

6-28-2016

The Role of Peer Status in the Self and Aggression in Adolescence and Early Adulthood

Danielle Findley-Van Nostrand
University of South Florida, dfindley@mail.usf.edu

Follow this and additional works at: <http://scholarcommons.usf.edu/etd>

 Part of the [Psychology Commons](#)

Scholar Commons Citation

Findley-Van Nostrand, Danielle, "The Role of Peer Status in the Self and Aggression in Adolescence and Early Adulthood" (2016).
Graduate Theses and Dissertations.
<http://scholarcommons.usf.edu/etd/6236>

This Thesis is brought to you for free and open access by the Graduate School at Scholar Commons. It has been accepted for inclusion in Graduate Theses and Dissertations by an authorized administrator of Scholar Commons. For more information, please contact scholarcommons@usf.edu.

The Role of Peer Status in the Self and Aggression in Adolescence and Early Adulthood

by

Danielle Findley-Van Nostrand

A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
Department of Psychology
College of Arts and Sciences
University of South Florida

Major Professor: Tiina Ojanen, Ph.D.
Jennifer Bosson, Ph.D.
Judith Bryant, Ph.D.
Jamie Goldenberg, Ph.D.
Diana Rancourt, Ph.D.
Joseph Vandellos, Ph.D.

Date of Approval:
June 6, 2016

Keywords: peer relations, social status, self-perceptions, aggressive behavior

Copyright © 2016, Danielle Findley-Van Nostrand

DEDICATION

I dedicate this work to the many who have supported me throughout my graduate career. First and foremost, I dedicate this to my husband, Caleb. You have been my best friend from the time we met, and your generous love and support mean the world to me. You obviously deserve an honorary spousal degree for your involvement. I love you and I can't wait for our next chapters. To my son, Ian, who is far too young to understand how much he has taught me already. I now know not only how to type while caring for a newborn, but I have also learned just how much love one can have for another being. I can't wait to see who you become. Everything we do is for you!

I also dedicate this to my mother, Diane, who was taken too soon. Her pride in me drove me from a young age and was apparent to anyone around her. To my father, David, who once told me that I will go to college, even if he had to drag me every day by himself. You have been steadfast in your encouragement and faith in me, and have always demonstrated hard work, grit, and fortitude (which, it turns out, are needed to complete a Ph.D.!). To Kelly, who has an inspirational positivity and generous spirit. I appreciate your unwavering confidence in me. Thank you both for all you do (and for letting me do some of my best writing at your home!). To my siblings in all of their forms: David, Jen, Rachel, Dan, and Hannah, who I can count on for endless love and support (despite the distance between some of us). I also want to include a special thank you to Jeannine and Alan, who assumed the role of supportive parents-in-law as though they have known me forever. Thank you for being so wonderful!

Finally, I dedicate this dissertation to the many friends and family members who have helped by offering their companionship in any form, even that of a listening ear over a drink. Many times, you have had more confidence in me than I did in myself. I love you all, I thank you all, and I can only hope I get the opportunity to return the support you have shown me.

ACKNOWLEDGEMENTS

I have been fortunate to receive support from a number of people I am happy to call colleagues. I would like to express my appreciation for my advisor, Tiina Ojanen, for her guidance and mentorship over the years, and for encouraging me to pursue a doctorate when I was still an undergraduate. Also thank you to my dissertation committee, including: Judy Bryant, Jennifer Bosson, Jamie Goldenberg, Diana Rancourt, and Joe Vanello, for your advice, discussions, and brainstorming at every stage of my major area paper and dissertation projects. You have molded my thinking and writing for the better. Also, thank you to Richard Pollenz for chairing my dissertation defense, lending me your wisdom, and providing opportunities to be involved with exciting initiatives at USF. Finally, thank you to the countless undergraduate research assistants who worked in the lab across the years. I have been fortunate to serve as your mentor, and appreciate your assistance in data collection and many other tasks.

TABLE OF CONTENTS

List of Tables	v
List of Figures	vi
Abstract	vii
Introduction.....	1
Dimensions of Peer Status: Acceptance and Popularity	3
Acceptance: Likeability by Peers.....	3
Popularity: Reputational Status/Power among Peers.....	5
Linking Peer Status and Self-Perceptions: Theoretical Considerations	8
Peer Status and Social Cognition: Current Research on Self-Perceptions and Social Goals	11
Social Goals as Moderators in Peer Status-Self Associations.	13
Peer Status and the Self in Adulthood	15
Peer Status and Aggression: Replicating and Extending Previous Research	17
Study 1	21
Aims and Hypotheses	21
Method	23
Participants.....	23
Measures	24
Peer regard	24
Self-concept clarity	25
Self-esteem.....	25
Aggression	25
Social goals	25
Procedure	26
Results.....	26
Differences by School.....	26
Differences by Gender	27
Bivariate Correlations	27
Associations among Peer Status, Self-Perceptions, and Aggression.....	28
Alternative model 1.....	29
Alternative model 2.....	29
Interactive Associations	32
Conclusion	32
Studies 2-4: Experimental Effects of Peer Status	36
Aims and Hypotheses	38

Study 2	40
Method	40
Participants.....	40
Measures	41
Manipulation check.....	41
Trait social goals	41
State self-esteem	41
State self-concept clarity.....	42
State hostility	43
Aggressive responses	43
Procedure	43
Results.....	44
Manipulation Check.....	44
Main Effects of Peer Status.....	44
Interactive Effects	45
Exploratory Associations among Study Variables	46
Conclusions.....	46
Study 3	48
Method	48
Participants.....	48
Measures	49
Manipulation check.....	49
Trait social goals	49
State self-esteem	49
State self-concept clarity.....	49
State hostility	49
Aggressive responses	49
Procedure	49
Results.....	50
Manipulation Check.....	50
Main Effects of Peer Status.....	50
Interactive Effects	51
Exploratory Associations among Study Variables	51
Conclusions.....	52
Study 4	53
Method	53
Participants.....	53
Measures	54
Manipulation check.....	54
Trait social goals	54
State self-esteem	54
State self-concept clarity.....	54
State hostility	54
Aggressive responses	54

Procedure	54
Results.....	55
Manipulation Check.....	55
Main Effects of Peer Status.....	56
Interactive Effects	56
Exploratory Associations among Study Variables	57
Conclusions.....	57
Discussion.....	59
Direct Effects of Peer Status on Self-Concept Clarity and Self-Esteem	59
Experimental Effects of Peer Status	61
Peer Status and Self-Perceptions: Moderation by Social Goals	63
Effects of Peer Status on Hostility and Aggression	64
Peer Status and Hostility in Adults.....	66
Limitations and Future Directions	68
Tables.....	72
Figures.....	88
References.....	99
Appendix A: Study 1 Self-Report Measures	117
Appendix B: Study 1 Peer-Report Measures	119
Appendix C: Studies 2-4: Trait/Moderator Measures.....	120
Appendix D: Studies 2-4: Outcome Measures.....	122
Appendix E: Studies 2-4: Manipulation Check Items	128
Appendix F: Studies 2 and 3: Peer Status Manipulation, Writing Task.....	129
Appendix G: Study 4: Peer Status Manipulation, False-Feedback Task.....	131
Appendix H: Study 4: Debriefing Statement	137
Appendix I: Study 1: USF IRB Approval Letters: Initial and Continuing Review	138
Appendix J: Studies 2-4: USF IRB Approval Letter: Initial and Amendment.....	143
Appendix K: Study 1: Informed Consent Documents	148
Appendix L: Studies 2 and 4: Informed Consent Page.....	152

Appendix M: Study 3: Informed Consent Page155

LIST OF TABLES

Table 1. Study 1 Means, Standard Deviations, Means by Gender, and Mean-Level Differences by Gender	73
Table 2. Bivariate Correlations among Study 1 Variables.	74
Table 3. Summary of Peer Status by Social Goal Interactions in Association with Self-Concept Clarity and Self-Esteem	75
Table 4. Study 2: Manipulation Check Items by Status Condition.....	76
Table 5: Study 2: Main Effects of Peer Status on Self-Concept Clarity, Self-Esteem, Hostility, Anger, and Aggressive and Assertive Responses to Provocation	77
Table 6. Study 2: Interaction Effects between Status and Social Goals on Self-Concept Clarity and Self-Esteem.	78
Table 7. Study 2: Correlations, Means, and Standard Deviations of the Study Variables	79
Table 8. Study 3: Manipulation Check Items by Status Condition.....	80
Table 9: Study 3: Main Effects of Peer Status on Self-Concept Clarity, Self-Esteem, Hostility, Anger, and Aggressive and Assertive Responses to Provocation	81
Table 10. Study 3: Interaction Effects between Status and Social Goals on Self-Concept Clarity and Self-Esteem.	82
Table 11. Study 3: Correlations, Means, and Standard Deviations of the Study Variables	83
Table 12. Study 4: Manipulation Check Items by Status Condition.....	84
Table 13: Study 4: Main Effects of Peer Status on Self-Concept Clarity, Self-Esteem, Hostility, Anger, and Aggressive and Assertive Responses to Provocation	85
Table 14. Study 4: Interaction Effects between Status and Social Goals on Self-Concept Clarity and Self-Esteem.	86
Table 15. Study 4: Correlations, Means, and Standard Deviations of the Study Variables	87

LIST OF FIGURES

Figure 1. Study 1: Associations between Popularity, Likeability, Dislikeability, and Self-Concept Clarity and Self-Esteem	89
Figure 2. Study 1: Associations between Popularity, Likeability, Dislikeability, and Self-Concept Clarity while controlling for Self-Esteem, and Self-Esteem while controlling for Self-Concept Clarity	90
Figure 3. Study 1: Associations among Peer Status, Aggression, Self-Concept Clarity, and Self-Esteem	91
Figure 4. Study 1: Associations among Self-Concept Clarity, Self-Esteem, Aggression, and Peer Status without Orthogonalized Aggression Variables	92
Figure 5. Associations among Self-Concept Clarity, Self-Esteem, Aggression, and Peer Status Variables using Orthogonalized Aggression Variables	93
Figure 6. Study 2: Interaction between Unpopular Status and Importance of Being Liked on Self-Esteem	94
Figure 7. Study 2: Interaction between Popular Status and Importance of Being Liked on Self-Concept Clarity	95
Figure 8. Study 4: Interaction between Liked Status and Agentic Goals on Self-Esteem.....	96
Figure 9. Study 4: Interaction between Unpopular Status and Communal Goals on Self-Esteem	97
Figure 10. Study 4: Interaction between Liked Status and Communal Goals on Self-Esteem.	98

ABSTRACT

From early on, social adjustment among peers is crucial to healthy development. Social status, a reflection of adjustment among peers, can be considered in terms of acceptance, or likeability and rejection, or dislikability, as well as popularity or reputational prestige in the peer group. Research finds meaningful links between peer status and social behaviors like aggression, but has not examined the role of dimensions of peer status in association with perceptions of the self. I conducted a set of studies examining associations among peer status (likeability, dislikability, and popularity) and self-perceptions (self-esteem and self-concept clarity), and social goals as moderators of these associations. In Study 1, I examined cross-sectional associations between peer-reported status and aggression and self-perceptions and social goals in adolescents. In Studies 2, 3, and 4, I experimentally examined the effects of peer status on the self, as well as social goals as moderators of these effects, in young adults using two newly developed manipulations of peer status. Contrary to my hypotheses, the results suggested that self-esteem and self-concept clarity were not directly associated with peer status, and that these associations largely did not differ based on social goals. However, further exploratory analyses revealed meaningful links among the study variables in youth and adults. Results have theoretical and practical implications for understanding peer status, the self, and aggression. Limitations and future directions are discussed.

INTRODUCTION

Peer relationships are critically important to social development. Beginning from early childhood, interactions with others are meaningfully tied to adjustment across emotional, behavioral, social, and other domains (Hartup, 1996; Parker & Asher, 1987). During adolescence, as youth explore and develop their identity and seek out autonomy (Zimmer-Gembeck & Collins, 2003), peers become the primary socialization agents (Harris, 1995; Larson & Verma, 1999). “Peers” refer not only to close relationships with friends, but to similar-aged individuals (approximately +/- one year) with whom one interacts regularly (Berndt, 1982; Hartup, 1983). Positive social adjustment (e.g., being liked) among peers is related to adaptive and positive behaviors, emotions, and functioning, whereas adjustment difficulties (e.g., low status or being disliked) among peers are tied to problematic development concurrently and over time (Rubin, Bukowski, & Parker, 2006). Because of the importance of healthy peer relationships, considerable research has examined social status in terms of acceptance and rejection (Dodge, Pettit, McClaskey, & Brown, 1986). Further, recent research considers *popularity* as a measure of reputational status or power among peers, that is separate from acceptance and has partially diverging implications for social-emotional and academic adjustment (Cillessen & Rose, 2005).

However, research on peer status remains limited in two important ways. First, multiple indices of social status amongst peers (i.e., acceptance or likeability, rejection or dislikeability, and popularity) have not been considered in relation to the self in adolescence, despite important developmental implications of both peer relations and identity development at this age. Further,

nearly all research on peer relations focuses on childhood and adolescence, although their importance extends to early adulthood. Recent theorizing suggests emerging or early adulthood (i.e., approximately ages 18-30) is distinct from adolescence *and* later adulthood, but shares many characteristics with the former (Arnett, 2000). Among others, these include increased self-focus, continued identity development, and great emphasis on social relations and closeness with others (Arnett, 2000; Arnett, 2007). Thus, understanding experiences among peers on the one hand, and their role in the self on the other, is important during both adolescence and young adulthood. The self reflects one's individual perceptions as a subject of experience (McConnell & Strain, 2007), and encompasses relevant constructs of self-perceptions, concepts, beliefs, identity, as well as feelings of self-worth, all of which may also be considered in terms of their structure or cognitive organization (Baumeister, 1997; McConnell & Strain, 2007). As two critical components of the self (Campbell, 1990), self-esteem and self-concept clarity (described in greater detail below) are likely socially construed, and thus impacted by social status amongst peers (herein referred to as "peer status", encompassing multiple dimensions).

In the present four studies, I examined associations among multiple dimensions of peer status (likeability, dislikeability, and popularity) and the self (self-esteem and self-concept clarity), and social goals as moderators of these associations. Further, I examined associations between and the effect of peer status on aggressive behaviors and cognitions. Study 1 includes correlational, cross-sectional data from adolescents. In Studies 2-4, I experimentally examined effects of peer status on self-esteem, self-concept clarity, and aggression in young adults. Below, I review literature relevant to both samples and methodologies, and then consider characteristics unique to each set of studies in their respective study introductions.

Dimensions of Peer Status: Acceptance and Popularity

Adjustment among peers is critically important especially during adolescence, when valuing of peer relationships peaks and peers become the primary source of socialization (Adler & Adler, 1995; Harris, 1995). Across multiple domains of adjustment, being well-liked or accepted is related to adaptive social functioning, including prosocial behaviors, friendliness, emotional well-being, and academic achievement (e.g., Newcomb, Bukowski, & Pattee, 1983; Parker, Rubin, Price, & DeRosier, 1995). Being disliked or rejected, in turn, shows inverse associations with adjustment and is tied to potentially long-lasting difficulties. For instance, rejection is related to internalizing symptoms, aggression and other externalizing problems, academic adjustment issues, and also predicts long-term problems like criminality and depression (e.g., Cillessen, Van Ijzendoorn, Van Lieshout, & Hartup, 1992; Wentzel, 2003). Thus, overall, being well-liked among peers reflects positive social-emotional adjustment, whereas rejection may posit a risk for concurrent and long-term adjustment difficulties in life.

