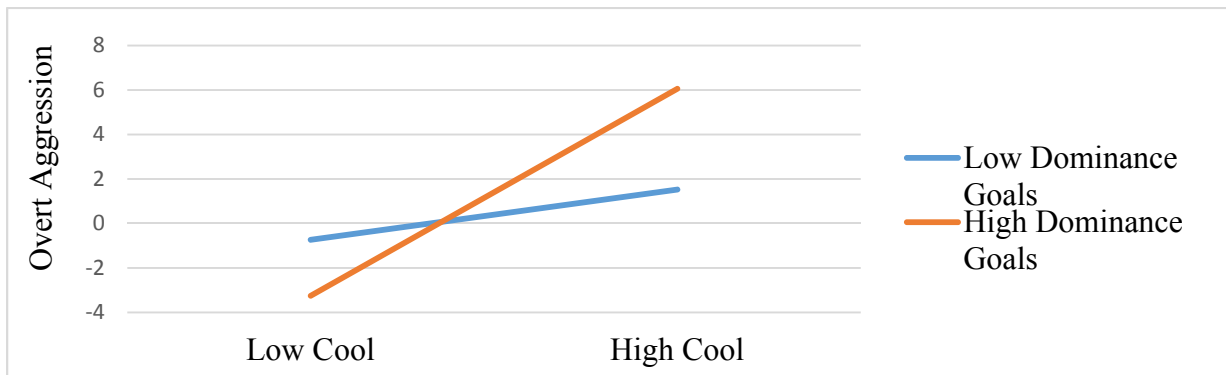


Figure 2. Coolness and Dominance Goals, Interaction for Overt Aggression.

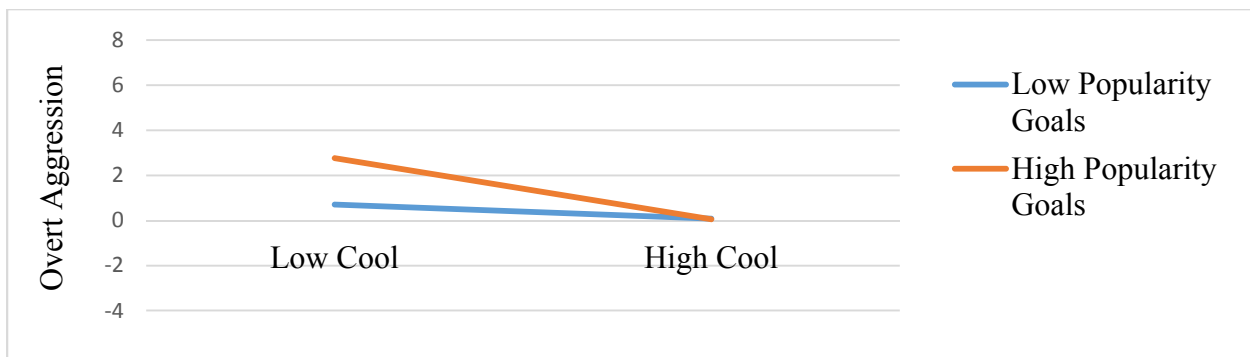


Figure 3. Coolness and Popularity Goals, Interaction for Overt Aggression.

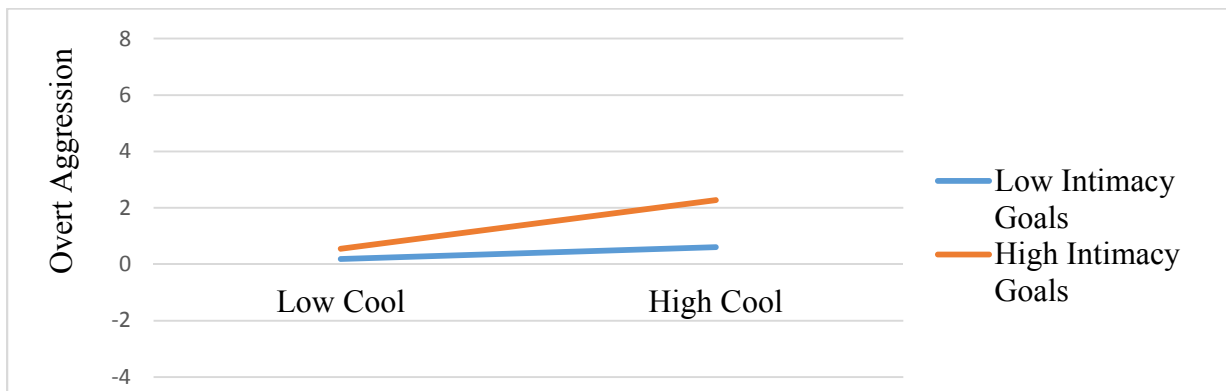


Figure 4. Coolness and Intimacy Goals, Interaction for Overt Aggression.

Relational Aggression. The final regression model for relational aggression in the spring was significant [$F(12, 329) = 47.461, p < .001$]. Non-significant interactions were excluded from the final regression model, which included all seven steps. In Step 1, gender and relational aggression in the fall were significantly associated with relational aggression in the spring. In

Step 2, there was a non-significant association between leadership in the fall and relational aggression in the spring. In Step 3, there was a significant association between coolness in the fall and relational aggression in the spring. In Step 4, there was a non-significant association between all three social goals in the fall (popularity, dominance, and intimacy) and relational aggression in the spring.

In Step 5, coolness in the fall significantly moderated the association between leadership and relational aggression in the spring (Figure 5). Simple slope analyses indicated that youth leaders who were considered ‘cool’ in the fall had significantly lower levels of relational aggression in comparison to youth leaders who were not considered ‘cool’ in the fall ($\beta = -0.097$, $t = -3.07$, $p = 0.002$). Moreover, students who were not nominated as leaders or cool in the fall had slightly higher levels of relational aggression in comparison to ‘cool’ non-leaders. However, results did not reach significance ($\beta = -0.015$, $t = -0.212$, $p = 0.832$).

In Step 6, gender moderated the association between coolness and relational aggression (Figure 6). The regions of significance were repressed for this interaction because gender is a dichotomous variable. As a result, the simple intercept for both lines are reported. Simple intercepts indicated that cool girls had significantly higher levels of relational aggression than cool boys ($\beta = 0.105$, $t = 1.917$, $p = 0.0561$). Furthermore, low-cool girls had higher levels of relational aggression than low-cool boys ($\beta = -0.108$, $t = -2.415$, $p = 0.0163$). Finally, gender significantly moderated the association between leadership and relational aggression in the initial model. However, this interaction did not reach significance in the final model.

In Step 7, all three social goals (popularity, dominance, and intimacy) were non-significant moderators for leadership and subsequent relational aggression. As a result, these interactions were removed from the final model. However, popularity goals moderated the association between coolness and relational aggression (Figure 7). Simple slope analyses

indicated that cool youth who highly endorsed popularity goals in the fall had significantly higher levels of relational aggression than cool youth who did not endorse popularity goals in the fall ($\beta = 0.254, t = 4.637, p = 0.00$). In contrast, low-cool youth who highly endorsed popularity goals in the fall had slightly lower levels of relational aggression than low-cool youth who did not endorse popularity goals in the fall. However, this result was non-significant ($\beta = -0.084, t = -1.004, p = 0.316$). Additionally, dominance goals in the fall moderated the association between coolness and relational aggression in the spring. However, this interaction did not reach significance in the final model. Finally, intimacy goals were a non-significant moderator for coolness and subsequent relational aggression (Step 7). As a result, this interaction was excluded from the final model.