Acceptance: Likeability by Peers

Traditional research on peer relations stems from the sociological field of sociometry, which suggests that any social group may be understood in terms of a system of attractions and repulsions (Moreno, 1953). Accordingly, soliciting information from all or most individuals within a group regarding their liking and disliking of others in the group paints a picture of the social dynamics occurring. Sociometric nominations (i.e., the number of like/dislike nominations received, standardized by group and/or or group size) are reflective of acceptance (i.e., likability) and rejection (i.e., dislikability) among peers (Asher, Coie, & French, 1992; Coie, 1990; Diehl et al., 1998). These scores may be used as continuous variables separately (Gifford-Smith & Brownell, 2003), or collectively to form a single score of “social preference” (like nominations

minus dislike nominations; Coie, Dodge, & Coppotelli, 1982). Further, sociometric scores can be used to classify and group children and adolescents into status groups of popular (accepted), rejected, controversial, and neglected (Newcomb et al., 1993). Traditionally, likeability/acceptance measured via sociometric nominations was also generally referred to as “popularity”, but as described below, this term now reflects a construct separate from traditional acceptance or likeability by peers (Cillessen & Rose, 2005).

Utilizing peer-reported information is invaluable for eliminating issues stemming from measuring solely self-reported social adjustment variables, and allows for a more holistic view of social dynamics occurring. That is, rather than relying on a single source for information (e.g., self or teacher-reports) regarding peer-group processes, peer nominations are collected from multiple participants within a group. Accordingly, and because of its eminence to research on peer relations in adolescence, in the present document, I review literature in which status is primarily operationalized by peer nominated constructs (likeability, dislikeability, and popularity). However, obtaining peer-reported information is not always feasible, and other methods should be considered. For instance, *self-perceived* status (i.e., a participant’s perception of their own level of acceptance/rejection) is also meaningful, especially when conceived in terms of its discrepancy from the peer-group’s consensus (Kistner, David, & Repper, 2007; Downey, Lebolt, Rincon, & Freitas, 1998). Further, collecting peer-reported information in the context of laboratory paradigms is not typically possible, given that a social group’s perspective requires a naturally pre-existing social context (e.g., collected in community samples). However, experiences of status (e.g., in laboratory experiments), usually *outside* of the natural social context, may be used to examine effects on outcomes of interest.

Notably, very little experimental research on adolescents, or on peer relations, exists, despite calls to address this issue in order to better understand causal relations among variables (Orobio de Castro, Thomaes, & Reijntjes, 2013). In Study 1, I utilized peer-nominated indices of status in middle school adolescents. In Studies 2-4, I aimed to bridge the methodological gap described by eliciting feelings or experiences of status among familiar peers without the literal presence of a peer group. However, despite these differences, the same theoretical framework can be used in both studies.

Popularity: Reputational Status/Power among Peers

Dating to original peer relations classifying individuals based on their respective levels of likeability and dislikeability, a subset of individuals score high in *both* (scoring high in a combined measure called “social impact” in which like most and like least nominations are summed; Dodge et al., 1983). These youth are labeled “high impact” (Coie, Dodge, & Coppotelli, 1982) or “controversial” (Newcomb et al., 1993), and show similar adjustment patterns to both well-liked and disliked individuals (e.g., LaFontana & Cillessen, 1999). However, drawing attention to the controversial nature of these individuals, researchers have recently adopted a new perspective in understanding social status among peers. Specifically, it is now generally accepted that sociometric popularity, herein referred to as likeability or acceptance, is differentiated from what is labeled as perceived, reputational, or consensual popularity (Cillessen & Rose, 2005; de Bruyn & van den Boom, 2005). Contrary to peer acceptance, reflecting personal *likeability* by individual peers, *popularity* reflects a group-level understanding of and consensus on status and prestige within the peer group (de Bruyn & van den Boom, 2005).

Peer acceptance and popularity are positively related, but not redundant, constructs. For instance, Babad (2001) reported that across 153 classrooms, the average correlation between acceptance (likeability) and popularity was .44, with less than 10% of students scoring high in both, with other studies finding similar moderate correlations (e.g., Parkhurst & Hopmeyer, 1998; though see Prinstein & Cillessen, 2003, who found a correlation of .80 in boys). Further, and importantly, acceptance and popularity show diverging relations with adjustment correlates. Whereas acceptance is dominantly correlated with *positive* adjustment, popularity shares some positive adjustment correlates, but also shows links to *negative* adjustment.

Popular youth are more likely than others to be unsatisfied and more likely to be critical towards school climate and teachers' behavior (Badad, 2001), yet score average to high in terms of performance (Schwartz, Gorman, Nakamoto, & McKay, 2006; Lease et al., 2002; though see Hopmeyer Gorman, Kim, & Schimmelbusch, 2002). Further, popular youth are centrally located within social networks, perceived as attractive and humorous, and are rated by others as leaders and desirable friends (Dijkstra, Cillessen, Lindenberg, & Veenstra, 2010; Farmer et al., 2003; Lease, Kennedy, & Axelrod, 2002). However, popularity is also associated with increased substance use (Choukas-Bradley, Gilletta, Neblett, & Prinstein, 2014; Tucker, Green, Zhou, Miles, Shih, & D'Amico, 2011), as well as risky health behaviors (Mayeux, Sandstrom, & Cillessen, 2008), suggesting some risk for long-term difficulties. In terms of social behaviors, popularity is tied to high levels of both prosociality and aggression, which may be especially relevant for adolescents and young adults.

Striving for and valuing status and dominance amongst peers is highest during adolescence (Corsaro & Eder, 1990; Gavin & Furman, 1986; Hawley, 2003; Pellegrini & Long, 2002), when respect and popularity is valued and prioritized even above friendship, personal

achievement, and romantic relationships (LaFontana & Cillessen, 2009; Merten, 2004). Accumulating evidence suggests that popular, high-status youth may behave strategically in order to gain and maintain their social position (Eder, 1995). In a study by Kornbluh and Neal (2014), peer-nominated aggressive and prosocial behaviors interacted to predict popularity: popular youth were high in both. In research from an evolutionary Resource Control Theory perspective (Hawley, 2006), two studies on European adolescents have found that popular youth exhibit both coercive and prosocial control strategies to gain, respectively, short and long-term advantages among peers (Findley & Ojanen, 2013; Hawley, 2003). Further, youth who effectively balance coercion and prosociality for personal gain score highest in popularity, whereas those using dominantly prosocial strategies are highest in likeability, and coercive strategy users are highest in dislikeability (Findley & Ojanen, 2013; Hawley, 2003). In our recent research, we found that adolescents differentiate between genuine and proactive forms of prosocial behaviors, the latter of which alone is tied to popularity while the former is tied to likeability (Findley-Van Nostrand & Ojanen, in preparation).

Clearly, peer status should be conceived in dimensions, including the separation of likeability and popularity (Cillessen & Mayeux, 2004; Luther & McMahon, 1996; Parkhurst & Hopmeyer, 1998). However, little is understood regarding associations among the dimensions of peer status and aspects of the self. Do these social experiences affect the way we perceive ourselves? Traditionally, peer status is examined as an outcome, rather than predictor, of social-emotional adjustment and behaviors, but given the importance of peer relations during adolescence and early adulthood, examining dimensions of peer status as predictors is certainly meaningful. In particular, examining not only how youth are granted various forms of status, but also how these in turn may affect their self-perceptions and subsequent adjustment may inform

understanding of efforts to prevent adjustment problems associated with experiences of social status among peers.

Linking Peer Status and Self-Perceptions: Theoretical Considerations

Most peer relations research is guided by the Social Information Processing (SIP) model (Crick & Dodge, 1994). The SIP model posits that during social interaction, individuals engage in several steps of cognitive processing, such as interpretations of social cues and response decisions. Further, the long-term memory, or knowledge base, containing self-relevant schemas, motives, and traits, is consistently referenced during online processing, resulting in social behaviors that elicit peers' evaluations (e.g., acceptance and rejection). Accordingly, much research has focused on examining associations among social cognition, behaviors, and social status among peers, presuming respective directionality of associations. For instance, individual differences in self and social cognition are seen to predict aggression, which in turn predicts acceptance and rejection amongst peers (e.g., Salmivalli et al., 2005). Thus, in the present studies, these links may also exist and were tested. However, directional associations *from* peer status *to* self-perceptions are the primary focus of this research.

Longitudinal research that speaks to the directionality of links between multiple dimensions of peer status and affiliated adjustment is scarce and has focused on aggression, with mixed findings. Aggression predicts increases in popularity and rejection, and decreases in acceptance (e.g., Dodge et al., 2003), though these are also found to be mutually associated over time (Cillessen & Mayeux, 2004; Rose et al., 2004). Yet, most studies suggest that peer status predicts changes in aggression more than vice versa (i.e., peer acceptance predicts decreases and popularity increases in aggression; Dijkstra et al., 2010; Ojanen & Findley-Van Nostrand, 2014; Zimmer-Gembeck, Geiger, & Crick, 2005). However, beyond aggression, little is known

regarding the *outcomes* of peer status. Based on the fundamental importance of both acceptance and status to personal well-being (Baumeister & Leary, 1995; Anderson, Hildreth, & Howland, 2015), the cyclical nature of psycho-social processes (Crick & Dodge, 1994), and experimental research in adults establishing meaningful outcomes of social status *outside* of the peer context (e.g., Tiedens, Unzueta, and Young, 2007; Willer, 2009), considering dimensions of peer status as predictors of various outcomes is worthwhile. For instance, if likeability or popularity enhances one's sense of self-worth or validates existing self-perceptions, it may in turn also affect behaviors and adjustment more broadly. Further, given that self-perceptions act as a part of social cognitive schemas and are theoretically relatively stable constructs (Baldwin et al., 1992), these changes may affect long-term adjustment.

The overarching aim of the present project was to examine peer status (likeability, dislikeability, and popularity) as a predictor of self-perceptions (self-esteem and self-concept clarity). Apart from the SIP framework described above, the role of peer status in research on self-related constructs is theoretically important for several reasons. First, classical theory suggests that the self is a largely social cognition (James, 1890), and during development, children internalize others' evaluations of themselves, resulting in relatively stable self-esteem (Cooley, 1902; Harter, Waters, & Whitesell, 1998; Mead, 1934). Further, during adolescence, cognitive advances (e.g., perspective taking, higher-order self-concepts) allow for greater integration among interpersonal experiences and self-schemas (Harter, 2006). Youth engage in "reflected appraisal", in which their self-evaluations and identity are primarily driven by feedback and social experiences with others (Hergovich, Sirsch, & Felinder, 2002). Given that peers encompass the primary social context for adolescents (Hartup, 1996), it is logical that status granted from peers may influence the self.

Secondly, the sociometer theory suggests that self-esteem acts as a monitor of interpersonal acceptance (Leary, Tambor, Terdal, & Downs, 2005). Thus, when one's acceptance among others is threatened, this is reflected in decreased self-esteem, in turn signaling the need to re-establish acceptance. From this perspective, self-esteem is not simply a correlate, but a direct consequence of peer evaluation. Considerations from this theory may be extended in two ways: first, other forms of status (e.g., popularity or respect) may also influence self-esteem to signal a need for change. In fact, dominance theory (Barkow, 1975) similarly posits that self-esteem has evolved to act as a monitor of dominance. Further, as individuals may have a need for coherency in cognition (e.g., Festinger, 1962), a lack of coherency regarding one's self-beliefs may also be signaled by a decline in acceptance and status. Specifically, within the context of adolescents' peer relationships, taking a hit in acceptance or in popularity (low acceptance, low popularity, or high rejection) may decrease feelings of self-worth while also increasing cognitive confusion regarding the self.

Finally, as described in greater detail below, existing research shows negative or adverse experiences with peers are meaningfully tied to self-regard. Thus, understanding how more positive adjustment among peers, like high status (likeability or popularity) may influence feelings of self-worth, as well as other aspects of the self, would further elucidate the mechanisms at hand. Further, social goals, or what individuals strive for in interactions (Erdley & Asher, 1996), may moderate associations among peer status and self-perceptions. That is, experiences of peer status may differentially affect the self, depending on how much an individual strives for a particular form of status. Presently, I examined the moderating role of social goals in links between peer status and self-perceptions.

Peer Status and Social Cognition: Current Research on Self-Perceptions and Social Goals

Despite accumulating research on the dimensions of peer status and their correlates, little is known about their links to self-perceptions, concepts, or esteem. Presently, I aimed to extend this research by examining peer acceptance, popularity, and rejection in relation to two core components of the self: self-esteem and self-concept clarity.

Self-esteem (SE) refers to global evaluative judgments about the self as a person of worth (Rosenberg, 1965; Tesser & Campbell, 1983). Self-concept clarity (SCC), in turn, is defined as the extent to which self-concepts are internally consistent, clearly defined, and temporally stable (Campbell, Trapnell, Heine, Katz, Lavalley, & Lehman, 1996). Whereas SE reflects the valence of attitudes towards the self, SCC reflects the cognitive coherency of self-knowledge, regardless of its evaluative nature or specific content, and can be considered a measure of the “structure” of self-concepts (Campbell et al., 1996). Although separate constructs, the association between SCC and global SE is positive: high and low levels of each tend to co-occur and are mutually related over time (Baumgardner, 1990; Campbell, 1990; Campbell et al., 1996; Stinson, Wood, & Doxey, 2008; Wu, 2009). Thus, the extent to which self-concepts are consistent and clear to the individual is intertwined with feelings of self-worth, or SE. Accordingly, in order to understand both affective and cognitive aspects of the self, researchers acknowledge the need to consider structural aspects of the self, and SCC in particular, along with SE (Campbell, 1990; Campbell, Assanand, & Di Paula, 2003). Presently, I examined both SE and SCC as outcomes of peer status.

To date, most research on peer status and the self has focused on SE in relation to acceptance and rejection. Overall, positive peer relationships are positively related to and predict self-worth (Boivin & Hymel, 1997; Harter, Stocker, & Robinson, 1996; Hartup & Stevens,

1997), which in turn predict later social functioning among peers in childhood (Verschueren, Buyck, & Marcoen, 2001). Yet, most research in this context centers on *negative* experiences amongst peers, providing valuable evidence regarding self-processes of low, but not high status youth. For instance, rejection may lead to internalized feelings of self-blame and worthlessness (Graham & Juvonen, 2001; Harter, 1999). Peer difficulties like rejection during the early school years (grades 1-3) is predictive of a negative self-concept in later elementary school (Ladd & Troop-Gordon, 2003). During adolescence, positive self-perceptions may predict decreases in later adversities (victimization, rejection, and friendlessness), which in turn influence regard for others (Salmivalli & Isaacs, 2005).

Further, few studies have considered peer popularity along with SE, but suggest this link exists. Thomaes, Reijntjes, Orobio de Castro, Bushman, Poorthuis, and Telch (2010) found that pre- to mid-adolescents' *state* SE directly depended on manipulated experiences of peer approval and disapproval. Following disapproval from peers, youth's low SE increased only when viewing positive feedback from popular peers, further suggesting that both likeability and popularity may influence adolescents' selves. In de Bruyn and van den Boom (2005), trait social SE was directly positively related to popularity, and indirectly related to likeability via decreased peer role strain. However, clearly, more research on SE and dimensions of peer status is needed.