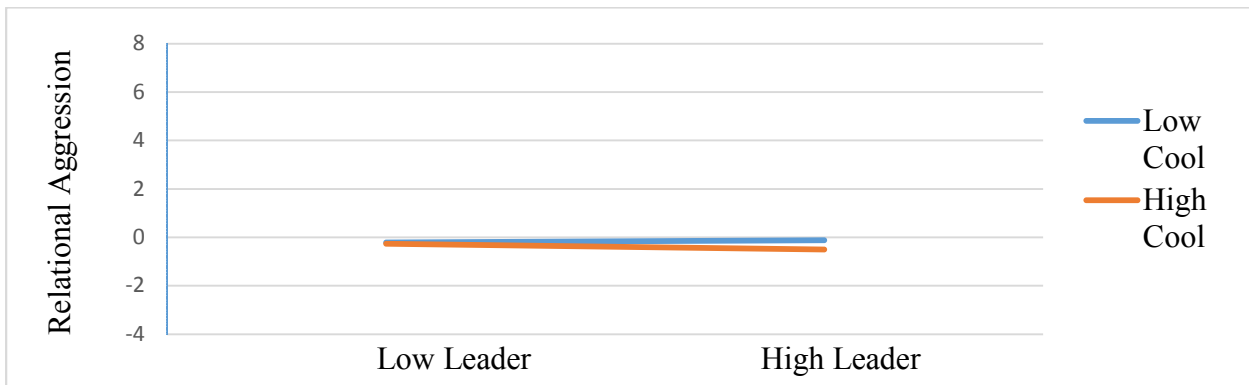


Figure 5. Leadership and Coolness, Interaction for Relational Aggression.

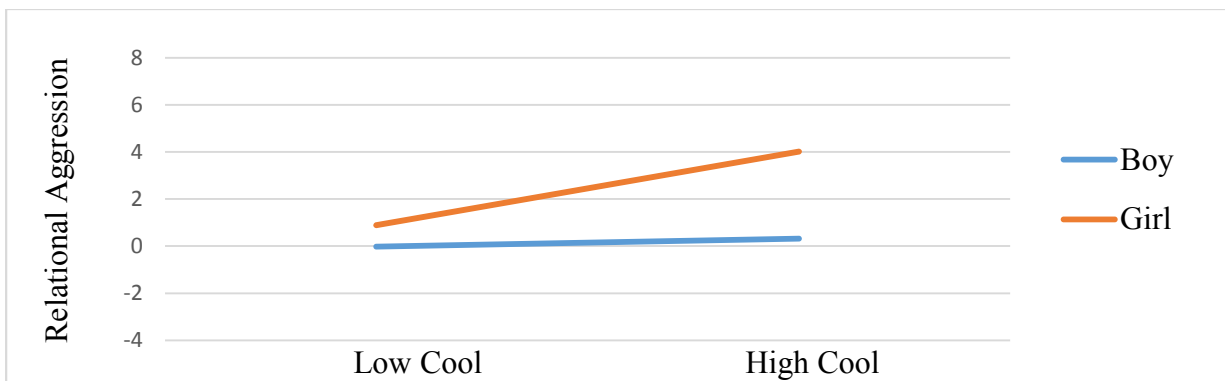


Figure 6. Coolness and Gender, Interaction for Relational Aggression.

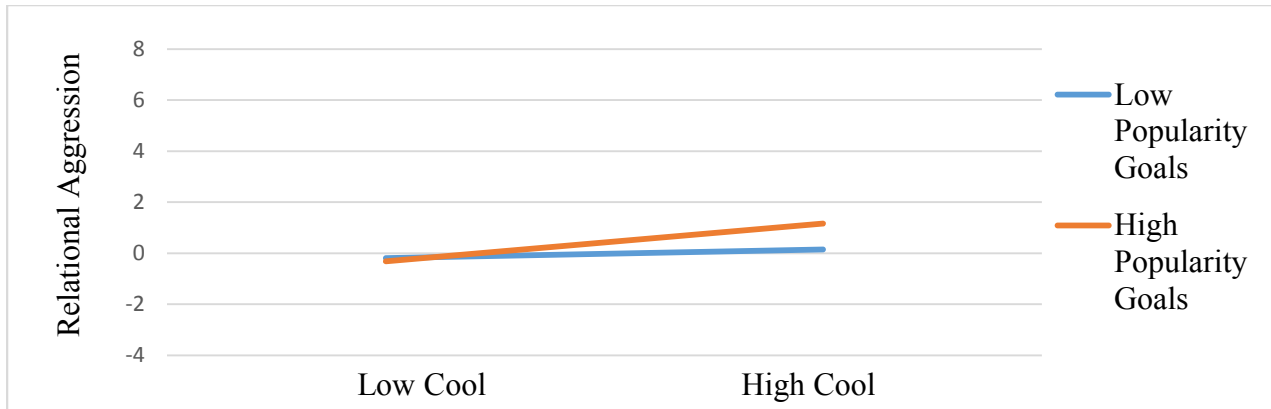


Figure 7. Coolness and Popularity Goals, Interaction for Relational Aggression.

Table 6. Leadership, Coolness, and Social Goals as Predictors of Aggression

Variable		Overt Aggression β		Relational Aggression β	
Step 1		Initial	Final	Initial	Final
	Gender	-.106*	-.106*	.084*	.084*
	Baseline aggression level	.490**	.490**	.649**	.649**
	R^2	.268**	.268**	.450**	.450**
Step 2					
	Leadership in the fall	.037	.037	.015	.015
	R^2/R^2 change	.269/.001	.269/.001	.450/.000	.450/.000
Step 3					
	Coolness in the fall	.076	.076	.259**	.259**
	R^2/R^2 change	.272/.003	.272/.003	.496**	.496/.047**
Step 4					
	Fall Popularity goals	-.027	-.027	.005	.005
	Fall Dominance goals	.188**	.188**	.032	.032
	Fall Intimacy goals	.071	.071	.027	.027
	R^2/R^2 change	.305/.033**	.305/.033**	.498/.002	.498/.002
Step 5					
	Leadership x Coolness	-.007	-	-.151**	-.151**
	R^2/R^2 change	.305/.000	-	.509/.011**	.509/.011**
Step 6					
	Leadership x Gender	.042	-	-.121*	-
	Coolness x Gender	-.060	-	.418**	.373**
	R^2/R^2 change	.307/.002	-	.598/.089**	.592/.082**

Table 6 (Continued)

Variable	Overt Aggression β		Relational Aggression β	
	Initial	Final	Initial	Final
Step 7				
Leadership x Popularity Goals	.020	-	.016	-
Leadership x Dominance Goals	-.111*	-.101*	-.094	-
Leadership x Intimacy Goals	.013	-	.000	-
Coolness x Popularity Goals	-.238**	-.212**	.124**	.159**
Coolness x Dominance Goals	.470**	.453**	.117*	.105
Coolness x Intimacy Goals	.121*	.102*	.048	-
R^2/R^2 change	.422/.115**	.417/.111**	.639/.041**	.634/.042**
F	14.836**	21.433**	35.937**	47.461**

Note. $N = 347$, * $p < .05$, ** $p < .01$

Chapter V: Discussion

The current study examined the influence of leadership, coolness, and social goals on subsequent overt and relational aggression during the fall and spring of sixth grade. This chapter summarizes the key findings that align with current literature and discusses the theoretical and practical implications. Furthermore, the limitations of the study are discussed, as well as future research directions that address these limitations. The following research questions were addressed in the present study:

1. What are the associations among peer-reported leadership and coolness in the fall with peer-reported aggression (overt and relational) in the spring of sixth grade?
2. To what extent do social goals (popularity, dominance, and intimacy) and gender moderate relations of peer-reported leadership and coolness in the fall with peer-reported aggression in the spring of sixth grade?
3. To what extent are there mean-level gender differences and changes in study variables across time?