Research on SCC is primarily conducted in adults, and has mostly focused on psychological and emotional, rather than social correlates. In adults, SCC is related to secure attachment, positive affect, high relationship quality, cooperative problem solving, and low aggression following ego threats (Bechtoldt et al., 2010; Campbell et al., 1996; Lewandowski et al., 2010; Stucke & Sporer, 2002; Wu, 2009). In adolescents, some research also supports SCC as an indicator of positive adjustment: SCC is related to identity commitment concurrently, and

mutually associated with SE over time (Schwartz et al., 2010; Wu et al., 2010). However, these are the only published studies on adolescent SCC. In our work, across a set of studies, we found that SCC was negatively related to aggression, negative affect, narcissism and depression, and positively related to prosocial behaviors in early adolescents. Further, links between SCC and positive adjustment are more consistent than those SE and adjustment: when controlling for each, SE was positively or unrelated to aggression.

Research has not examined SCC and peer status, but the above may be considered as indirect support for meaningful associations between the two. That is, if SCC is linked to prosocial adjustment, it may also be directly or indirectly linked to peer acceptance. However, with regards to SCC and peer status, it is also helpful to consider adult studies conducted outside of the peer context. First, SCC is negatively impacted by stressors, which can weaken one's sense of identity and require reconsideration of self-concepts (Ritchie, Sedikides, Wildschut, Arndt, & Gidron, 2010). Thus, feeling unfulfilled in terms of acceptance and status may serve as a stressor, in turn decreasing SCC. Secondly, in a set of studies examining self-concept consistency, which differs from SCC in that it reflects similarity in self-beliefs across multiple contexts (Donahue, Robins, Roberts, & John, 1993), experiences of power heightened consistency of self-concepts (Kraus, Chen, & Keltner, 2011). Thus, as likeability and popularity are indicators of high status, they are likely positively related, and rejection negatively related, to SCC. In the present studies, I examined these associations. Also, I expected that these links may, at least partially, be moderated by one's goals or motives for social interaction.

Social Goals as Moderators in Peer Status-Self Associations

Across the present studies, I examined social goals as moderators of the associations between dimensions of peer status and SE/SCC. Social goals reflect what individuals strive for in

social interactions and help to explain behaviors among peers. Based on the interpersonal circumplex theory (Locke, 2003; Ojanen, Grönroos, & Salmivalli, 2005), social goals can be examined as trait-like motives reflecting strivings for closeness with others (communal/closeness goals) and for social status and power (agentic/status goals). Communal goals are positively related to prosocial behaviors, temperamental affiliation, empathy, positive perceptions of peers, and social acceptance, and negatively to withdrawal and aggression, whereas agentic goals are negatively related to prosocial behaviors and positively to narcissism, aggression, and popularity (Caravita & Cillessen, 2012; Findley & Ojanen, 2012; Ojanen & Findley-Van Nostrand, 2014; Ojanen, Findley, & Fuller, 2012; Salmivalli et al., 2005; Sijstema et al., 2009; Thomaes, Stegge, Bushman, Olthof, & Denissen, 2008). Accordingly, domains of communion and agency map onto the distinction between forms of high status: acceptance or likeability reflects high communion, whereas status in the form of popularity or prestige reflects high agency.

Presently, I examined whether individual differences in trait-like agentic and communal goals interact with peer status in association with SCC and SE. Concordance between social goals and experienced social status may enhance SCC and SE beyond their unique effects on these constructs. Several relevant theories suggest that SCC and SE would be heightened when one's social experiences are in line with one's strivings. First, historically, cognitive dissonance theory suggests that discrepant cognitions create discomfort (Festinger, 1962). For instance, the knowledge of one's low status, in combination with highly valuing high status and power, may lessen SE and create confusion within the self. Secondly, felt authenticity reflects a sense of positivity arising from behaviors that are driven by choice and self-expression (Kernis & Goldman, 2006). If one experiences status that aligns with their trait-like motives, felt authenticity may be higher, in turn potentially reflected in heightened SE and SCC. Third, self-

verification theory states that individuals seek self-confirmatory feedback (Swann et al., 1992), further suggesting that alignment between strivings and experienced status may result in heightened positivity and clarity of self-perceptions. Thus, I expected that communal goals in combination with being highly liked, and agentic goals in combination with being highly popular, would be related to high SE and SCC. A high level of either social goal in combination with being disliked, in turn, was considered especially likely to be related to low SE and SCC. I expected these interactions to emerge in both correlational (Study 1) and experimental (Studies 2-4) data.

Peer Status and the Self in Adulthood

In Studies 2-4, based on the rationale outlined above, I aimed to extend this research by examining the *causal* effects of likeability, dislikeability, and popularity on SE and SCC using two manipulations of peer status. Acceptance and belonging, as well as status and power, are frequently examined in adults (e.g., Leary, Cottrell, & Phillips, 2001; Keltner, Gruenfeld, & Anderson, 2003), but this occurs outside of the context of the peer group, typically in laboratory paradigms with strangers. This is an important contextual difference. Familiarity is known to affect social behaviors (e.g., Doyle, Connolly, & Rivest, 1980), and thus it may also influence responses to experiences of status. In theory, likeability and popularity are likely more highly valued when rewarded by peers as opposed to strangers. Accordingly, reactions in terms of changes in SCC and SE based on status granted by peers may be especially strong relative to other contexts (e.g., amongst strangers). Thus, in Studies 2-4, I examined the effects of status *among peers* on SCC and SE, and whether social goals moderate these associations. In these studies, peer status included likeability, dislikeability, and popularity as in Study 1, but also included a condition of unpopularity.

During adulthood, the nature of the peer group may change, but it does not lose its importance. Despite increased independence generally and in terms of selection of peers (Arnett, 1998; Sullivan & Sullivan, 1980), social relationships remain an important driver of adjustment across ages (Leary & Baumeister, 2000). Yet, very little research directly examines the peer context beyond adolescence. One reason for this may simply be practical: for adults, peer groups are not typically structured within schools or classrooms that can be targeted for research.

Some evidence suggests that peer status in adolescence is meaningfully related to adjustment during early adulthood. Rejected youth are more likely to exhibit later externalizing problems, whereas well-liked youth are more likely to have successful careers and positive social relationships, and popular youth are more likely to engage in risky and substance use behaviors (Allen, Schad, Oudekerk, & Chango, 2014; Sandstrom & Cillessen, 2010; Zettergren, Bergman, & Wangby, 2006). However, the role of peer status *during* emerging adulthood is not currently understood, though indirect evidence and one study shine some light on the issue.

LaFontana and Cillessen (2009) compared the prioritization of various social domains across childhood, adolescence, and early adulthood (college-age). Specifically, they compared the proportion of participants choosing status enhancement over other priorities, and found that a similar proportion of adolescents and young adults chose status enhancement over friendship and compassion (and both groups were higher than younger children). Further, especially when compared to older adolescents, college-age students did not differ in relative importance of status over any other priorities (LaFontana & Cillessen, 2009). Thus, while acceptance is unquestionably important to the self (e.g., SE; Leary & Downs, 1995), status in terms of popularity also likely continues to influence self-concepts and adjustment into adulthood.

In the only study to date examining multiple dimensions of peer status during early/emerging adulthood, Lansu and Cillessen (2012) approached methodological challenges (i.e., how to target a peer-group beyond adolescence) by examining indices of peer status in a professional college with structured classrooms (i.e., the same group of students took many classes together and were thus familiar with one another). This study established discriminant validity of acceptance and popularity in adults: whereas acceptance was positively related to prosocial leadership, negatively to relational aggression and social exclusion, and unrelated to dominant leadership, popularity was positively related to both dominant and prosocial leadership as well as relational aggression, and negatively related to social exclusion (Lansu & Cillessen, 2012). These findings suggest that patterns among forms of peer status in early adulthood mirror those found in adolescence.

Based on the above literature, as well as the theory of emerging adulthood as a developmental life stage with many features of an “extended” adolescence (Arnett, 2000), the role of peer status in self-perceptions is presumably similar during this time to that of adolescence. That is, self-focus and importance of socialization continue to remain high in adolescence and emerging adulthood relative to earlier childhood and later adulthood (Arnett, 2007). Given these theoretical and empirical bases, I expected peer status, SE, SCC to be meaningfully and similarly associated in youth (Study 1) and adults (Studies 2-4).

Peer Status and Aggression: Replicating and Extending Previous Research

A secondary aim of this project was to replicate and extend existing research on peer status and aggression. Specifically, apart from the associations between and effects on self-perceptions, in each study, I also examined peer status as a predictor of aggression. In Study 1, I examined peer-reported overt, relational, proactive, and reactive forms of aggression (described

below). In Studies 2-4, I examined aggression as felt hostility and aggressive responses to hypothetical provocation. Because of the number of associations examined in Study 1, further elaboration on the links between forms of peer status and various indices of aggression is warranted.

Aggression tends to be negatively related to likeability, and positively to dislikeability and popularity amongst peers (e.g., Cillessen & Mayeux, 2004; Dodge et al., 2003; Ojanen & Findley-Van Nostrand, 2014; see Mayeux, Houser, & Dyches, 2011). However, research on aggression also differentiates between overt/direct (e.g., physical fighting) and relational/indirect (e.g., gossiping and rumor-spreading) forms on the one hand, as well as between proactive (i.e., instrumental, goal-oriented) and reactive (i.e., hostility in response to perceived provocation) forms on the other (see Little, Jones, Hendrich, & Hawley, 2003). Overt aggression shows a stronger negative association with peer acceptance than relational aggression, which is especially positively related to popularity (Cillessen & Mayeux, 2004; Puckett, Aikins, & Cillessen, 2008; though overt aggression is also tied to high popularity; Cillessen & Rose, 2005; LaFontana & Cillessen, 2010).

Proactive and reactive forms of aggression are rarely examined along with dimensions of peer status, but they were expected to show similar relations as overt and relational forms. Existing research shows reactive aggression (defensive reactions to provocation or frustration) is negatively related to likeability and positively with dislikeability among peers (Dodge et al., 2003). Because aggression directly hurts and undermines connections with others, proactive aggression also likely elicits high levels of rejection and low levels of acceptance by peers (de Bruyn, Cillessen, & Wissink, 2010; Raine et al., 2006). In terms of popularity, these associations are less clear. Because aspects of relational aggression can be considered socially competent

(especially relative to overt forms; Andreou, 2006; Rodkin & Roisman, 2010), it may show similar associations as proactive or goal-oriented aggression. Thus, to the extent that popular youth are motivated to maintain their high status (Dijkstra et al., 2010; Ojanen & Findley-Van Nostrand, 2014), popularity is likely positively related to proactive aggression.

Reactive aggression, in turn, was expected to be either positively or negatively related to popularity: popular youth, in terms of their social skills, do not fit the profile for a reactively aggressive adolescent. Yet, they may be especially motivated to defend their position in the status hierarchy (Adler & Adler, 1998), which could be reflected in high levels of aggressive responses based on even slight perceptions of threat. Only one study has directly compared proactive and reactive aggression in relation to popularity amongst peers: popularity was positively related to proactive and negatively to reactive aggression concurrently, and was unrelated to reactive but predicted increases in proactive aggression over time (Stoltz, Cillessen, van den Berg, & Gommans, 2015). This initial work suggests that popularity may show differential associations with forms of aggression, but further research is warranted.

Overall, based on the research reviewed above, I expected to observe similar associations between peer status and each form of aggression in Study 1. However, analysis of multiple forms of aggression was expected to extend existing research and allow for a somewhat exploratory view of any differences in associations that may emerge. Assessment of cross-sectional associations (Study 1) among peer-reported peer status and aggression served the purposes of 1) replicating existing links between peer status and aggression in a diverse sample of early adolescents, 2) allowing for comparisons of alternative directional models (see specific aims below), and 3) extending understanding of peer status to include multiple forms of aggression.

Because examining several forms of aggression concurrently in an experimental paradigm is not feasible, in Studies 2-4, aggression was operationalized as felt hostility and aggressive responses to hypothetical provocation. Assessment of the causal links between peer status and aggression in adults served the purposes of 1) extending research on multiple dimensions of peer status to adulthood, 2) testing two novel manipulations of peer status, and 3) testing whether peer status is causally related to aggression. Specific aims of Studies 2-4 are described below following Study 1.

STUDY 1

Adjustment among peers is particularly important during adolescence. In this study, I examined cross-sectional associations among peer status (likeability, dislikeability, and popularity), SE and SCC, and aggression. The findings were expected to extend existing literature in several ways. First, they were expected to provide information on how different forms of peer status are related to adolescents' sense of self-worth as well as the clarity of their self-concepts. As such, results were expected to have implications for the study of the social context in self-development and adjustment. To date, only a couple of studies have examined SCC in adolescence, although it may be especially meaningful to adjustment during this time in development. Second, self-perceptions do not work in isolation, but rather along with other cognitive processes, such as social goals (Crick & Dodge, 1994). Thus, the effects of social experiences on self-perceptions may well be strengthened depending on existing goals for social interaction. Testing moderation of these associations by social goals was expected to provide a greater understanding of related social cognitive processes.

Aims and Hypotheses

Research Aim 1: *Examine whether indices of peer status are directly related to SE and SCC in adolescents.*

Hypothesis 1a: Likeability will be positively related to SE and SCC at the bivariate level and when controlling for dislikeability and popularity.

Hypothesis 1b: Popularity will be positively related to SE and SCC at the bivariate level and when controlling for likeability and dislikeability.

Hypothesis 1c: Dislikeability will be negatively related to SE and SCC at the bivariate level and when controlling for likeability and popularity.

Research Aim 2: *Examine whether social goals moderate associations between indices of peer status and the self.*

Hypothesis 2a: The associations between likeability and SE/SCC will be stronger for youth high in communal goals.

Hypothesis 2b: The associations between popularity and SE/SCC will be stronger for youth high in agentic goals.

Hypothesis 2c: The associations between dislikeability and SE/SCC will be stronger for youth high in agentic goals *or* communal goals.

Research Aim 3: *Replicate existing links between forms of peer status and aggression.*

Hypothesis 3a: Likeability will be negatively related to peer-group aggression.

Hypothesis 3b: Popularity will be positively related to peer-group aggression.

Hypothesis 3a: Dislikeability will be positively related to peer-group aggression.

Research Aim 4: *Examine mean-level differences by gender.*

Hypothesis 4: Based on established gender differences in peer relational processes (Rose & Rudolph, 2005), I expect that female adolescents will score higher in likeability and communal goals, and lower in agentic goals and SE than male adolescents. Further, males will likely score higher in most forms of aggression, but may not differ from females in indirect aggression, in line with existing findings (Card, Sawalani, Stucky, & Little, 2008).

Supplementary and partially exploratory research aims:

Research Aim 5: *Examine differences in associations between peer status and aggression based on form of aggression.*

Research Aim 6: *Compare three models testing alternative directional associations. Specifically, compare models in which 1) peer status predicts SE and SCC, which in turn predict aggression, 2) peer status predicts SCC, SE, and aggression, and 3) SCC and SE predict aggression, which in turn predicts peer status.*

Research Aim 7: *Examine whether likeability or popularity is more strongly tied to SE and SCC in youth.*

Research Aim 8: *Examine whether evaluative (SE) or cognitive structural (SCC) aspects of the self are more impacted by peer status in youth.*

Method

The data were collected during 2014 from two local middle schools, using self and peer-report surveys. This study was approved under IRB protocol #14783 (See Appendix I for IRB approval letter and continuing review approval), and conducted in the Hillsborough County School District (school board approval # RR-1314-44).

Participants

585 students from two local middle schools participated in this study (approximately 35% of the eligible participants). Students were considered eligible if they were fluent in English and were enrolled in classes not classified as special education. Prior to consent administration, meetings were held with individual school principals and school district personnel regarding the aims of the overarching project and to establish relationships and elicit interest. Students were recruited by administering parental consent and participant assent documents approximately one

month prior to survey administration. Parental consent was administered in English and Spanish. See Appendix K for informed consent documents. Participants represented dominantly low-mid socioeconomic status families (approximately 87% of students from one school, and 70% of the second school qualify for free or reduced lunch based on household income).

Because this study relied on peer-reported peer status and behavior measures, some participants were excluded based on participation rate in their respective classrooms; if only a few students in a classroom participated, the reliability of nominations may be compromised. However, as described by Marks and Cillessen (2014), reliability may still be achieved even when participation rate is less than ideal. Following their approximations, any class in which less than 25% of students participated were excluded from the analyses (classroom participation was 38% on average, ranging from 25%-65%). This left a final N of 472. Preliminary analyses indicated that findings aligned between the original full sample and the currently used reduced sample, suggesting that the difference in participation rate did not skew the findings.

The final group of 472 participants included 314 (66.5%) females, and 156 (33.1%) males. Two participants (.4%) elected not to report their gender. The ethnic distribution of the sample was as follows: 142 (30.1%) White/Caucasian; 128 (27.1%) Black/African American; 89 (18.9%) Hispanic, 71 (15%) Multi-Racial; 14 (3%) other; 14 (3%) did not know their race/ethnicity; and 14 (3%) elected not to report their ethnicity.

Measures

See Appendix A for full self-report measures, and Appendix B for peer-report measures.

Peer regard. Likeability (acceptance) and dislikeability (rejection) were assessed using sociometric procedures. Specifically, students reported on who they liked, who they disliked, and who they believed were the most popular in their class (e.g., Cillessen & Rose, 2005;

Newcomb et al., 1993). These measures have been used reliably and validly in previous studies for decades.

Self-concept clarity. The 12-item Self-Concept Clarity Scale (Campbell et al., 1996) was used to measure trait clarity and coherency of self-concepts ($\alpha = .75$). This scale has been used reliably in two published studies in adolescence (Schwartz et al., 2010; Wu et al., 2010), as well as in unpublished studies from our research group in adolescence and adults.

Self-esteem. The 10-item Rosenberg Self-Esteem Scale (Rosenberg, 1962) was used to measure trait feelings of self-worth ($\alpha = .72$). This scale is frequently and reliably used in adolescent samples.

Aggression. Peer nominations were collected using the method described above. Aggression was measured using 13 items reflecting the forms and functions of aggression. Three items measured direct aggression (e.g., “who hits or pushes others around?”; $\alpha = .87$), and four items measured indirect aggression (e.g., “who, when mad at a person, ignores or stops talking to them?”; $\alpha = .78$; Crick & Grotpeter, 1995). Further, three items measured reactive (e.g., “who overreacts angrily to accidents?”; $\alpha = .81$) and proactive (“who threatens and bullies others?”; $\alpha = .72$; Dodge & Coie, 1987; Salmivalli & Neiminen, 2002) functions of aggression. These scales, and similar versions of them, have been used reliably and validly in previous studies.

Social goals. The 33-item Interpersonal Goals Inventory for Children (IGI-C; Ojanen et al., 2005) was used to measure agentic and communal goals. In this measure, eight subscales are combined to form two vector scores reflecting overarching goals towards agency and communion (for the combination procedure, see Locke, 2003). This measure has been reliably used in several studies in adolescents across countries (e.g., Caravita & Cillessen, 2013; Ojanen & Findley-Van Nostrand, 2014; Sijtsema et al., 2009; Thomaes et al., 2010).

Procedure

Students completed surveys at school, during school hours. Per the school district's regulations, participating students were taken from their social studies courses to the school's library, where they completed the survey. Surveys were read aloud by myself and supervised undergraduate research assistants in groups of 3-5 students to ensure reading comprehension (over 70% of one school, and 60% of the second school, read at below state mandated reading levels based on school district data). Self-report surveys included likert-rating scales (detailed below). The peer-report portion of the survey included a list of participating students' names in each respective class (social studies classroom). Although peer-nominations across the entire grade may be desirable and in line with the majority of existing peer relations research, such a procedure was not possible in the current study based on school district requirements and restrictions. On the peer-report survey, next to each student's name, participants checked off whether they felt the individual item described that student or not. The district requirements did not allow open nominations, as it would have introduced the opportunity for students to nominate other students who did not agree to or have parent permission to participate in the study. Individual scale scoring is detailed above.

Results

Differences by School

To examine differences between participants recruited from the two separate schools, I first tested mean-level differences in the study variables by school membership using analysis of variance (ANOVA). Participants in School 1 scored lower in SCC ($M = 2.75$; $SD = .65$) than participants in School 2 ($M = 3.10$; $SD = .92$), $F(1,470) = 22.52$, $p < .001$. No other significant differences emerged. Secondly, associations tested below (Figures 1-5) were also examined

using multi-group modeling by school (Joreskog & Sorbem, 1993). A model with paths free to vary across groups (in this case, school membership) was estimated and compared to models in which each individual path was constrained to be equal between the groups. Comparisons indicated that paths did not differ between schools, suggesting that associations were similar rather than different across the schools. Thus, the following analyses were conducted in aggregated data.

Differences by Gender

To examine mean-level differences by gender, I used ANOVA. See Table 1 for the overall variable means, standard deviations, and mean-level differences by gender. Relative to males, females scored higher in popularity, likeability, and communal goals, and lower in dislikeability, SCC, SE, and proactive aggression. Females also scored marginally lower in overt aggression than males (see Table 1). Thus, Hypothesis 4 regarding gender differences was partially supported.

In order to compare whether the associations tested in the models below differed significantly between boys and girls, I tested each path using multi-group modeling. Results suggested that paths did not differ between genders.

Bivariate Correlations

See Table 2 for correlations among the study variables. Contrary to expectations, popularity, likeability, and dislikeability were unrelated to SCC and SE. Popularity was positively related agentic goals and all forms of aggression, and unrelated to communal goals. Likeability was unrelated to social goals and overt, relational, and reactive forms of aggression, and negatively related to proactive aggression. Dislikability was unrelated to social goals, and positively related to all forms of aggression. SCC and SE were positively correlated, and SCC

was unrelated to social goals and relational and reactive forms of aggression, and unexpectedly, positively related to overt and proactive forms of aggression. SE was unrelated to agentic goals and relational aggression, positively related to communal goals, and was also positively related to overt and proactive forms of aggression (and marginally to reactive aggression). Agentic and communal goals were moderately positively correlated, and agentic goals were positively related to all forms of aggression, whereas communal goals were unrelated to aggression. Finally, all forms of aggression were mutually positively related.

Associations among Peer Status, Self-Perceptions, and Aggression

First, based on proposed direct associations between peer status variables and self-processes, I tested a model in which SCC and SE were regressed upon popularity, likeability, and dislikeability. There were no significant associations among peer status and SCC and SE (see Figure 1). Further, these associations were non-significant regardless of whether SE was controlled for in associations between peer status variables and SCC, or whether SCC was controlled for in associations between peer status variables and SE (see Figure 2). Given that popularity, likeability, and dislikeability were significantly correlated, direct associations between each peer status variable and SCC/SE were also tested without including the other status variables as predictors. Results did not differ depending on whether other status variables were controlled for or not. Finally, these associations also did not differ based on controlling for SE in SCC-peer status associations, or controlling for SCC in SE-peer status associations. Thus, hypotheses 1a-1c were not supported.

A supplementary aim of this study was to examine alternative models depicting alternative directions of associations (Research Aim 6). First, because peer status was not related to SCC or SE, the first model in which status predicts self-perceptions, which in turn predict

aggression was not estimated (links between SCC and SE and aggression would be redundant with the third model proposed, tested as the second model below).

Alternative model 1. Based on the primary aims of the present research (i.e., examining peer status as predictors of self-perceptions and aggression), I tested a model in which peer status variables were set to predict the forms of aggression while controlling for one another (see Figure 3). There were two reasons for including this model. First, the theoretical rationale outlined above suggests that peer status may directly affect self-perceptions and behaviors (despite peer status-self links emerging as nonsignificant). Secondly, although previous research has found that aggression predicts peer status (in line with the social information processing perspective), some studies have found that status more strongly predicts changes in aggression over time. Inclusion of this model allows for comparisons between these directional links.

Model fit was evaluated using the Comparative Fit Index (CFI; acceptable model fit = .90 or above; good model fit = .95 or above), and Root Mean Square Error of Approximation (RMSEA; acceptable model fit = .05 or below; see Hu & Bentler, 1999). This model fit the data well (see Figure 3), and several significant associations emerged (non-significant paths were removed from the model). While controlling for the other forms of peer status, popularity was positively associated with all four forms of aggression. Likeability was negatively related to relational and proactive aggression, marginally negatively to overt aggression, and unrelated to reactive aggression. Dislikability was positively associated with all four forms of aggression (see Figure 3). Thus, overall, with the exception of the association between likeability and reactive aggression, Hypotheses 3a-3c were supported.

Alternative model 2. Based on the social information processing model of peer relations in which stable trait-like self-perceptions may affect behaviors, which in turn elicit peer

responses (e.g., likeability by peers), I next tested a model in which the peer status variables were regressed upon the aggression variables, which were in turn regressed upon SCC and SE. This model also allowed for testing of Hypotheses 3a-3c, which entailed replicating links between peer status and aggression found in existing research. This model fit the data well, and several significant associations emerged (non-significant paths were removed from the model; see Figure 4). Firstly, SCC was marginally negatively related to reactive aggression, but unrelated to the other forms (when controlling for SE). SE, in turn, was positively related to overt, reactive, and proactive aggression (in line with zero-order associations). In this model, while controlling for each respective form of aggression, overt aggression was positively related to popularity and dislikeability, relational aggression was positively related to popularity and unrelated to likeability and dislikeability, reactive aggression was marginally positively related to popularity, positively related to likeability, and unrelated to dislikeability, and proactive aggression was marginally negatively related to popularity, negatively related to likeability, and positively related to dislikeability (see Figure 4). Notably, several associations between aggression and peer status in this model were unexpected, and were likely due to issues of multicollinearity. That is, including four positively related forms of aggression as simultaneous predictors leaves the variance used to explain differences in peer status difficult to interpret (i.e., there is considerable overlap in what each predictor explains; Hair, Tatham, & Anderson, 1998). Because the associations depicted seem to depend on which predictors are included, the precision of the estimated regression coefficients may be compromised (Yoo, Mayberry, Bae, Singh, He, & Lillard, 2014).

To address multicollinearity, I utilized an established variable orthogonalization procedure (see Geldof, Pronprasertmanit, Schoemann, & Little, 2013; Lance, 1988; Little et al.,

2006). In this procedure, overlapping variance among the predictor variables (e.g., the four aggression variables) is removed by regressing each variable onto the others and saving the residuals scores, representing unique variance *not* shared by the other variables, as orthogonal (uncorrelated) variables to be used as predictor variables (in the case of more than two predictor variables, a composite score is formed based on individual residual scores for each target variable; see also Ojanen & Kiefer, 2013). This procedure is considered statistically more desirable than other methods of handling multicollinearity (e.g., dropping predictor variables from the model; Geldof et al., 2013).

The model using orthogonalized aggression variables as the predictor variables is reported in Figure 5. This model fit the data well. As seen here, overt, relational, and reactive aggression were positively related to both popularity and dislikeability, and proactive aggression was positively related to dislikeability and negatively to likeability. Self-concept clarity was unrelated to aggression, and self-esteem was unrelated to overt, relational, and reactive forms of aggression and positively related to proactive aggression. Thus, because this model depicts aggression-peer status links that are not compromised due to multicollinearity, and concur with theory and the bivariate correlations, these were used for alternative model comparison in the present study.

In order to address Research Aim 6, model fit comparisons (between models depicted in Figure 3 and Figure 5) were conducted by examining change in CFI between models, with change in CFI of greater than .01 indicating a meaningful difference in model fit (Cheung & Rensvold, 1999). There was no significant difference in model fit between the models. Thus, the data did not support one model over the other.

Interactive Associations

Continuous interactions among forms of peer status and social goals in relation to SCC and SE were tested using established methods (Aiken & West, 1991). Specifically, variables were mean-centered before creating continuous interaction terms, which in turn were used as predictors of the specific outcome of interest in a regression analysis. Each interaction test included both main effects of the specific form of peer status and the social goal, as well as their interaction term. See Table 3 for a summary of interactions. Because of the number of tests included, only the interaction terms are presented (see Table 3). Peer status variables (likeability, dislikeability, and popularity) and social goals (agentic and communal goals) did not significantly interact in their associations with SCC or SE. Thus, Hypotheses 2a-2c were not supported.

Conclusion

A number of hypotheses in Study 1 were not supported. First, peer status was not directly associated with SCC and SE at the bivariate level or in the path models. This was unexpected given previous research finding that especially peer rejection is negatively related to SE (e.g., Graham & Juvonen, 2001; Ladd & Troop-Gordon, 2003). However, SE and popularity were marginally positively correlated. Although only a trend, this is in line with research finding a positive link between these constructs (de Bruyn & van den Boom, 2005). Secondly, associations between peer status and SCC and SE were not dependent on social goals. That is, associations between likeability, dislikeability, and popularity among peers with adolescents' self-perceptions do not seem to depend on the extent to which youth strive for agency or communion among peers.

As a secondary aim of this study, I tested models depicting alternative directional associations between peer status and aggression/self-perceptions on the one hand, and between self-perceptions, aggression and peer status on the other. Notably, the data were cross-sectional, which precludes inferences of directionality. However, these comparisons shed some light on the associations of interest, replicating and extending existing research on the links between 1) peer status and aggression, and 2) SE, SCC, and aggression.

First, comparisons between alternative directional models revealed some unexpected findings. Overall, as expected (see Figure 3), popularity and dislikeability were positively, and likeability negatively, associated with aggression regardless of its form. As an exception, likeability was unrelated to reactive aggression. However, when forms of aggression were set to predict status, results were somewhat as expected, but with some surprising findings (see Figure 5). For instance, likeability was only negatively related to proactive aggression, but unrelated to the other forms of aggression, and popularity was unrelated to proactive aggression. While speculative, these results may suggest that, in the present sample, youth may actively dislike those they perceive as behaving aggressively for personal gain (and not grant them popularity), whereas hostile responses to provocation are perceived as more intimidating, potentially granting popularity. This is in line with research finding that especially adolescent boys who are perceived as “tough” are also popular (Rodkin et al., 2000). However, these associations are partially discrepant from the hypotheses, and should be further examined in future research.