Associations among Leadership and Coolness with Aggression

Peer relationships are highly salient during the first year of middle school when peer status (coolness) is prioritized and associated with aggression. Specifically, high status youth exhibit overt and relational to maintain their position in the social hierarchy (Bellmore et al., 2011; Bowker et al., 2010; LaFontana & Cillessen, 2010; Rose et al., 2004; Rubin et al., 2006). Peer-reported leadership is also salient during early adolescence (Allen et al., 2014; Cillessen et

al., 2014; Lee & Olszewski-Kubilius, 2006; Mortensen et al., 2014; Mullen & Tuten, 2004); however, this construct is understudied in comparison to peer status (coolness). Nevertheless, leadership is worth additional investigation, as youth leaders are considered interpersonally competent and maintain a level of influence over their peers (Coie et al., 1982; Lee & Olszewski-Kubilius, 2006; Miller-Johnson et al., 2003; Mortensen et al., 2014). The current study hypothesized that leadership and coolness would be moderately correlated yet distinct constructs (Lansu & Cillessen, 2011; Prinstein & Cillessen, 2003; Rubin et al., 2006; Ward & Ellis, 2008) and that youth leaders would influence their peers through aggression (Rubin et al., 2006). The associations among leadership, coolness, and subsequent overt and relational aggression are discussed in the following paragraphs.

Leadership and Coolness. As expected, there was a significant, positive association among leadership and coolness in the fall and spring of sixth grade. This finding aligns with previous research indicating that cool youth are often nominated as leaders by their peers (Rodkin et al., 2000). Previous research on leadership and high social status may explain this association. For instance, Ward and Ellis (2008) found that social status and social support were the most preferred leadership traits in youth. Moreover, findings outlined by Lansu and Cillessen (2011) demonstrate that prosocial leadership (e.g., when a leader helps and shows interest in others) is associated with high social status. Therefore, leaders may be perceived as cool youth who influence their peers in a positive manner. Although leadership and coolness were significantly associated at both time points, there was a large, significant correlation between leadership in the fall and coolness in the fall and a moderate significant correlation between leadership in the fall and coolness in the spring. These findings suggest that certain traits may emerge across the sixth grade for high-status leaders, or that perceptions of peer leaders differed in the fall and spring.

Leadership and Aggression. Relevant literature related to leadership and aggression is scarce, as leadership remains an understudied construct. The current study contributes to existing literature by differentiating between overt aggression (i.e., getting into physical fights, threatening to beat up, or bullying other students) and relational aggression (i.e., spreading rumors, gossiping, or excluding friends). Previous studies indicate that unconventional youth leaders (deviant youth who set trends for clothing, speech, and behavioral norms) often remain highly regarded and influential despite their high levels of aggression and other problem behaviors (e.g., sexual activity, substance use, and violence; Miller-Johnson et al., 2003). However, researchers conceptualized aggression as “getting into fights” without differentiating between overt and relational aggression (Miller-Johnson et al., 2003, p. 379). As a result, these findings provide additional insight into the specific forms of aggression that youth leaders exhibit.

Leadership and Overt Aggression. Although leadership in the fall was not associated with overt aggression in the fall or spring, leadership in the spring was significantly associated with overt aggression in the fall and spring. These results were unexpected, as research has highlighted that overt aggression becomes less socially sanctioned by peers over time (Björkqvist et al., 1992). However, overt aggression may be an acceptable way for sixth-grade students to control resources (Little et al., 2003) and maintain their position in the social hierarchy (Bellmore et al., 2011) during the middle school transition (Lafontana & Cillessen, 2002; Pellegrini & Long, 2002). Additional research is needed to evaluate the relationship between leadership and overt aggression, and to determine if overt aggression is an acceptable way for youth leaders to maintain their social position during the middle school transition.

Leadership and Relational Aggression. Leadership in the fall was associated with relational aggression in the fall but not in the spring. The association between leadership and

relational aggression in the fall only indicates that youth leaders may not have high levels of relational aggression over time. As a result, additional research is needed to determine if youth leaders are characterized by positive attributes, including mentorship and role-modeling (Mortensen et al., 2014). Previously, researchers examining youth narratives ($N = 219$) in students ages 12-19 demonstrated that youth leaders are often considered role-models who teach necessary skills to others (Mortensen et al., 2014). However, relevant literature does not focus on the association between leadership and relational aggression, indicating that additional investigation is needed.

Coolness and Aggression. There was a significant positive association between coolness and overt aggression in the fall and in the spring. Coolness and relational aggression also shared a significant positive association in the fall and spring. These results align with previous research demonstrating a significant positive association between coolness and overt and relational aggression (Bellmore et al., 2011; Hoff et al., 2009; Kiefer & Wang, 2016; Rodkin et al., 2013; Rose et al., 2004). Researchers in one study assessed perceived popularity, overt aggression, and relational aggression using peer nominations among 607 third, fifth, seventh, and ninth-grade students in two Midwestern school districts (Rose et al., 2004). Results indicated that there was a significant positive relationship between perceived popularity and overt and relational aggression in seventh and ninth-grade students (Rose et al., 2004). The current study emphasizes the link between these variables and extends the results in the previous study to sixth-grade students.

The findings in the present study reflect previous studies examining aggression during the transition to middle school when early adolescents are navigating a new peer environment (Bellmore et al., 2011; Lafontana & Cillessen, 2002; Merten, 1997; Pellegrini & Long, 2002; Rose et al., 2004). In one particular study, 1,985 sixth grade students from 99 classrooms in 11 middle schools in Los Angeles completed peer nominations to assess 'cool' status stability,

social preference, and aggressive reputation (Bellmore et al., 2011). Researchers asserted that students who maintained their ‘cool’ status over the first year of middle school were considered more aggressive than those who never obtained a high social status (Bellmore et al., 2011). Moreover, students who maintained or obtained a ‘cool’ status also displayed an increase in overt aggression, relational aggression, and verbal aggression (e.g., putting others down or making fun of peers) from fall to spring (Bellmore et al., 2011). Therefore, findings from the current study align with previous research indicating the prevalence of aggression in high-status youth as a way to establish and maintain dominance in the social hierarchy.

Coolness and Overt Aggression. Coolness and overt aggression were significantly associated in the fall and spring. These results align with previous research emphasizing the positive relationship between high peer status and overt aggression (Lafontana & Cillessen, 2002; Parkhurst & Hopmeyer, 1998; Waasdorp et al., 2013). Additionally, the results suggest that high-status youth may use overt aggression to control social resources (Little et al., 2003) and obtain social goals (Lafontana & Cillessen, 2002). However, the current study utilized peer nominations to examine peer reputation, which emphasizes the individual perceptions of students (Jamison et al., 2015). Therefore, the Crick and Grotpeter (1995) peer nomination measure may not reflect students’ actual behavior. Furthermore, the functions of overt aggression are unclear and may vary according to the individual. Overt aggression may occur as a defensive response to provocation (reactive) or may be a deliberate attempt to reach a certain goal (instrumental; Little et al., 2003). Even though overt aggression serves multiple functions, research suggests that instrumental-overt aggression tends to remain stable over time (Ojanen & Kiefer, 2013), as it is often employed as a form of status maintenance and resource control among dominant, high status youth (Cillessen & Mayeux, 2004). Previous studies have also indicated that youth report higher levels of overt aggression in their relationships than relational aggression (e.g., Hawley et

al., 2007), whereas others have asserted that overt aggression is associated with hostile peer interactions (e.g., Little et al., 2003). Therefore, future research is needed to clarify the function (instrumental or reactive) and identify the types of peer interactions that foster overt aggression among high-status youth.

The significant positive association at both time points may have developmental implications. Specifically, these results are consistent with previous research indicating that in contrast to their peers in elementary school, middle school students (i.e., sixth, seventh, and eighth-grade) tend to associate overt aggression with popularity rather than unpopularity (Lafontana & Cillessen, 2002). However, a longitudinal study indicated that high-status youth display an increase in relational aggression, but not overt aggression, in the fifth, seventh, and ninth grades, suggesting that the social skills required to strategically harm someone may develop over time (Rose et al., 2004). Developmental theory suggests that young children are likely to engage in overt aggression because they lack the social skills necessary to harm someone indirectly, whereas individuals may use relational aggression to harm others through indirect social manipulation (Björkqvist et al., 1992).

Coolness and Relational Aggression. As expected, coolness and relational aggression were significantly positively associated at both time points. This finding is consistent with research highlighting the positive relationship between peer status and relational aggression (Lafontana & Cillessen, 2002; Merten, 1997; Rose et al., 2004). These studies also suggest that high-status youth exhibit relational aggression to establish and maintain their position in the social hierarchy (Lafontana & Cillessen, 2002; Merten, 1997; Rose et al., 2004). However, researchers postulate that high-status youth may ignore or exclude others because they do not have enough time to interact with everyone (Eder, 1985; Rose et al., 2004). Alternatively, high-status youth may exhibit higher levels of relational aggression when they are criticized or when

their peers do not want to interfere with their behavior (Rose et al., 2004). Similar to overt aggression, peer reputation was examined using the Crick and Grotpeter (1995) peer nomination measure. Therefore, it is possible that peer reports of relational aggression may not reflect the students' actual behavior; relational aggression is difficult to directly and accurately assess given its indirect nature. Additionally, the function (reactive or instrumental) may vary according to individual needs and circumstances. Further research is needed to investigate the functions (reactive and instrumental) of relational aggression, and to determine if cool youth engage in relational aggression to maintain their social position or react to provocation.

The current study highlights the salience of peer relationships and status during early adolescence. Specifically, the significant associations between coolness and relational aggression across the school year suggests that youth employ sophisticated aggressive tactics (Rose et al., 2004) to maintain and protect their status through social manipulation (Lafontana & Cillessen, 2002; Merten, 1997). These findings support research indicating socially intelligent individuals engage in subtle forms of aggression that are likely to go unnoticed and protect them from danger (Björkqvist et al., 1992).

Moderation Effects of Social Goals on Aggression Over Time

Leadership, Coolness, and Relational Aggression. Separate hierarchical regression analyses were conducted to examine the associations among peer-reported leadership and status in the fall with peer-reported overt and relational aggression in the spring, as well as the moderation effects of social goals and gender on associations between leadership and coolness with subsequent aggression (overt and relational). Results obtained from the separate hierarchical regression analyses revealed that youth leaders considered 'cool' in the fall had significantly lower levels of relational aggression in the spring (Figure 5). These findings suggest that youth leaders may be less willing to engage in subsequent relational aggression. Youth

leaders may possess a level of responsibility and authenticity needed to work effectively with others to accomplish a task (Mullen & Tuten, 2004) or create change (Mortensen et al., 2014). As a result, leaders may not value relational aggression, as it conflicts with many positive traits including maturity, mentorship, and the ability to persuade others to work towards the same goal (Ward & Ellis, 2008).

Moreover, these results demonstrate that leadership and coolness are correlated, yet distinct constructs, as prior research indicates that sixth-grade students who have higher levels of peer-reported aggression were more likely to be perceived as popular over time (Bellmore et al., 2011; Bowker et al., 2010). The current study adds to these previous findings, as researchers presented aggression as a general concept without differentiating between overt and relational aggression in the results and discussion sections (Bellmore et al., 2011; Bowker et al., 2010). Thus, the results from the current study suggest that coolness and leadership are moderately correlated constructs that may be distinguished by levels of relational aggression.

Coolness, Gender, and Relational Aggression. Separate hierarchical regression results indicate that cool girls had significantly higher levels of relational aggression than cool boys (Figure 6). These results support previous research asserting that perceived popularity is significantly associated with subsequent relational aggression in high-status girls (Cillessen & Mayeux, 2004). Research suggests that manipulative and antisocial behaviors are increasingly reinforced in the peer group, indicating that relational aggression is a socially acceptable way for girls to establish dominance and control over their peers (Adler & Adler, 1995; Cillessen & Mayeux, 2004; Merten, 1997). Boys may also maintain their social position through relational aggression, as research indicates that boys consider both types of aggression to be socially appropriate ways to harm others (Card, Stucky, Sawalani, & Little, 2008). For instance, Card and colleagues (2008) found minimal gender differences in indirect (relational) aggression after

conducting a meta-analysis of 148 studies on direct (overt and verbal) and indirect (relational) aggression in children and adolescents. Collectively, the current study provides empirical support for gender differences in aggression (overt and relational) and confirms that relational aggression is most often used amongst high-status girls.

Coolness, Popularity Goals, and Relational Aggression. The moderation results also revealed that cool youth who highly endorsed popularity goals had significantly higher levels of later relational aggression (Figure 7). These results support previous findings indicating that cool youth who prioritize popularity are often considered more aggressive than their peers because they are motivated to maintain their high status (Cillessen et al., 2014; Dawes & Xie, 2014). However, the current study utilized a different form of measurement than previous studies. For instance, Dawes and Xie (2014) assessed popularity goals with a single item (“It’s important that people think I’m popular”). Moreover, Cillessen and colleagues (2014) utilized a 20-item self-report measure that indirectly assessed popularity goals by determining if participating students prioritized popularity over five other themes (i.e., “friendship, romance, rule adherence, achievements, and altruism”; Cillessen et al., 2014, p. 208). As a result, the current study adds to the literature by identifying the form(s) of aggression (i.e., overt aggression and relational aggression) that youth (cool and non-cool) exhibit when they are striving for popularity.