Secondly, links between SCC/SE and aggression were not a primary focus of this study, but warrant some discussion. First, current research on the links between SE and aggression is mixed, with studies finding positive, negative, and null associations. On the one hand, youth with low self-regard are thought to be especially likely to act out and aggress towards others (e.g.,

Donnellan et al., 2005). On the other, youth with high and especially inflated SE are considered especially easy to fall victim to ego-threat, acting out accordingly (e.g., Salmivalli, 2001). Still other findings suggest no linear relationship between SE and aggression (e.g., Washburn, McMahon, King, & Silver, 2004), but rather a curvilinear relationship in which high and low of SE are positively linked to aggression (Perez, Vohs, & Joiner, 2005). In the present study, SE was positively related to proactive aggression and unrelated to the other forms (and, if interpreted based on un-orthogonalized aggression variables, is positively related to overt, reactive, and proactive forms of aggression and unrelated to relational aggression). Little research to date examines SE in relation to multiple forms of aggression in youth. Thus, the findings contribute to the literature on SE and aggression. Links between SCC and aggression in adolescents have not been documented, but research in adults suggests high SCC may buffer against aggression (Stucke & Sporer, 2002). In the present study, findings from the analysis with un-orthogonalized aggression variables showed a marginal negative link between SCC and reactive aggression while controlling for SE, which supports this notion. However, SCC was unrelated to orthogonalized aggression variables depicted in Figure 5. Clearly, more research on self-aggression links in youth is warranted.

Finally, in line with existing accounts of gender differences in peer relational processes (Rose & Rudolph, 2004), a number of expected mean-level gender differences were found. Across studies, female adolescents tend to score more favorably in indices of social and behavioral adjustment relative to males, who tend to score more favorably in terms of psychological and emotional adjustment relative to females (Rose & Rudolph, 2004). Accordingly, in this study, females were more popular, more liked, less disliked, less proactively aggressive, and strived for closeness with peers more than males. Males, in turn, reported higher

SE and SCC relative to females. There were no gender differences in relational or reactive aggression. Relational aggression has previously been shown to occur relatively equally between males and females (especially when peer-reported; Card et al., 2008). However, males typically score higher in reactive aggression, although some results suggest that of the forms of aggression, the magnitude of gender difference is smallest for reactive aggression (Little et al., 2003). Thus, overall, results regarding mean-level gender differences align in line with existing research.

Finally, supplementary research aims 7-8 were not able to be fully tested given the lack of associations between the peer status variables and SCC and SE.

STUDIES 2-4: EXPERIMENTAL EFFECTS OF PEER STATUS

Results from Study 1 suggested that peer status might not be directly related to self-perceptions in adolescence. However, this study could be extended and strengthened in a number of ways. First, all data reflected trait-like characteristics, leaving it unknown whether more state-like self-perceptions may be affected by experiences of peer status. In the next three studies, I examined effects of peer status on state SE and SCC, and the moderating role of trait-like social goals in these associations, as well as the effects of peer status on aggression. These studies extend existing research by examining causal links between multiple dimensions of peer status and outcomes of interest. Further, data were collected from young adults, extending existing research on peer status to a somewhat older population.

Lansu and Cillessen (2012) found preliminary support that dimensions of peer status typically examined in adolescence extend to early adulthood. However, the methodological challenge of targeting an entire peer group remains. Yet, as emphasized by Orobio de Castro et al. (2013), causal mechanisms in peer relations are very little understood. Thus, bridging the context-specificity of their study (i.e., *peer status*) with experimental paradigms may facilitate future research aiming to examine *causal* effects of peer group status in adulthood without the challenge of recruitment. Presently, I tested two separate manipulations of peer status: a writing task (Studies 2 and 3) and a manipulation in which participants received feedback on a bogus test intended to measure their status among peers via self-report (Study 4). In the writing task, participants wrote about a time that they either felt liked, disliked, popular, or unpopular. In the

bogus feedback task, participants completed self-report measures and then received “test results” stating that they are most likely either liked, disliked, popular, or unpopular among their peers.

Initially, I proposed that Studies 2 and 3 could be combined into a single sample collected from two separate sources (an undergraduate participant pool, SONA, and Amazon’s Mechanical Turk, MTurk). Although I did not expect differences in results regarding the key study questions between the samples, some differences emerged. Most importantly, as described below in their respective studies, manipulation checks suggested that the manipulation did not work in the undergraduate participant pool, but did (to some degree) in the MTurk sample. Secondly, upon inspection of the written responses to the manipulation, it was clear that what individuals consider their peer group is different between college and non-college samples. That is, the college sample (Study 2) primarily wrote about experiences among their classmates, whereas the more generalized sample (Study 3; including college students and non-college students) tended to write more about experiences among social groups outside of the academic context. Thus, Study 2 includes participants from the college (SONA) sample, and Study 3 includes participants from the MTurk sample. In Study 4, I tested the false feedback manipulation. All hypotheses and methods between the studies are identical and summarized below.

Experiences of peer status were expected to have similar effects on state SE and SCC as the hypothesized associations among peer status and trait SE and SCC in Study 1. Although hypotheses from Study 1 were not supported, the experimental studies examine these mechanisms as *state-like* processes, which may be more influenced in the moment than trait-like constructs measured previously. Further, as in Study 1, I expected social goals to moderate the effect of peer status on self-perceptions (SE and SCC). Regarding aggression, I expected effects of peer status to be similar in this age group relative to adolescence. Bailey and Ostrov (2007)

found links between social cognition and the forms of aggression that closely mirrored findings in adolescence. Thus, hypotheses regarding aggression measured in these studies were in line with Study 1 hypotheses. Aggression was measured in terms of hostility, angry feelings following provocation, and aggressive and assertive responses to hypothetical provocation. Specific hypotheses are outlined below.

Since the proposal of the study, a fourth condition (unpopular) was added. This was primarily to examine whether, if likeability and dislikeability have opposing effects on self-perceptions, popularity and unpopularity may similarly show opposing effects.

Aims and Hypotheses

Research Aim 1: *Examine whether indices of peer status directly affect SE and SCC in young adults.*

Hypothesis 1a: Likeability will increase SE and SCC.

Hypothesis 1b: Popularity will increase SE and SCC.

Hypothesis 1c: Dislikeability will decrease SE and SCC.

Hypothesis 1d: Unpopularity will decrease SE and SCC.

Research Aim 2: *Examine whether social goals moderate effects of peer status on the self.*

Hypothesis 2a: Acceptance will increase SE/SCC especially for individuals high in communal goals or who strongly value being liked by others.

Hypothesis 2b: Popularity will increase SE/SCC especially for individuals high in agentic goals or who strongly value being popular.

Hypothesis 2c: Rejection will decrease SE/SCC especially for individuals high in communal *or* agentic goals, or those who strongly value being liked or popular.

Hypothesis 2d: Unpopularity will decrease SE/SCC especially for individuals high in agentic goals or who strongly value popularity.

Research Aim 3: *Examine causal links between forms of peer status and aggression.*

Hypothesis 3a: Acceptance will decrease aggression.

Hypothesis 3b: Popularity will increase aggression.

Hypothesis 3c: Rejection will increase aggression.

Hypothesis 3d: Unpopularity may increase aggression, although this effect in particular likely depends on value placed on status and prestige.

Supplementary (and partially exploratory) research aims:

Research Aim 4: *Test which manipulation of peer status allow for more robust effects on peer status and aggression.*

Research Aim 5: *Examine whether acceptance or popularity is more strongly linked to higher SE/SCC in adults.*

Research Aim 6: *Examine whether evaluative (SE) or cognitive structural (SCC) aspects of the self are more impacted by peer status in adults.*

STUDY 2

In this study, participants completed a writing task in which they reflect upon a time that they felt popular, liked, disliked, or unpopular (participants in the control condition also completed a neutral task). I tested main effects of peer status on SCC, SE, and aggression (hostility, angry feelings following provocation, and aggressive/assertive responses to hypothetical provocation), as well as interactive effects of social goals in effects of each form of status (relative to neutral) on SCC and SE.

Method

Participants

Participants were recruited from SONA, an online participant pool in the Department of Psychology. Three hundred and fifty one participants completed an online study. Based on initial screening of the data, several participants were dropped from the study (27 who failed attention checks, 18 who did not complete the writing task, and 5 who completed the writing task but did not continue onto the rest of the survey). Thus, the final N was 301. Two hundred and twelve (70.4%) of participants identified as female, and 86 (28.6%) as male. Three participants (1%) elected not to disclose their gender. The ethnic composition of the sample was as follows: 162 (53.8%) White/Caucasian, 46 (15.3%) Hispanic, 39 (13%) Asian/Pacific Islander, 27 (9%) Black/African American, 12 (4%) Bi-Racial, 10 (3.3%) Other, 4 (1.3%) preferred not to answer, and 1 (.3%) Native American. See Appendix J for IRB approval letter, and Appendix L for the informed consent page of the study.

Measures

Manipulation check. In order to assess whether the manipulation had the intended effect on feelings of status, participants rated how liked, disliked, popular, and unpopular they feel in the moment (I feel liked/disliked/popular/unpopular; 1 = strongly disagree. Past research on rejection has successfully used similar wordings (Zadro, Williams, & Richardson, 2004). As an additional manipulation check, participants were also asked to think about themselves among their peers, and rate how liked/disliked/popular/unpopular they perceive themselves to be (1 = not at all liked/disliked/popular/unpopular; 10 = very liked/disliked/popular/unpopular). See Appendix E for all items.

Trait social goals. Participants completed two measures of social goals. The first was a somewhat revised version of the IGI used in Study 1 (e.g., rather than the statement “how important is it to you that you decide what to play?”, the item read “... you decide what to do”). This revised measure has been used in adults reliably (Findley & Ojanen, 2012). A second more brief measure of popularity and likeability goals specifically was also used. Based on existing studies (e.g., Dawes & Xie, 2014), importance of popularity was measured using a single item of “it is important to me that people think I’m popular”. A single-item measure (“it is important to me to be well-liked”) was also included. See Appendix C for all items.

State self-esteem. Participants completed a two-item SE scale to measure state self-esteem. A single item scale has been shown to have similar predictive validity as the Rosenberg Self-Esteem Scale (e.g., “I have high self-esteem”; Robins, Hendin, & Trzesniewski, 2001), and has also been used as a state-like measure of SE in experimental paradigms (see De Cremer, van Kippenberg, van Kippenberg, Mullenders, & Stinglhamber, 2005). In this study, the above item

as well as a second item (i.e., “I feel good about myself”) were included ($\alpha = .87$). See Appendix D for all items.

State self-concept clarity. Participants completed a measure of state SCC comprised of an adapted version of the Latitude of Self-Description Questionnaire established by Baumgardner (1990). In this assessment, participants provided two ratings of each of several self-concepts. First, they selected which percentile they believe they fall under for a given item, on a scale of 1-100 (e.g., for “intelligent”, one may rate themselves in the 60th percentile). Next, participants indicated the percentile range within which they perceive themselves to be. For instance, participants may be sure that they are more intelligent than at least 20% of the population, and not more intelligent than 95% of the population. Thus, they would place arrows at 20 and 95. The range of each item (in the example item, range would be 75) reflects the level of self-concept clarity. Across several items, a low average range indicates high self-concept clarity. In this study, the mean range across items was used as a score for SCC ($\alpha = .92$).

The original measure used trait adjectives randomly selected from an existing personality trait checklist, but has been modified based on specific study aims (see, e.g., Guadagno & Burger, 2007). In the present study, I wanted to ensure that self-concept clarity was not examined only in the context of positively valenced words, or in the context of only terms reflecting dimensions of agency and communion. Thus, I randomly selected 12 adjectives reflecting agency (e.g., independent), communion (e.g., loyal), a lack of agency (e.g., vulnerable), and a lack of communion (e.g., egoistic), from a set of items proposed by Abele and colleagues (2008) that control for valence and word frequency across five countries. These are similar to initial items used by Baumgardner (1990). See Appendix D for all items.

State hostility. State feelings of hostility were examined using the 30-item state hostility scale (Anderson & Carnagay, 2009; Anderson, Deuser, DaNeve, 1995). Participants rated how much they are experiencing each adjective (e.g., content, angry, frustrated) on a scale of 1-5 (not at all-very much so; $\alpha = .95$). See Appendix D for all items.

Aggressive Responses. Aggression was measured via responses to hypothetical scenarios from the Aggressive Provocation Questionnaire (O'Connor, Archer, & Wu, 2001). Participants were given 10 scenarios. Following each, they rated their feelings of anger, frustration, and irritation, and selected a most likely response out of several options. Thus, this measure resulted in several scores: feelings of anger, frustration, and irritation, as well as scores on assertive and aggressive actions based on selected responses. For the current study, scores on feelings of anger, frustration, and irritation were combined into a single score, currently referred to as “angry feelings” ($\alpha = .88$). For each scenario, there were five possible responses, including one assertive and one aggressive option. A score of “assertiveness” was calculated based on the summed number of assertive options selected, and a score of “aggression” was calculated based on the summed number of aggressive options selected. Because this measure was initially developed for a British population, some wording was edited to be appropriate for an American early adult sample (e.g., “queuing” was replaced with “waiting in line” in one prompt). See Appendix D for full measure.

Procedure

This study was conducted entirely online using a survey created in Qualtrics and administered via SONA. Participants first completed measures of social goals that served as moderators. Next, participants completed a writing task in which they recalled a time that they felt a certain way among peers (either liked, disliked, popular, or unpopular). In the neutral

condition, participants wrote about what they did in the last 24 hours. Previous research has manipulated experiences of status and power using similar prompts (e.g., Fast & Chen, 2009). See Appendix F for specific writing prompts. As a manipulation check, participants were asked how liked, disliked, popular, and unpopular they perceive themselves to be around peers. Next, participants completed measures of state self-esteem and self-concept clarity, followed by measures of aggressive cognition and responses to provocation.

Results

Manipulation Check

ANOVA was used to examine whether the peer status conditions had the intended effects on feelings of popularity, likeability, unpopularity, and dislikeability. With condition entered as a factor and the eight manipulation check items entered as dependent variables, there were no main effects of status on feelings of popularity, likeability, unpopularity, or dislikeability, or on perceptions of popularity, likeability, unpopularity, and dislikeability. See Table 4 for means of individual items by condition and summary of ANOVA results. Despite the manipulation check failing, and given the novelty of examining peer status as a manipulation, the effects of peer status, and the moderating role of social goals, on the study variables were tested below.

Main Effects of Peer Status

ANOVA was used to examine mean-level differences in SCC, SE, aggressive cognitions (hostility and anger), and aggressive responses to provocation. As seen in Table 5, there were no effects of peer status on SCC, SE, hostility, or aggressive or assertive responses to provocation. The only significant effect was on feelings of anger in response to hypothetical scenarios. Follow-up tests using Tukey's post-hoc revealed that participants in the unpopular condition scored significantly *lower* in angry feelings following provocation than participants in the liked

condition, $p < .05$. Thus, Hypotheses 1a-1d were not supported, Hypotheses 3a-3d were also not supported.

Interactive Effects

Because conditions of the independent variable (IV; i.e., the four discrete statuses) in this study are not linear, dummy variables for each status were created in which 0 = neutral and 1 = the respective peer status condition. Then, following Aiken & West (1991), I examined interactive effects between continuous moderator variables (social goals) and peer status by multiplying each moderator by the IV (i.e., each dummy-coded status condition) and regressing the outcome upon the IV, moderator variable, and interaction term. Where significant interactions occurred, follow-up tests were conducted in which the continuous moderator was categorized into low, average, and high levels based on +/- one standard deviation from its mean, followed by a test of the effect of the manipulation separated by respective level of the moderator. Given the four measures of social goals (agentic goals, communal goals, importance of popularity, and importance of likeability), this resulted in several interaction tests. These are summarized in Table 6.