Coolness, Popularity Goals, and Overt Aggression. As expected, popularity goals moderated relations among coolness and aggression. Specifically, low-cool youth who highly endorsed popularity goals had significantly higher levels of later overt aggression. These results align with prior research indicating that popularity goals influence subsequent levels of aggression (Cillessen et al., 2014; Dawes & Xie, 2014). However, the current study makes a unique contribution to the literature, as it focuses on the cognitive representations of what participants want to achieve (i.e., a goal content approach). To identify the most satisfying

outcome, participants were presented with four items that represented popularity goals. Nevertheless, the present study was unable to determine if low-status youth who highly endorsed popularity successfully achieved their goals through overt aggression. Although previous literature indicates popularity goals may not be sufficient to obtain a high social status (Dawes & Xie, 2014), additional research is needed to determine if overt aggression is used to achieve popularity or if it is an underlying mechanism for low-cool youth.

Coolness, Leadership, Dominance Goals, and Overt Aggression. Separate hierarchical regression results indicated that ‘cool’ youth who endorsed dominance goals in the fall had significantly higher levels of overt aggression in the spring (Figure 2). These results align with previous research indicating that high-status youth who endorsed dominance goals in the fall had higher levels of subsequent aggression (Kiefer & Wang, 2016; Ojanen & Findley-Van Nostrand, 2014). The current study also suggests that leadership and coolness are related yet distinct constructs as leadership and coolness were positively associated at both time points, yet, youth leaders endorsing dominance goals in the fall had significantly lower levels of overt aggression in the spring (Figure 1). Thus, although cool youth and youth leaders strive for influence and power over peers (e.g., dominance goals), these groups may be associated with different levels of subsequent aggression. Further research is needed to examine associations between leadership and additional adjustment indices such as prosocial behavior and the ability to create positive change.

Literature results may clarify the associations among leadership and peer status. In one study, 235 young adults (ages 18-25) at a professional college were asked to complete 20 questions on a sociometric instrument about their peer affiliations and behavior (Lansu & Cillessen, 2011). According to Lansu and Cillessen (2011), popularity and preference (most liked) were associated with prosocial leadership (being kind, well-liked, and helpful), whereas

dominant leadership (having power, fitting in, and being central) was only associated with popularity. It is possible that participants in the current study nominated ‘cool’ peers based on perceived popularity (being socially central, unfriendly, and aggressive) and ‘leaders’ based on prosocial leadership (Farmer et al., 2000; Lafontana & Cillessen, 2002; Rodkin et al., 2000). Further research is needed to examine the associations among types of leaders (i.e., prosocial and dominant), dimensions of social status (i.e., perceived popularity and preference), and subsequent overt and relational aggression in early adolescence.

Coolness, Intimacy Goals, and Overt Aggression. Lastly, cool youth who highly endorsed intimacy goals had significantly higher levels of peer-reported overt aggression in the spring (Figure 4). These results were unexpected, as research suggests that intimacy goals are negatively associated with overt aggression over time (Ojanen & Findley-Van Nostrand, 2014). However, these results may indicate that youth require close friendships to maintain their social position, as intimacy goals promote cohesion (Cillessen et al., 2011; Hawley et al., 2007) and emphasize positive peer interactions and satisfying relationships (Jarvinen & Nichols, 1996; Ojanen & Findley-Van Nostrand, 2014). It is also possible that cool youth who have high levels of subsequent overt aggression are bistrategic controllers (e.g., Hawley et al., 2007). Resource Control Theory asserts that bistrategic controllers employ coercive (taking, threatening, and deceiving) and prosocial strategies (cooperating and building alliances) to acquire and control social resources (Hawley et al., 2007). Bistrategic controllers engage in highly intimate and enjoyable friendships (Hawley et al., 2007) and possess multiple positive qualities (socially skilled and extroverted; Hawley, 2003). Therefore, it is possible that cool youth with high intimacy goals maintain their social position by minimizing the negative effects of overt aggression.

Mean-Level Gender Differences

Leadership. No significant gender differences were found for leadership. Although research investigating mean-level gender differences in leadership is scarce, multiple studies report that the nature of leadership differs according to gender (Mullen & Tuten, 2004; Lansu & Cillessen, 2011). However, previous research has focused on leadership characteristics (Lansu & Cillessen, 2011) and roles (Mullen & Tuten, 2004). It is unclear if the participants in the current study nominated leaders according to gender-based characteristics and roles. Therefore, additional investigation is warranted to determine if there are mean-level gender differences in leadership.

Coolness. No significant gender differences were found for coolness. This is unexpected, as research suggests that boys have a greater likelihood of being perceived as popular (Lansu & Cillessen, 2011) and girls have a higher likelihood of maintaining their popular status (Cillessen & Mayeux, 2004). Researchers postulate that boys have difficulty maintaining their high status because they value social preference, which is less stable than perceived popularity (Cillessen & Borch, 2006; Cillessen & Mayeux, 2004; Lansu & Cillessen, 2011). Gender inconsistencies may be attributed to the conceptualization of coolness. In the current study, coolness was used as an indicator of peer status. Coolness is a developmentally appropriate way to measure peer status, as it is continuously revised to represent what youth consider cool (Kiefer & Wang, 2016; Rodkin et al., 2006). However, peer status can also be conceptualized as perceived popularity (social centrality) or sociometric popularity (social preference; Cillessen et al., 2011; Cillessen & Mayeux, 2004; Rodkin et al., 2006; Rubin et al., 2006). Coolness and perceived popularity are similar constructs that assess peer status. For instance, youth who are considered cool or popular remain socially visible and are not typically well-liked by their peers (Cillessen et al., 2011; Cillessen & Mayeux, 2004; Kiefer & Wang, 2016; LaFontana & Cillessen, 2002). However,

coolness focuses on the individual characteristics (e.g., interpersonal skills and fashionable clothing) that secure peer approval (Jamison et al., 2015; Kiefer & Wang, 2016), while perceived popularity focuses on social centrality (Cillessen et al., 2011; Rodkin et al., 2006). Therefore, the findings in the current study may not align with those that have utilized peer nomination measures to assess preference and perceived popularity (Cillessen & Mayeux, 2004; Lansu & Cillessen, 2011) or social centrality (Xie et al., 2002).

Aggression. The findings revealed significant mean-level gender differences in overt and relational aggression that are consistent with prior research (Cillessen & Mayeux, 2004; Crick & Grotpeter, 1995; Xie et al., 2002). Specifically, girls received more peer nominations for relational aggression in the fall ($M = 0.22$, $SD = 1.22$) and spring ($M = 0.23$, $SD = 1.27$), whereas boys received more peer nominations for overt aggression in the fall ($M = 0.15$, $SD = 1.29$) and spring ($M = 0.25$, $SD = 1.55$; Crick & Grotpeter, 1995; Page, 2012; Xie et al., 2002). These results align with social cognitive theory, which asserts that gender-specific behaviors arise from gender differences in social-cognitive styles (Rose & Rudolph, 2006; Ruble et al., 2006). For instance, girls tend to be more preoccupied with the approval of others and define themselves based on their relationships (Rose & Rudolph, 2006). In contrast, boys may have higher levels of overt aggression because they are less concerned with the approval of others (LaFontana & Cillessen, 2010).

However, researchers found minimal gender differences in indirect (relational) aggression after conducting a meta-analysis of 148 studies on direct (overt and verbal) and indirect (relational) aggression in children and adolescents (Card, Stucky, Sawalani, & Little, 2008). Researchers postulate that boys consider both types of aggression to be socially appropriate ways to harm others (Card et al., 2008). Although the current study provides empirical support for mean-level gender differences in aggression (overt and relational),

additional research is needed to determine if specific types of aggression (i.e., verbal) are more socially acceptable for boys or girls.

Social Goals. Tests of Between-Subjects reveal significant mean-level gender differences in all three social goals which is consistent with prior research (Cillessen et al., 2014; Kiefer & Ryan, 2008; Ojanen & Findley-Van Nostrand, 2014). Specifically, the current study aligns with literature indicating that boys endorse popularity goals more than girls (Kiefer & Ryan, 2008; Kiefer & Wang, 2016), boys endorse dominance goals more than girls (Kiefer & Ryan, 2008), and girls endorse intimacy goals more than boys (Ojanen & Findley-Van Nostrand, 2014). However, previous research indicates that there are no mean-level gender differences in popularity goals (Cillessen et al., 2014; Li & Wright, 2014). Researchers assert that both genders may endorse similar levels of popularity goals because social status is highly prioritized in early adolescence (Cillessen et al., 2011; Galván et al., 2011). Therefore, additional research focusing on mean-level gender differences in social goals (particularly popularity goals) is needed to clarify these inconsistencies.

Theoretical and Practical Implications

The current study has theoretical and practical implications. First, the regression results illustrate the social development of sixth-grade students and highlight the effects of social motivation on early adolescent behavior. According to the results, low-cool youth who highly endorsed popularity goals had significantly higher levels of subsequent overt aggression. In contrast, cool youth who highly endorsed popularity goals had significantly higher levels of subsequent relational aggression. These findings have multiple implications. First, the increased prioritization of popularity in sixth-grade students often results in heightened levels of aggression (Cillessen et al., 2014; Cillessen & Mayeux, 2004), regardless of social status. Second, students may have a higher likelihood of achieving their popularity goals if they develop the social

intelligence needed to engage in subtle forms of manipulation and aggression (Björkqvist et al., 1992; Lafontana & Cillessen, 2002; Merten, 1997).

The current study also has implications regarding the prevalence and social acceptance of both forms of aggression (overt and relational) in cool youth. Specifically, the moderation effects indicated that relational aggression is socially accepted amongst cool youth (Lafontana & Cillessen, 2002; Merten, 1997; Rose et al., 2004; Xie et al., 2002). However, the moderation effects also highlighted the significant levels of overt aggression amongst cool youth who are striving for dominance or intimacy. Therefore, it appears that cool youth have the social skills necessary to control social resources (Hawley et al., 2007; Kiefer & Wang, 2016) and achieve their social goals through multiple forms of aggression (Lafontana & Cillessen, 2002; Parkhurst & Hopmeyer, 1998).

Additionally, this study provides further insight into the relationships between leadership, peer status (coolness), and subsequent relational aggression (Cillessen et al., 2014). Positive correlations at both time points indicates that leadership and coolness are conceptually distinct, yet related constructs. The regression results provided additional insight by demonstrating that cool youth leaders had significantly lower levels of subsequent relational aggression. In contrast, cool students who highly endorsed popularity goals had significantly higher levels of subsequent relational aggression. These results suggest that cool youth are at risk for relational aggression when they strongly endorse popularity goals. However, cool youth leaders are distinct, as they remain influential yet unwilling to maintain their social position through relational aggression.

The current study has practical implications for educators at the middle school level. These findings may assist school personnel in understanding social goals (popularity, dominance, and intimacy) and their implications for later aggression (overt and relational). School psychologists and other educators who are responsible for implementing interventions at

the Tier 1 (universal) level may encourage students to strive for leadership instead of popularity, as youth leaders control social resources and influence their peers without aggression.

Alternatively, educators may identify students who highly prioritize popularity at the beginning of the school year, as these students are at-risk for aggression. Educators may ask incoming sixth-grade students to complete the Social Goals Questionnaire (Jarvinen & Nicholls, 1996) to assess social goals (popularity, dominance, and intimacy). After each student's responses are reviewed, those who are striving for popularity are identified and placed in a Tier 2 (supplemental) intervention to prevent aggression and foster positive peer relationships.

Educators may also identify cool youth who are at-risk for subsequent aggression. After these students are identified, their responses on the Social Goals Questionnaire (Jarvinen & Nicholls, 1996) are reviewed. Those who are focused on achieving popularity, power, or close peer relationships are placed in a Tier 2 (supplemental) intervention to develop positive leadership traits and prevent later aggression. School psychologists and other school personnel may implement feasible and empirically-supported interventions such as the Second-Step Program, which modifies social goals and reduces aggression by teaching youth behavioral skills that promote social problem-solving (Frey, Nolen, Edstrom, & Hirschstein, 2005).

Limitations and Future Directions

There are multiple limitations that need to be taken into consideration with the present study. The first limitation is the use of peer-report measures for leadership, aggression (overt and relational), and coolness, as participants may have failed to nominate unfamiliar peers. Moreover, the peer-report measures present a more accurate representation of peer reputation rather than actual behavior. As a result, future research utilizing multiple methods of data collection (self-reports, teacher-reports, peer-reports) are needed to gain the perspectives of those who best represent the criteria for leadership, coolness, and aggression. These studies may be

particularly important at the secondary level, where students are not contained to single classrooms and often interact with classmates at a grade-wide or school-wide level. Shared method variance (i.e., use of peer nominations to assess multiple constructs) may also account for the associations between leadership and coolness, and leadership and relational aggression, in the current study.

The second limitation is the operationalization of leadership, as a general operationalization of leadership was used to understand the valuable characteristics that youth consider. For instance, the peer reports used in this study did not identify specific types of leadership such as individualistic (Miller-Johnson et al., 2003; Mullen & Tuten, 2004) or collectivistic leadership (Carter & Spotanski, 1989; Mortensen et al., 2014). Although a more general measure of leadership was used in the current study, the findings provide insight into youth leaders, how they may differ from high-status youth, the goals that they strive for, and relations with subsequent aggression. Additional research is needed to examine both general and specific forms of leadership (individualistic and collectivistic), and whether associations differ for its associations with coolness, social goals, and aggression. Interviews or focus groups with early adolescents may allow researchers to further understand youth perceptions of leadership and how youth leaders influence their peers.

An additional limitation of this study was the six-month difference between time points. Although six months is an appropriate length of time to assess change during the sixth-grade school year (Kiefer & Wang, 2016), additional information is needed to understand changes across longer periods of time. Long-term longitudinal studies with three or more time points would provide a more comprehensive understanding of leadership in terms of its stability and developmental changes over time. Although mature youth are often influential among their same-age peers (Allen et al., 2014; Moffitt, 1993), middle school students view maturity as

antisocial and rebellious behavior (Miller-Johnson et al., 2003; Moffitt, 1993) while high school students view maturity as responsible adult behavior (Allen et al., 2014; Moffitt, 1993).

Therefore, examining changes across middle and high school may provide further insight into the behaviors that constitute status and leadership at different stages of development and their associations with social goals and aggression.

Examining peer status (coolness) and leadership at the peer group level (rather than at the grade-wide level as in the present study) may allow for the examination of peer interaction among cool youth and youth leaders, as well as the possibility of multiple influential youth within a peer group. Research indicates that youth influence their peers through certain behaviors (Miller-Johnson et al., 2003); therefore, more information is needed to evaluate the peer group dynamics among multiple influential youth. Previous research examining status at the peer group level may contribute to this area, as youth occupying a central position in their peer group are more likely to exhibit relational aggression (Xie et al., 2002). These research findings may provide a context for future study in terms of interactions between multiple high-status youth and/or youth leaders at the peer group level.