The hypothesized interactive effects were non-significant. However, a few supplementary interaction tests were significant. For effects on SE, the only significant interaction was unpopularity by importance of being liked. Follow-up tests revealed that, unpopularity decreased SE for those who highly value being liked (see Figure 6). For effects on SCC, importance of being liked by popularity emerged as a significant interactive effect. Follow-up tests revealed that popularity increased SCC for those who highly value being liked (see Figure 7). Thus, Hypotheses 2a-2d were not supported. However, the significant interactions found suggest that

the effects of popularity or unpopularity may primarily depend on importance placed on being liked, rather than being popular.

Exploratory Associations among Study Variables

In order to examine whether any correlational findings from Study 1 may be at least partially mirrored in the present study, I explored correlations among the study variables. To achieve this aim, I used the manipulation check items of “How popular/unpopular/liked/disliked do you think you are?” as self-reported measures of peer status. These measures were then examined in association with the outcome measures of SCC, SE, and aggression. Because most expected effects of peer status were non-significant, I considered the combination of these associations across conditions to be acceptable for exploratory purposes. However, results should be interpreted with caution, as not all participants were exposed to the same survey.

As seen in Table 7, several significant correlations were present. SCC was unrelated to all forms of peer status, and SE was positively related to perceived popularity and likeability and negatively to perceived unpopularity and dislikeability. In terms of correlations between peer status and aggression: hostility was negatively associated with popularity and likeability, and positively with unpopularity and dislikeability; angry feelings following provocation were unrelated to peer status; aggressive responses following provocation were positively related to perceiving oneself as disliked (and marginally negatively to perceiving oneself as liked); and assertive responses to provocation were negatively related to perceived unpopularity and dislikeability.

Conclusion

Results in Study 2 did not support hypotheses. First, the writing task manipulation did not pass the manipulation checks. Second, the only main effect of peer status that emerged was on

feelings of anger following provocation (but not on aggressive or assertive hypothetical responses to provocation). However, even this effect was not as expected: participants who were in the liked condition scored higher than those in the unpopular condition in anger following feedback. This suggests that, overall, there is no direct effect of peer status on state SCC or SE, or on aggressive cognitions or responses to hypothetical provocation (with the exception of the one difference found). Further, results suggest that these effects largely do not depend on social goals, or what individual strive for or value among their peers. With the exception of two significant interactions, which were supplementary tests not included in the main study hypotheses, all interactive effects between peer status and social goals were non-significant. The supplementary analyses found that unpopularity may decrease SE, and popularity may increase SCC, only for those who highly value being liked. In Study 3, I tested these hypotheses in a sample recruited from outside of a college-age participant pool.

STUDY 3

In Study 3, I examined the effects of peer status (manipulated using a writing task) on SCC, SE, hostility, angry feelings following provocations, and aggressive and assertive responses to provocation. All study materials and procedures were identical with the exception of participant recruitment.

Method

Participants

Participants were recruited via Amazon's Mechanical Turk (MTurk). MTurk is an online program that allows for nationally representative samples. Recruiting from MTurk is beneficial in that participants were not limited to college students as in Study 2, potentially allowing for greater generalization of findings. Participants were limited to 18-30 year olds, who received a small monetary compensation for their time (\$.25). After removing 42 participants who did not complete the writing task and three who failed an attention test, 254 participants made up the final sample. One hundred and forty eight (58.3%) of participants identified as female, and 103 (40.6%) as male. Three participants (1.2%) elected not to disclose their gender. The ethnic composition of the sample was as follows: 198 (78%) White/Caucasian, 21 (8.3%) Hispanic, 13 (5.1%) Asian/Pacific Islander, 16 (6.3%) Black/African American, 4 (1.6%) Bi-Racial, 1 (.4%), Native American, and 1 (.4%) preferred not to answer. Seventy four (29.1%) of participants were college students, and 180 (70.9%) were not. See Appendix J for IRB approval letter and for an IRB letter approving the extension of the study to MTurk, and see Appendix M for the informed consent page of the study.

Measures

All measures used in this study were the same as Study 2. See Appendix E for manipulation check items, Appendix C for moderator measures, Appendix D for outcome measures, and Appendix F for writing prompts.

Manipulation check. Participants completed the same items used in Study 2.

Trait social goals. Participants completed the same measures used in Study 2.

State self-esteem. Participants completed the same SE items used in Study 2 ($\alpha = .88$).

State self-concept clarity. Participants completed the same SCC questionnaire used in Study 2 ($\alpha = .91$).

State hostility. Participants completed the same measure of hostility used in Study 2 ($\alpha = .95$).

Aggressive Responses. Participants completed the same measures of feelings of anger following provocation ($\alpha = .90$), and aggressive and assertive responses to hypothetical scenarios.

Procedure

Procedures were identical to Study 2, with the exception of the online platform used to recruit participants. This study was conducted entirely online using a survey created in Qualtrics and administered via MTurk. As in Study 2, participants first completed measures of social goal used as moderators, then a writing task manipulation of peer status, and then completed outcome measures of SCC, SE, hostility, feelings of anger following provocation, and aggressive and assertive responses to provocation.

Results

Manipulation Check

ANOVA was used to examine whether the peer status conditions had the intended effects on feelings of popularity, likeability, unpopularity, and dislikeability. With condition entered as a factor and the eight manipulation check items entered as dependent variables, some significant effects emerged, although these were not entirely in line with expectations. Seven of the eight items (excluding perceiving oneself to be disliked) differed significantly between the conditions. Participants in the liked condition felt more popular and liked, and less unpopular and disliked than participants in the unpopular condition. Participants in the liked condition also perceived themselves as less unpopular and more liked than those in the unpopular condition. Participants in the popular condition felt less disliked and less unpopular than participants in the unpopular condition, and more popular than participants in the unpopular and neutral conditions. No other items were significantly different between peer status and neutral conditions, and there were no differences by condition in perceiving oneself as disliked. See Table 8 for means of individual items by condition and summary of ANOVA results. Although results regarding the manipulation check items did not emerge entirely as expected, the main effects of peers status, and the moderating role of social goals are examined below.

Main Effects of Peer Status

ANOVA was used to examine mean-level differences in SCC, SE, aggressive cognitions (hostility and anger), and aggressive responses to provocation. As seen in Table 9, there were no effects of peer status on SCC, SE, hostility, feelings of anger in response to hypothetical provocation, or aggressive or assertive responses to provocation. Thus, results from Study 3 did not support Hypotheses 1a-1d or 3a-3d.

Interactive Effects

Following the same procedures as Study 2, I tested interactive effects between peer status (popularity, likeability, unpopularity, and dislikability) and social goals (agentic goals, communal goals, importance of popularity, and importance of being liked) on SCC and SE. These effects are summarized in Table 10 (because of the number of interactions tested, only the interaction terms themselves are presented, although each test included two main effects and the interaction). All hypothesized interactive effects were non-significant. Thus, Hypotheses 2a-2d were not supported.

Exploratory Associations among Study Variables

As in Study 2, I examined bivariate associations among the variables. Again, data were collapsed across conditions and should thus be interpreted with caution (especially in the present study, where manipulation check items differed somewhat between conditions despite no other main or interactive effects being found). Correlations were overall in line with Study 2 (see Table 11). SCC was unrelated to peer status. SE was positively related to popularity and likeability and negatively related to unpopularity and dislikability. In terms of the links between peer status and aggression: hostility was negatively related to popularity and likeability and positively to unpopularity and dislikeability; angry feelings following provocation were unrelated to peer status; aggressive responses to provocation were unrelated popularity, unpopularity, and likeability, and positively related to dislikeability; and assertive responses to provocation were positively related to popularity and likeability, negatively related to dislikeability, and marginally negatively related to unpopularity.

Conclusion

As in Study 2, results from Study 3 suggested that peer status does not directly affect SCC or SE, and that social goals do not affect these findings. While speculative, it may be that the writing task used as a manipulation in both studies is not sufficient to elicit strong enough feelings of the respective forms of peer status to produce a change in self-perceptions or aggression. However, unlike Study 2, participants in Study 3 reported some differences in their feelings of peer status between conditions, though these were not reflected in any differences in the dependent variables. However, most of the differences in manipulation check items were in the expected direction. One potential reason for the lack of effects may be that the writing task does not elicit feelings of particular forms of status around *current* peers. That is, participants reflected on experiences of status within the last year, which may not have been recent enough to have the intended effects. Thus, in Study 4, I aimed to elicit status using a manipulation that may prime stronger feelings and subsequent reactions.

STUDY 4

In Study 4, I examined the effects of peer status (manipulated using a bogus feedback paradigm) on SCC, SE, hostility, angry feelings following provocations, and aggressive and assertive responses to provocation. Contrary to the previous two studies that used a writing task, the manipulation used in this study may more reliably elicit experiences of peer status, as participants are unaware of the purpose of the study, or that the feedback they are receiving is random.

Method

Participants

Participants were recruited via SONA, an undergraduate participant pool in the Department of Psychology (i.e., participants were recruited from the same pool as Study 2, but comprised an independent sample). After removing three participants who did not want their data included upon being debriefed, 19 who stated that the feedback received during the manipulation was unbelievable to very unbelievable, and 23 participants who failed an attention test, the final N was 264 participants. Two hundred and nine (79.2%) of participants identified as female, and 54 (20.5%) as male. One participant (.4%) elected not to disclose their gender. The ethnic composition of the sample was as follows: 139 (52.7%) White/Caucasian, 48 (18.2%) Hispanic, 29 (11%) Asian/Pacific Islander, 26 (9.8%) Black/African American, 11 (4.2%) other, and 2 (.8%) preferred not to answer. See Appendix J for IRB approval letter, and Appendix L for the informed consent page.

Measures

All measures used in this study were the same as Studies 2 and 3. See Appendix E for manipulation check items, Appendix C for moderator measures, Appendix D for outcome measures, and Appendix G for manipulation materials.

Manipulation check. The same items used in Studies 2 and 3 were used in Study 4.

Trait social goals. Participants completed the same measures used in Studies 2 and 3.

State self-esteem. Participants completed the same SE items used in Studies 2 and 3 ($\alpha = .92$).

State self-concept clarity. Participants completed the same SCC questionnaire used in Studies 2 and 3 ($\alpha = .92$).

State hostility. Participants completed the same measure of hostility used in Studies 2 and 3 ($\alpha = .93$).

Aggressive Responses. Participants completed the same measures of feelings of anger following provocation ($\alpha = .89$), and aggressive and assertive responses to hypothetical scenarios used in Studies 2 and 3.

Procedure

As in Studies 2 and 3, participants the study entirely online using a survey created in Qualtrics and administered via SONA. As in the previous two studies, participants first completed social goal measures used as moderators. Next, participants were told that they had just completed a measure intended to capture self-reported status among peers. The materials given stated that the measure had been administered across many participants, and that they have repeatedly been found to accurately predict actual status among peers. Following this description, participants were randomly assigned to either the popular, unpopular, liked, disliked,

or neutral conditions. In the status conditions, they were told that their results indicate that they are most likely, e.g., popular among their peers (depending on the respective status condition), and then given a brief description of what that likely means. False feedback is frequently used as an experimental tool to elicit feelings of whatever the construct at hand may be, including acceptance (e.g., Leary et al., 2001). See Appendix G for full manipulation materials. Following the manipulation, participants then completed outcome measures of SCC, SE, hostility, feelings of anger following provocation, and aggressive and assertive responses to provocation. Finally, participants were asked how believable they felt their “test results” were. At the end of the survey, participants were debriefed and asked whether they would still allow the data to be used in the study.

Results

Manipulation Check

I used ANOVA to examine whether the peer status conditions had the intended effects on feelings of popularity, likeability, unpopularity, and dislikeability. With condition entered as a factor and the eight manipulation check items entered as dependent variables, some significant effects emerged, although these were not entirely in line with expectations. Seven of the eight items (excluding perceiving oneself to be disliked) differed significantly between the conditions. Participants in the liked condition felt more popular and liked, and less unpopular and disliked than participants in the unpopular condition. Participants in the liked condition also perceived themselves as less unpopular and more liked than those in the unpopular condition. Participants in the popular condition felt less disliked and less unpopular than participants in the unpopular condition, and more popular than participants in the unpopular and neutral conditions. No other items were significantly different between peer status and neutral conditions, and there were no

differences by condition in perceiving oneself as disliked. See Table 12 for means of individual items by condition and summary of ANOVA results. Although results regarding the manipulation check items did not emerge entirely as expected, the main effects of peer status, and the moderating role of social goals are examined below.

Main Effects of Peer Status

ANOVA was used to examine mean-level differences in SCC, SE, aggressive cognitions (hostility and anger), and aggressive responses to provocation. As seen in Table 13, there were no effects of peer status on SCC, SE, feelings of anger in response to hypothetical provocation, or aggressive or assertive responses to provocation. The only significant effect of peer status was on hostility. Follow-up tests indicated that participants in the popular condition scored lower than participants in the neutral condition in hostility. Thus, Hypotheses 1a-1d were not supported, and Hypotheses 3a-3d were also not supported.

Interactive Effects

Following the same procedures as the previous two studies, I tested interactive effects between peer status (popularity, likeability, unpopularity, and dislikeability) and social goals (agentic goals, communal goals, importance of popularity, and importance of being liked) on SCC and SE. These effects are summarized in Table 14 (because of the number of interactions tested, only the interaction terms themselves are presented, although each test included two main effects and the interaction). Most hypothesized interactive effects were non-significant. Two supplementary tests (not included in the primary hypotheses) were significant: agentic goals by likeability, and communal goals by unpopularity. Unexpectedly, likeability decreased SE for those low in agentic goals only (see Figure 8), and unpopularity decreased SE for those low in communal goals (see Figure 9). There was also a marginal interaction between communal goals

and likeability: likeability marginally decreased SE for those low in communal goals (see Figure 10).

Exploratory Associations among Study Variables

As in Studies 2 and 3, I examined bivariate correlations among the study variables on an exploratory basis (see Table 15). For this analysis, data were collapsed across the conditions, and should thus be interpreted as caution. SCC was marginally positively related to perceiving oneself as popular, but was otherwise unrelated to peer status. SE was positively related to popularity and likeability, and negatively related to unpopularity and dislikeability. In terms of correlations between peer status and aggression, hostility was unrelated to popularity and unpopularity, negatively related to likeability, and positively related to dislikeability; angry feelings and aggressive responses following provocation were unrelated to peer status; and assertive responses following provocation were positively related to popularity and negatively related to unpopularity, likeability, and dislikeability.

Conclusion

Contrary to expectations, the bogus-feedback manipulation used in Study 4 did not more reliably produce the hypothesized effects of peer status relative to the writing tasks in the previous studies. As in Studies 2 and 3, results from Study 4 suggest that peer status does not directly affect SCC or SE. Further, these effects did not depend on social goals. The only significant interactions that emerged were from supplementary analyses not included in the primary aims and hypotheses, and were also not in line with theoretical reasoning. That is, individuals who reported low levels of striving for social status reported lower SE when told that they were *liked*, a condition which was expected to only show increases in SE regardless of social goals. Further, individuals who reported low levels of communal goals showed decreases

in SE when told that they were unpopular. While speculative, this may suggest that individuals higher in communal goals, who can reasonably be assumed to have close friendships, are somewhat more resilient to negative effects of peer status. However, there was also a marginal trend towards these low-communal goal individuals to decrease in SE even following being told that they are liked, which should in theory bolster their self-perceptions and show the reverse effect.