Finally, additional research is needed with diverse populations. This information may be utilized to examine the effects of cultural norms on the major variables in this study (leadership, peer status, aggression, social goals). The extent to which cultural variables (race/ethnicity, socioeconomic status) impact early adolescents' view of leadership is unknown. Therefore, it is essential to determine if the interactions in this study are universal or limited to the inherent values in the participants' cultural group.

Conclusions

In conclusion, the current study contributes to literature by examining associations among leadership, peer status (coolness), social goals, and aggression. Although leadership and

coolness were significantly associated at both time points, only cool youth who endorsed popularity, dominance, or intimacy goals in the fall had significantly higher levels of peer-reported aggression (overt or relational) in the spring. In contrast, cool leaders has significantly lower levels of subsequent relational aggression in comparison to non-cool leaders. Therefore, this study provides insight into the differential associations of leadership and peer status (coolness) with subsequent aggression. Lastly, this study provides empirical evidence for the increased prioritization of popularity during the first year of middle school and emphasizes the moderating effects of social goals on coolness and subsequent aggression. For instance, low-cool youth who highly endorsed popularity goals had significantly higher levels of subsequent overt aggression, whereas cool youth who highly endorsed popularity goals had significantly higher levels of subsequent relational aggression. These findings are significant, as they highlight the negative behaviors that may arise among early adolescents who highly prioritize popularity. Additional research is needed to examine a more diverse sample, utilize multiple forms of data collection (peer-report, self-report, teacher-report, and focus groups), and include at least three points of longitudinal data.

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Appendices

Appendix A: Demographics Form

**The Adolescent Motivation
and Development Study:
Student Questionnaire**



**Middle School
Fall, 2009**

Print Name:

Demographics Form (Continued)

Student Demographics

Gender:

Boy

Girl

Race (choose one):

Asian American or Pacific Islander

Black or African American

Hispanic or Latino/a

White or European American

Multi-Racial

Other: _____



Stop!!! Do not continue until told to do so.

Appendix B: Example of Middle School Parental Consent Forms

Dear Parent or Caregiver:

This letter provides information about a research study that will be conducted at Sergeant Smith Middle School by Sarah Kiefer, a professor from the University of South Florida. My goal in conducting the study is to examine how students' motivation changes over time, and how it relates to students' social and academic adjustment in school. The purpose of the study is to gain a better understanding of motivation during early adolescence in order to help all students function well socially, be engaged in school, and perform up to their academic potential.

- ✓ Who I Am: I am Sarah Kiefer, Ph.D., a professor in the College of Education at the University of South Florida (USF). I am planning the study in cooperation with the principal and administrators of Sergeant Smith Middle School to ensure the study provides information that will be helpful to the schools.
- ✓ Why I am Requesting Your Child's Participation: This study is being conducted as part of a project entitled, "The Adolescent Motivation and Development Study." Your child is being asked to participate because he or she is a student at Sergeant Smith Middle School.
- ✓ Why Your Child Should Participate: We need to learn more about what motivates students what leads to school success during the teenage years! The information that I collect from students may help increase our overall knowledge of what motivates students in school and how teachers and schools can support students' success in school. In addition, information from the study will be shared with the teachers and administrators at Sergeant Smith Middle School in order to increase their knowledge of what motivates students to be successful academically and socially in school. Information from this study will provide a foundation from which to improve the schooling experiences of students at Sergeant Smith Middle School. Please note neither you nor your child will be paid for your child's participation in the study. However, all students who participate in the study will be given a small gift and those students who return completed parental consent forms will be entered into a drawing for a gift certificate.
- ✓ What Participation Requires: If your child is given permission to participate in the study, he or she will be asked to complete several paper-and-pencil questionnaires. These surveys will ask about your child's thoughts, behaviors, and attitudes towards school. Completion is expected to take your child about 40 minutes. I will personally administer the questionnaires at Sergeant Smith Middle School along with a trained team of researchers from USF during regular school hours. Questionnaires will be administered in classrooms to students who have parent permission to participate. Participation will occur during one class period in the Fall and Spring semesters in sixth grade at Sergeant Smith Middle School. In total, participation will take about 80 minutes of your child's time. In addition, students' school records will be reviewed for indications of academic achievement (GPA and FCAT) and if on reduced lunch status.

- ✓ Please Note: Your decision to allow your child to participate in this research study must be completely voluntary. You are free to allow your child to participate in this research study or to withdraw him or her at any time. If you choose not to participate, or if you withdraw at any point during the study, this will in no way affect your relationship with Sergeant Smith Middle School, USF, or any other party.
- ✓ Confidentiality of Your Child's Responses: There is minimal risk to your child for participating in this research. I will be present during administration of the questionnaires, along with a team of trained researchers, in order to provide assistance to your child if he or she has any questions or concerns. Additionally, school guidance counselors will be available to students in the unlikely event that your child becomes emotionally distressed while completing the measures. Your child's privacy and research records will be kept confidential to the extent of the law. Authorized research personnel, employees of the Department of Health and Human Services, and the USF Institutional Review Board may inspect the records from this research project, but your child's individual responses will not be shared with school system personnel or anyone other than us and our research assistants. Your child's completed questionnaires will be assigned a code number to protect the confidentiality of his or her responses. Only I will have access to the locked file cabinet stored at USF that will contain: 1) all records linking code numbers to participants' names, and 2) all information gathered from school records. Please note that although your child's specific responses on the questionnaires will not be shared with school staff, if your child indicates that he or she intends to harm him or herself, I will contact district mental health counselors to ensure your child's safety.
- ✓ What I'll Do With Your Child's Responses: I plan to use the information from this study to inform educators and psychologists about students' motivation in school, as well as to construct a plan for improving students' motivation and success in school during adolescence. The results of this study may be published. However, the data obtained from your child will be combined with data from other people in the publication. The published results will not include your child's name or any other information that would in any way personally identify your child.
- ✓ Questions? If you have any questions about this research study, please contact Dr. Sarah Kiefer at (813) 974-0155. If you have questions about your child's rights as a person who is taking part in a research study, you may contact a member of the Division of Research Compliance of the University of South Florida at (813) 974-9343.
- ✓ Want Your Child to Participate? To permit your child to participate in this study, complete the attached consent form and have your child turn it in to his or her first period teacher.

Sincerely,

Sarah Kiefer, Ph.D.

Assistant Professor of Educational Psychology

Department of Psychological and Social Foundations-

Consent for Child to Take Part in this Research Study

I freely give my permission to let my child take part in this study. I understand that this is research. I have received a copy of this letter and consent form for my records.

Printed name of child

Signature of parent Date

Printed name of parent of child taking part in study

Statement of Person Obtaining Informed Consent

I certify that participants have been provided with an informed consent form that has been approved by the University of South Florida’s Institutional Review Board and that explains the nature, demands, risks, and benefits involved in participating in this study. I further certify that a phone number has been provided in the event of additional questions.