DISCUSSION

The present project examined the role of peer status on self-perceptions (SE, SCC) and aggression in adolescents (Study 1; correlational study) and young adults (Studies 2-4; experimental studies). To date, very little research has examined the direct associations and effects of multiple forms of peer status on self-perceptions, especially using integrated assessments of different forms of both constructs. Based on the present data, despite theoretical and empirical reasons to expect these links, social status among peers does not appear to be directly related to SCC or SE. Further, across the studies, the effects of experiences of peer status on SCC and SE were largely independent of individuals' social goals, also discrepant from my hypotheses. However, these findings contribute to the current literature in several ways, such as by leading to several other research questions addressed below.

Direct Effects of Peer Status on Self-Concept Clarity and Self-Esteem

Across the four studies, I expected likeability and popularity to be related to high SCC and SE, and dislikeability and unpopularity to be related to low SCC and SE. Research on peer status in adolescence differentiating between likeability/acceptance, dislikeability/rejection, and popularity has found several meaningful and divergent associations of these variables with adjustment correlates (e.g., Cillessen & Rose, 2005). However, most of this research has focused on social behaviors among peers, rather than on self-perceptions. In the present studies, I assessed dimensions of peer status and self-perceptions in terms of SE, or the favorability and positivity of self-beliefs, and SCC, or the clarity and consistency of self-beliefs.

In Study 1, I examined direct links between likeability, dislikeability, and popularity with SE and SCC in youth. These associations were non-significant at the bivariate level and in path models (with the exception of a marginally positive association between popularity and SE), regardless of whether any other predictor variables were controlled for. In Studies 2-4, I examined effects of peer status on SCC and SE in young adults. Overall, results did not support my hypotheses, as there were no significant direct effects of peer status on SCC or SE. These results were unexpected, given that SE has been previously linked to acceptance and rejection (e.g., Harter et al., 1998; Hartup & Stevens, 1997; Ladd & Troop-Gordon, 2003; Leary et al., 2005), and research finding that high status generally increases SE and consistency of self-beliefs (Kraus et al., 2011). A number of explanations for the overall pattern of the results considered.

First, it may be that peer status is in fact *not* directly tied to self-perceptions. Although self-perceptions embody social cognition developed via internalization of others' evaluations into one's self-concept (Harter et al., 1998; James, 1890), this internalization may not occur as directly as anticipated. When considered from a social information processing perspective (Crick & Dodge, 1994), self-perceptions may be affected indirectly via several cognitive processing steps that occur *between* feedback from peers and incorporation into one's self schema. The present studies not capture these mechanisms. For instance, real-time interpretations of social events may alter the impact of peer feedback on perceptions of self (Dodge et al., 2003), suggesting peer perceived or even self-experienced social status may not directly affect self-perceptions.

Additionally, peer status in Study 1 and manipulations in Studies 2-4 were assessed based on generalized agreements by peers on the whole. Although status is typically based on a degree of consensus from a peer group, perceptions of the particular peers granting status may affect

findings. For instance, dislikeability granted from peers that one perceives as highly popular may self-perceptions more strongly than if status were granted from lower status peers. In line with this suggestion, Thomaes and colleagues (2010) found that low SE youth exposed to peer disapproval increase their SE only if positive feedback is received from popular, but not unpopular peers. Further in line with the social information processing perspective, research in adolescence finds that trait-like indices of self and social cognition predict aggression and other behaviors, which in turn predicts status (Salmivalli et al., 2005), suggesting an alternative direction of associations among the constructs. Accordingly, this direction of associations was partially supported by supplementary findings in Study 1: SE and SCC showed some associations with aggression, which in turn was more consistently linked to peer status indices.

Experimental Effects of Peer Status

Studies 2-4 suggest that even state-like changes in self-perceptions may not directly result from experienced peer status. However, this is difficult to know, given that the lack of effects may have been driven by the current manipulations not working as intended. That is, in Studies 2 and 4, the manipulation check items suggested that the manipulations largely failed to induce experiences of peer status, including participants assigned to the popular condition feeling more popular, those assigned to the disliked condition feeling more disliked, and so on. In Study 3, some differences across conditions on the manipulation check items emerged, but these were not as consistent as expected. Overall, the present lack of significant effects of peer status on self-perceptions was unexpected given research finding that, for instance, when feelings of acceptance are threatened, SE decreases (Leary et al., 2005), and the certainty of self-concepts increases under high-power conditions (Kraus et al., 2011).

Since previous research has induced feelings of status (outside of the peer context; Tiedens et al., 2007; Willer, 2009) in adults using writing samples and bogus feedback manipulations, it may be the presence of the peer context that drove the mostly null results. That is, although I predicted that the peer context would in fact strengthen any effects of status given the personal importance of peers to the individual, the reverse may be true. Perhaps, especially as adults, we have a better awareness of our own status among peers relative to strangers or other contexts, making it more difficult to change or manipulate. In the case of Studies 2 and 3 (writing task manipulation), recalling an isolated event of experiencing a particular status in the past may not have fully integrated or translated into *current* feelings of status. For instance, such a personal experience may have already been reconciled within the individual and thus not elicit immediate reactions. In the case of Study 4 (the bogus feedback manipulation), being told that you are, for instance, most likely disliked by your peers as a whole, in turn, could be less believable, or even elicit a defensive reaction in which such information is not processed enough to affect real change in the self. In future research, it may be worthwhile to limit the writing task to a shorter time frame (in the current study, participants wrote about experiences in the last year), and/or create a way for bogus feedback to come from a source more personal than survey results. Further, *who* the peer status appraisal is granted from may be important. Currently, in correlational and experimental data, status was assessed based on generalized agreement by peers as a whole. However, some findings suggest more nuanced perceptions regarding particular peers granting status (e.g., whether their status is perceived to be higher or lower; Thomaes et al., 2010) may be worthwhile to assess in this context, as the effects of experienced status on self-perceptions may vary accordingly.

Peer Status and Self-Perceptions: Moderation by Social Goals

In the present project, I expected dimensions of peer status to interact with goals for peer interaction in their associations with self-perceptions. Across all four studies, I examined moderation by agentic/status goals and by communal/closeness goals, and in the experimental studies, also included single item measures of perceived importance of popularity and likeability. To summarize, I expected SE and SCC to be highest for popular participants (or those assigned to experience popularity) who strived for social status and popularity and for liked participants (or those assigned to experience likeability) who strived for closeness and likeability, and lowest when participants who score high in any of the goal measures were disliked or unpopular (or assigned to experience being disliked or unpopular).

However, these hypotheses were mostly unsupported. In Study 1 (cross-sectional, adolescence) and in Study 3 (experimental, writing task, MTurk), no significant interactions were found. Importantly, the significant interactions found were only supplementary tests, and not central to the main hypotheses. In Study 2 (experimental, writing task, SONA), only for those who highly valued being liked, unpopularity decreased SE, and popularity increased SCC. These effects were expected primarily for people who strive for popularity or status, but given the positive correlation between desire to be liked and desire to be popular, they are somewhat in line with hypotheses. However, it should be noted that no effects of peer status on manipulation check items or on the outcomes of interest (with the exception of angry feelings following provocation) were significant. Thus, the reliability of these interaction effects is questionable, and results should be followed up with future research. In Study 4 (experimental, false feedback task, SONA), unexpectedly, likeability decreased SE for those low in agentic goals only, and unpopularity decreased SE for those low in communal goals only.

The mostly null interaction results contradict theory suggesting that 1) discrepant cognitions induce discomfort (Festinger, 1962), 2) felt authenticity is driven by alignment of one's choices and behaviors (Kernis & Goldman, 2006), and 3) individuals seek self-confirmatory feedback (Swann et al., 1992), all suggesting that congruency between desired and experienced status could increase positivity and clarity of self-concepts. The few interactions between peer status and social goals observed in the present project are somewhat encouraging, but should be interpreted with caution.

It remains unclear why the hypothesized interactions by social goals were non-significant. One reason may be that across the studies, goals were assessed as *trait-like* strivings for status or closeness. Although extensive research supports the utility of trait-like goal assessments in the study of affective, cognitive, behavioral and social adjustment (see, e.g., Ojanen et al., 2005; Ojanen & Findley-Van Nostrand, 2014; Thomaes et al., 2008), state-like goal measures might have been more appropriate, especially in the experimental studies. Although individual differences in trait-like goals are meaningful to adjustment, individuals also fluctuate to some degree in their social motivations depending on the situation (DeShon & Gillespie, 2005). Thus, capturing “in the moment”, or state-like goals may better predict the effects of experienced peer status on self-perceptions.

Effects of Peer Status on Hostility and Aggression

In the present studies, I examined links between forms of peer status and aggression. Although links between overt/direct and relational/indirect aggression and the forms of peer status in adolescence are relatively well understood (e.g., Cillessen & Mayeux, 2004; Dodge et al., 2003; Ojanen & Findley-Van Nostrand, 2014; Mayeux et al., 2011), this study extended research by also measuring proactive and reactive forms of aggression. I expected overt,

relational, proactive, and reactive forms of aggression to be negatively related to likeability and positively to dislikeability. In terms of popularity, I expected proactive aggression to be positively related because of its goal-oriented nature (i.e., youth who strategically use aggression for personal gain tend to be rated as popular among peers; Findley & Ojanen, 2013), whereas I expected reactive aggression to be either unrelated or positively related to popularity. Popular youth typically display social skills considered to be lacking in reactively aggressive youth (Andreou, 2006), yet may be especially likely to lash out when they are threatened (e.g., to regain lost status), supporting a positive association.

In Study 1, associations between likeability, dislikeability, and popularity and aggression found in past research were replicated and extended by comparing links across form of (overt, relational, reactive, and proactive) aggression. Overall, associations emerged as expected. In line with past research, dislikeability was positively related to all four forms of aggression, whereas likeability was negatively related to overt, relational, and proactive forms of aggression (but unrelated to reactive aggression), and popularity was positively related to all four forms of aggression. Further, these links differed somewhat between alternative directional models examined. When aggression was set to predict status, likeability was negatively related to proactive aggression but otherwise unrelated to other forms of aggression, whereas popularity was unrelated to proactive and positively related to reactive aggression. The positive association between reactive aggression and popularity suggests that, although reactive aggression typically entails a lack of the self-regulation and social skills typical of popular adolescent (Dodge et al., 2003), popular youth may be strongly motivated to maintain their status with aggression (popularity predicts aggression across time more than vice versa; Ojanen & Findley-Van Nostrand, 2014). Thus, they may be hypersensitive to perceived threats that may elicit reactive

aggression. Further, reactive aggression may be perceived as a display of “toughness”, also characteristic of popular adolescents (Rodkin, Farmer, Pearl, & Van Acker, 2000). However, because the difference in the statistical fit between the path models proposing alternative direction of associations (and resulting in different associations between forms of status and aggression) was nonsignificant, the present findings do not favor a particular set of associations over the other. Also, due to the cross-sectional nature of Study 1, longitudinal research is needed for conclusions regarding the directionality of these associations in development.

Peer Status and Hostility in Adults

Studies 2-4 extended past research by examining causal effects of peer status on aggression, which was presently examined as hostility, feelings of anger following hypothetical provocation, and aggressive and assertive responses to hypothetical provocation. In Study 2, the only main effect of peer status found was on angry feelings following hypothetical provocation. However, follow-up tests suggested this effect was not as expected: participants in the liked condition scored *higher* in angry feelings following provocation than participants in the unpopular condition. This was unexpected, as likeability is typically negatively related to aggression, and being told you are well-liked should in theory decrease aggressive cognition and behavior (at least relative to low-status conditions). No other differences between conditions were found. In Study 3, there were no main effects on measures of aggression. In Study 4, the only significant effect of peer status found was on hostility: participants in the popular condition scored lower in hostility than participants in the neutral condition. Although this effect was also unexpected, it may suggest that for adults, popularity may fulfill one’s psychological need for status, and in turn lessen aggressive cognition (although popularity was positively associated

with aggression in Study 1/adolescents, supporting research widely documenting this link in youth).

It is somewhat unclear why there were little effects of peer status on aggression. In particular, the disliked and unpopular conditions presumably served as ego-threats to participants, and other research utilizing ego-threatening conditions have found positive effects on state hostility and aggression (e.g., Anderson et al., 2009; Baumeister & Bushman, 1998). The present findings may, in part, be due to issues of measurement of aggression. In particular, when comparing to the four forms of aggression measured in Study 1, the measures used in Studies 2-4 most closely capture *reactive* aggression, or responses to real or perceived threat. This includes a measure of feelings of hostility (not measured in direct response to hypothetical situations), and hostile cognitions tend to be positively correlated with reactive aggression (Dodge et al., 2003). Including these measures of hostility/aggression was in part due to the difficulty of examining several forms of aggression as simultaneous outcomes of peer status. Future research would benefit from comparing different forms of aggression in response to experimentally manipulated peer status, as well as inclusion of more direct measures of aggressive behaviors in this context. For instance, granting an individual the status of popularity may increase *proactive* aggression, as this may heighten the perceived need to protect high status (potentially via more goal-oriented behaviors for personal gain). Further, measuring aggressive behaviors rather than cognition or responses to hypothetical situations may be a more reliable method of assessment. Nevertheless and despite unexpected results, the present project is the first to examine whether peer status manipulations affect aggression and as such, raises questions for future research.

Limitations and Future Directions

The present studies were limited in several ways. In addition to the future directions discussed above, these could also be addressed in future research. In Study 1, the peer-reported method used to assess peer status and aggression was overall considered a strength, as self-reports of these constructs are subject to bias. However, there were several challenges in the present sample that may have impacted findings. First, peer-reports were collected across individual classrooms, rather than grades. Allowing participants to nominate a greater number of individuals may have resulted in more reliable assessments of peer status and aggression. However, it should be noted that some results may be partially due to population differences between the present project and most existing studies on peer relations. That is, the sample used in Study 1 was highly diverse, and came from schools with relatively high levels of behavioral problems. Thus, as peer status is closely tied to behaviors (Crick & Dodge, 1995; Salmivalli et al., 2005), the presently observed links between dimensions of peer status and self-perceptions may differ from those observed in schools with fewer behavioral problems. While speculative, future research could compare these associations between lower and higher income samples.

Study 1 could also be improved by replicating findings using other measures of peer status. First, inclusion of an “unpopular” item in the peer-reports would allow for more direct comparison across this and the experimental studies. Second, while self-reported status may potentially be less accurate as a whole, the effects of perceived status are likely as strong as effects of status as rated by others. Some research supported this idea, finding that perceived rejection is strongly tied to adjustment regardless of agreement from peers (Downey et al., 1992). Further, although results from Studies 2-4 found no direct effects of peer status on SE or SCC, attempting to manipulate status and other peer relational processes in *adolescent* samples is

especially important and timely, given the general lack of understanding of causal mechanisms in this field (Orobio de Castro et al., 2013). Thus, the present results may help inform future studies aimed at experimentally examining peer status.

Finally, Study 1 is limited to cross-sectional data, which precludes conclusions regarding the direction of associations in development. Future research should utilize longitudinal data to examine the interplay between peer status, self-perceptions, aggression, and social goals over time for more thorough conclusions. Although unlikely based on the present findings, it is possible that peer status predicts changes in SCC or SE across time.