Signature of person Date

Printed name of person obtaining consent

Appendix C: Student Verbal Assent Script

Introduction

Hello my name is _____. I am a student/teacher at the University of South Florida. Right now, I'm trying to learn about students' motivation and success in school. I would like to ask you to help me by being in a study, but before I do, I want to explain what will happen if you decide to help me. (*While one person discusses informed consent, the other person can write the survey example on the board and pass out the teacher survey and student surveys.*)

Informed Consent

- I will ask you to fill out a survey. Filling out this survey is voluntary. If at any point you want to stop or skip a question that is ok. For survey questions, there are no right or wrong answers; we just want your opinions. By being in the study, you will help me understand students' motivation and success in school.
- Your survey is confidential. This means that your parents, teacher, and classmates will not know what you have written on your survey. When I tell other people about the study, I will not use your name, and no one will be able to tell who I'm talking about.
- Your mom/dad says it's okay for you to be in the study. But if you don't want to be in the study, you don't have to be. What you decide won't make any difference with your grades or about how people think about you. No one will be upset if you don't want to be in the study. If you want to be in the study now but change your mind later, that's okay. You can stop at any time. If there is anything you don't understand you should tell me so I can explain it to you.
- You can ask me questions about the study. If you have a question later that you don't think of now, you can call me (*or Dr. Kiefer*) or ask your parents or teacher to call or email me (*or Dr. Kiefer*).

Do you have any questions for me about the survey?

Would you like to be in the study and fill out the survey?

NOTE TO RESEARCHER: The student should answer "Yes" or "No." Only a definite "Yes" may be taken as assent to participate. Look for students saying yes, nodding of heads, thumbs up.

Appendix D: Student Survey Instructions

Please PRINT your first and last name on the front cover. After you have printed your name, turn to the next page. Fill in the bubble that corresponds to your gender. Lastly, fill in the appropriate bubble that best describes your racial/ethnic group. **Please do not start the survey yet. I have a few things to tell you about survey questions:**

1. For survey questions, there are no right or wrong answers; we just want your opinions.
2. If you have any questions raise your hand.
3. I will read the questions out loud. With these types of questions we are interested in your first reaction to the questions. Don't spend too much time on any one question.
4. Some of the survey questions will sound similar. We ask you an idea several different ways so that we can make sure that we really know your opinion about things.

Example of survey question (have this on board at the beginning of the session).

I like <u>pepperoni pizza</u>				
1	2	3	4	5
not	somewhat		very	
true	true		true	

Ask class:

1. How many of you would pick 1 – why? Right because you don't like it, that is not true for you. So you would circle 1 on your survey.
2. How many of you would pick 3 – why? Right you think it is ok, this is sort of true for you. So you would circle 3 on your survey.
3. How many of you would pick 5 – why? Right because you love it, it is very true for you. So you would circle 5 on your survey.

Recap:

- The 2 is for when you are between a 1 and 3 and the 4 is for when you are between 3 and 5.
- Be sure to use all the numbers to tell us exactly how you feel about the survey items.
- On the survey the exact meaning of 1-5 will change but it is the same idea, you'll see.

Turn to the next page and begin.

Appendix E: Student Survey Procedure

General Points

- *Many students will go ahead on their own and that is fine, but don't encourage or mention this.*
- *When reading the survey, emphasize key words in items. Keep a steady tempo. Don't get too carried away but convey enthusiasm and read with some zip to keep students attentive.*
- *Find a student in the class who is a little slower and watch for them to look up after each item to make sure you are not going too fast. Check with students a few times – am I going too fast??*
- *In the beginning point out what the likert scale means. You do not need to say this every time though. Point out when meaning of likert scale changes.*
- *“OK, at the top of page 1, question 1 is ‘How important...’ #1 means not at all important, #3 means somewhat important, and #5 means very important ... question 2 ‘For me...’ #1 means not at all important, #3 means somewhat important, and #5 means very important. Then just read questions for the rest of this set. When get to next set... question 6 ‘How good...’ now for this set #1 means not at all good, #3 means somewhat good and #5 means very good”*
- *One administrator reads the survey, the other person (if there is a 2nd person) should walk around and make sure students are filling it out properly and answer any individual questions.*

Friendship and Peer Nominations

- *Ask students to PRINT the FIRST and LAST names of students in the SIXTH GRADE at their school. If they can't spell the last name, ask them for the first initial of the last name, or to do the best that they can.*
- *Emphasize that students should think about friends and classmates in their own GRADE.*

Student Survey Procedure (Continued)

- *Students may not want to nominate a peer that they admire. Tell students: This may be a student that you respect or would like to be like, or that they admire something specific about that person.*

When Surveys are Completed:

One person can pick up surveys & pencils - check that students' names are on front page!

One person can pass out highlighter/pens.

Be sure to pick up teacher survey, ask teacher if there are any absent students today.

Appendix F: Social Goals (Jarvinen & Nicholls, 1996)

5 Point Likert Scale (*1 = not at all true of me, 3 = somewhat true of me, 5 = very true of me*)

When I'm with people my own age I like it when...

Dominance Goals (4 items)

They worry that I'll hurt them

They know I'm tougher than them

I make them do what I want

They are afraid of me

Intimacy Goals (4 items)

I really know someone's feelings

Someone understands how I feel

I go out of my way to help them

I can make them happy

Popularity Goals (4 items)

Everyone wants me for a friend

I'm the most popular

They like me better than anyone else

I'm the coolest

Appendix G: Peer Nominations

Please nominate up to 3 students for each question.

All students act differently at school. Which students in your class...(Crick & Grotpeter, 1995)

Leadership

Are a leader among peers?

Coolness

Are really cool?

Overt Aggression

Get into physical fights, threaten to hit or beat up on other students, or try to dominate or bully students?

Relational Aggression

Spread rumors or gossips about some students, exclude students from his/her peer group when mad at them, or threaten to stop being their friend in order to hurt a student?

Appendix H: IRB Approval Letter

March 9, 2011

Sarah Kiefer PhD
Psychological & Social Foundations
EDU 105

RE: **Expedited Approval** for Continuing Review
IRB#: 107783
Title: *The Adolescent Motivation and Development Study*
Study Approval Period: 03/26/2011 to 03/26/2012

Dear Dr. Kiefer:

On March 3, 2011, Institutional Review Board (IRB) reviewed and **APPROVED** the above protocol **for the period indicated above**. It was the determination of the IRB that your study qualified for expedited review based on the federal expedited category number 7.

Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies. (NOTE: Some research in this category may be exempt from the HHS regulations for the protection of human subjects. 45 CFR 46.101(b)(2) and (b)(3). This listing refers only to research that is not exempt.

Please note, if applicable, **only use the IRB-Approved and stamped consent forms for participants to sign**. The enclosed informed consent/assent documents are valid during the period indicated by the official, IRB-Approval stamp located on page one of the form. Make copies from the enclosed original.

Please reference the above IRB protocol number in all correspondence regarding this protocol with the IRB or the Division of Research Integrity and Compliance. In addition, you can find the Institutional Review Board (IRB) Quick Reference Guide providing guidelines and resources to assist you in meeting your responsibilities in the conduction of human participant research on our website. Please read this guide carefully. It is your responsibility to conduct this study in accordance with IRB policies and procedures and as approved by the IRB.

We appreciate your dedication to the ethical conduct of human subject research at the University of South Florida and your continued commitment to human research protections. If you have any questions regarding this matter, please call 813-974-5638.

Sincerely,

John A. Schinka, Ph.D., Vice-Chairperson
USF Institutional Review Board

Cc: Anna Davis/bb, USF IRB Professional Staff