Studies 2-4 were also not without their limitations. First, these studies were conducted exclusively online. Although experimental research has successfully used online paradigms, perhaps in-lab experiments may have more success. For instance, especially in Study 4, delivering the bogus feedback face-to-face might have been more believable, and also might have had a stronger impact on self-beliefs. Secondly, the measure used to assess SCC may have presented issues. Although based on past research (Baumgardner, 1991), this task has minimally been used in experimental research as an outcome. While there is no immediate reason to suspect a problem with the measure, its lack of significant associations across the studies with any variables is concerning. In particular, existing research has found that SCC and SE are positively correlated, sometimes up to .60. In Study 1, these measures were correlated as expected, but were unrelated across the experimental studies. The latter findings contradict a positive link between SCC and SE reported in other studies (e.g., Campbell et al., 1991; Campbell et al., 2000; Wu, 2009; among others), suggesting the present measure might have been problematic. Replication studies are needed to further evaluate this question.

Also, as discussed previously, there may be several ways to test whether peer status can in fact be manipulated without the literal presence of a peer group. Among others, these include limiting the writing task to a more narrow time frame, giving feedback from a more personal source, and/or potentially also examining whether the status of the person delivering feedback, or the status of the people being written about, could affect findings. For instance, if a participant writes about a time that they felt unpopular when their lab group did not consider their opinion during a group project, could the effects of such an experience depend on whether the individual perceived the other members of the group themselves to be high or low status? Importantly, although the hypothesized effects were not found, these studies are still among the first to attempt to experimentally assess peer status, bridging a methodological gap in existing literature.

The present findings also lead to several more general research questions and future directions. For instance, defining what a peer group *is* in young adulthood, and how this differs from younger age groups, may be worthwhile. Although a general definition of “people around your age who you socialize with regularly but are not necessarily your friends” is offered in the present studies, this may not sufficiently address the fact that relative to adolescents, adults have far more autonomy in selecting both their friends and their peer group. Whereas adolescents are relatively constrained to their school context, adults have freedom to socialize more widely. Understanding these differences would be helpful. Although, explorative inspection of the written responses in Study 2 showed that many responses entailed experience that happened within courses or in lab sections or study groups, suggesting that young adults largely still consider the academic context as their primary source of peers.

It should also be noted that peer groups also include close friendships. Differentiating between effects of friends and less formal peers, as well as any potentially protective effects of

close friendships on effects of peer status as a whole, would be an interesting research direction especially in adulthood where these are less understood. That is, if status is granted from a close friend, it may be more impactful to the individual.

Given the critical importance of the peer context as the primary source for social adjustment from a young age and during adolescence (Adler & Adler, 1995; Harter, 1995), and arguably into young adulthood (Allen et al., 2014; Arnett, 2000; Lansu & Cillessen, 2012), continued research on the effects of peer status on a range of outcomes is important. In summary, the influence of multiple forms of peer status on one's self perceptions are likely more complex than the current studies could fully capture. Nevertheless, findings provide several questions for future research on peer relations across ages.

TABLES

Table 1. Study 1 Means, Standard Deviations, Means by Gender, and Mean-Level Differences by Gender.

	Mean	SD	Females	Males	F	p
1. Popular	.05	1.06	.15	-.15	8.95	< .01
2. Liked	.06	1.01	.33	-.16	25.78	< .001
3. Disliked	.06	1.05	-.12	.43	30.83	< .001
4. SCC	2.94	.82	2.81	3.21	26.35	< .001
5. SE	3.66	.87	3.53	3.91	20.92	< .001
6. AgGoal	-.35	1.95	-.30	-.44	.50	<i>ns</i>
7. CommGoal	1.67	1.94	1.85	1.33	7.52	< .01
8. AggOV	.00	1.01	-.06	.12	3.07	=.08
9. AggREL	.00	1.01	.04	-.10	2.10	<i>ns</i>
10. AggREA	.00	1.02	-.01	.02	.08	<i>ns</i>
11. AggPRO	.00	1.01	-.07	.14	3.50	< .001

Note: Peer-reported variables reflect standardized scores; Goal scales reflect vector scores. Popular = popularity; Liked = likeability; Disliked = dislikability; SCC = self-concept clarity; SE = self-esteem; AgGoal = agentic goals; CommGoal = communal goals; AggOV = overt aggression; AggREL = relational aggression; AggREA = reactive aggression; AggPRO = proactive aggression.

Table 2. Study 1: Bivariate Correlations among the Variables.

	1	2	3	4	5	6	7	8	9	10	11
1. Popular	1										
2. Liked	.34***	1									
3. Disliked	.04	-.21***	1								
4. SCC	.00	-.04	.06	1							
5. SE	.06	-.04	.01	.56***	1						
6. AgGoal	.17***	.02	.07	-.04	.04	1					
7. CommGoal	.05	.07	-.06	.06	.14**	.12**	1				
8. AggOV	.34***	-.05	.42***	.11*	.13**	.15**	.02	1			
9. AggREL	.35***	-.02	.23***	-.02	.03	.11*	.06	.49***	1		
10. AggREA	.32***	.02	.25***	.03	.09 ⁺	.14**	.03	.61***	.59***	1	
11. AggPRO	.23***	-.11*	.37***	.12*	.16**	.15**	-.01	.71***	.56***	.60***	1

*** $p < .001$; ** $p < .01$; * $p < .05$; ⁺ $p < .10$.

Note: Popular = popularity; Liked = likeability; Disliked = dislikability; SCC = self-concept clarity; SE = self-esteem; AgGoal = agentic goals; CommGoal = communal goals; AggOV = overt aggression; AggREL = relational aggression; AggREA = reactive aggression; AggPRO = proactive aggression.

Table 3. Study 1: Summary of Peer Status by Social Goal Interactions in Association with Self-Concept Clarity and Self-Esteem.

Interaction	SCC		SE	
	β	<i>SE</i>	β	<i>SE</i>
AgGoalXPopular	.02	.05	.05	.05
AgGoalXDislike	-.01	.05	-.05	.05
AgGoalXLike	.00	.05	.02	.05
CommGoalXPopular	-.01	.07	-.05	.07
CommGoalXDislike	.05	.06	.08	.06
CommGoalXLike	-.02	.06	.04	.06

*** $p < .001$; ** $p < .01$; * $p < .05$; + $p < .10$.

Note: Because of the number of interactions examined, only the interaction terms themselves are presented. For each test, the interaction term and the respective two main effects were included as predictors of self-concept clarity and self-esteem (e.g., the AgGoalXPopular interaction included the main effect of agentic goals, main effect of popularity, and the interaction term between agentic goals and popularity). Popular = popularity; Liked = likeability; Disliked = dislikability; SCC = self-concept clarity; SE = self-esteem; AgGoal = agentic goals; CommGoal = communal goals; AggOV = overt aggression; AggREL = relational aggression; AggREA = reactive aggression; AggPRO = proactive aggression.

Table 4. Study 2: Manipulation Check Items by Status Condition.

Item	Popular		Unpopular		Liked		Disliked		Neutral		F	p
	M	SD	M	SD	M	SD	M	SD	M	SD		
I feel popular	3.20	.93	3.23	.95	3.23	.96	3.10	.95	3.10	.99	.30	ns
I feel unpopular	2.53	.85	2.65	.98	2.32	.95	2.71	.99	2.39	.95	1.86	ns
I feel liked	3.80	.76	3.98	.60	4.00	.71	3.78	.88	3.95	.76	1.22	ns
I feel disliked	2.27	.82	2.08	.79	2.01	.90	2.31	.96	2.00	.81	1.73	ns
I think I am popular	5.65	1.92	5.89	2.04	6.10	2.02	5.32	2.10	5.69	2.34	1.38	ns
I think I am unpopular	3.87	2.08	4.04	2.39	3.23	2.02	3.66	2.49	3.71	2.33	1.06	ns
I think I am liked	7.11	1.71	6.73	1.66	7.48	1.60	7.18	1.62	7.08	1.86	1.43	ns
I think I am disliked	2.54	1.78	2.59	1.50	2.17	1.65	2.78	1.88	2.39	2.09	.93	ns

Note: superscripts indicate which conditions scored significantly different from one another.

Table 5. Study 2: Main Effects of Peer Status on Self-Concept Clarity, Self-Esteem, Hostility, Anger, and Aggressive and Assertive Responses to Provocation.

Variable	Popular ^P		Unpopular ^U		Liked ^L		Disliked ^D		Neutral ^N		F	p
	M	SD	M	SD	M	SD	M	SD	M	SD		
SCC	36.37	16.69	34.50	18.77	37.62	20.97	29.70	18.33	35.24	20.49	1.42	ns
SE	3.63	1.03	3.98	0.87	3.93	1.05	3.83	0.92	3.94	1.08	1.21	ns
Hostility	2.20	0.64	2.11	0.56	2.16	0.64	2.16	0.56	2.20	0.63	0.22	ns
Anger	3.79	0.77	3.52 ^L	0.83	3.90 ^U	0.61	3.67	0.70	3.86	0.71	2.51	< .05
Aggressive Responses	0.75	1.41	0.40	0.79	0.55	0.95	0.60	1.17	0.74	1.16	0.94	ns
Assertive Responses	4.94	2.08	4.65	2.15	5.26	1.86	4.79	2.05	5.06	2.14	0.79	ns

Note: superscripts indicate which conditions scored significantly different from one another.

Table 6. Study 2: Interaction Effects between Status and Social Goals on Self-Concept Clarity and Self-Esteem.

Interaction	SCC		SE		Interaction	SCC		SE	
	β	<i>SE</i>	β	<i>SE</i>		β	<i>SE</i>	β	<i>SE</i>
AgGoalXPopular	.02	1.62	-.01	.09	PopGoalXPopular		2.30	.05	.13
AgGoalXDislike	-.06	1.72	.03	.09	PopGoalXDislike		2.44	.15	.13
AgGoalXLike	.06	1.59	-.12	.08	PopGoalXLike		2.54	-.04	.13
AgGoalXUnpop	.18	1.93	.13	.09	PopGoalXUnpop		2.82	.12	.13
CommGoalXPopular	-.18	1.47	.10	.08	LikeGoalXPopular		2.14	-.15	.12
CommGoalXDislike	-.04	1.50	.06	.07	LikeGoalXDislike		2.30	-.05	.12
CommGoalXLike	-.14	1.56	.12	.07	LikeGoalXLike		2.62	-.09	.13
CommGoalXUnpop	-.18	1.68	-.06	.08	LikeGoalXUnpop		2.93	-.25*	.13

*** $p < .001$; ** $p < .01$; * $p < .05$; + $p < .10$

Note: Each status is dummy-coded with (Control = 0; Status = 1). Because of the number of interactions examined, only the interaction terms themselves are presented. For each test, the interaction term and the respective two main effects were included as predictors of self-concept clarity and self-esteem (e.g., the AgGoalXPopular interaction included the main effect of agentic goals, main effect of popularity, and the interaction term between agentic goals and popularity). Popular = popular condition; Liked = liked condition; Disliked = disliked condition; Unpop = Unpopular condition SCC = self-concept clarity; SE = self-esteem; AgGoal = agentic goals; CommGoal = communal goals; LikeGoal = importance of being liked; PopGoal = importance of being popular.

Table 7. Study 2: Correlations, Means, and Standard Deviations of the Study Variables.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Popular	1													
2. Unpopular	-.62***	1												
3. Liked	.56***	-.42***	1											
4. Disliked	-.28***	.46***	-.58***	1										
5. SCC	.03	.00	.09	.00	1									
6. SE	.31***	-.27***	.33***	-.28***	.02	1								
7. AgGoal	.13*	-.11	.04	-.01	-.11 ⁺	.17**	1							
8. CommGoal	.11 ⁺	-.17**	.29***	-.20**	-.02	.14*	-.03	1						
9. PopGoal	.36***	-.21***	.10 ⁺	.07	-.07	.00	.06	-.03	1					
10. LikeGoal	.38**	-.11	.18**	-.07	.01	-.14*	-.19**	.17**	.45***	1				
11. Hostility	-.15**	.27***	-.32***	.38***	.00	-.28***	.14*	-.39***	.14*	-.12*	1			
12. Anger	.04	-.08	.07	-.08	.03	.01	.00	.05	.14*	.17**	.15*	1		
13. Aggression	-.02	.09	-.11 ⁺	.21***	-.08	-.11 ⁺	.17**	-.14*	.20***	.09	.37***	.24***	1	
14. Assertive	.06	-.16**	.05	-.13*	.00	.15**	.18**	.06	-.06	-.07	-.09	.28***	-.22***	1
<i>Mean</i>	5.69	3.68	7.14	2.48	34.79	3.86	.08	2.43	3.20	4.76	2.17	3.76	.62	4.96
<i>SD</i>	2.10	2.26	1.70	1.80	19.20	1.00	2.12	2.47	1.52	1.49	.61	.73	1.13	2.05

*** $p < .001$; ** $p < .01$; * $p < .05$; ⁺ $p < .10$

Note: Correlations presented across conditions. Popular = perceiving self as popular; Liked = perceiving self as liked; Disliked = perceiving self as disliked; Unpop = perceiving self as unpopular; SCC = self-concept clarity; SE = self-esteem; AgGoal = agentic goals; CommGoal = communal goals; LikeGoal = importance of being liked; PopGoal = importance of being popular; Hostility = feelings of hostility; Anger = feelings of anger, frustration, and irritation following provocation; Aggression = aggressive responses following provocation; Assertive = assertive responses following provocation.

Table 8. Study 3: Manipulation Check Items by Status Condition.

Item	Popular ^P		Unpopular ^U		Liked ^L		Disliked ^D		Neutral ^N		<i>F</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
I feel popular	3.30	1.21	2.85 ^L	1.02	3.47 ^U	1.01	3.13	0.94	2.92	1.14	3.07	< .05
I feel unpopular	2.25	1.12	2.83 ^L	1.13	2.18 ^U	1.07	2.42	1.06	2.56	1.22	2.70	< .05
I feel liked	4.05	0.81	3.58 ^L	0.92	4.14 ^U	0.83	3.78	0.85	3.68	1.08	3.52	< .01
I feel disliked	2.00 ^U	0.89	2.56 ^{PL}	1.06	1.86 ^U	0.87	2.09	0.97	2.13	0.98	3.79	< .01
I think I am popular	6.41 ^{UN}	2.23	4.94 ^{PL}	2.43	6.18 ^U	2.12	5.71	2.04	5.06 ^P	2.53	4.10	< .01
I think I am unpopular	2.93 ^U	2.31	4.65 ^{PL}	2.55	2.63 ^U	2.08	3.66	2.26	3.53	2.79	5.08	< .01
I think I am liked	7.50 ^U	1.76	5.98 ^{PL}	2.26	7.39 ^U	1.65	6.84	1.99	6.45	2.30	4.95	< .01
I think I am disliked	2.32	1.89	3.27	2.38	2.29	1.89	2.95	2.19	2.79	2.42	1.82	<i>ns</i>

Note: superscripts indicate which conditions scored significantly different from one another.

Table 9. Study 3: Main Effects of Peer Status on Self-Concept-Clarity, Self-Esteem, Hostility, Anger, and Aggressive and Assertive Responses to Provocation.

Variable	Popular		Unpopular		Liked		Disliked		Neutral		F	p
	M	SD	M	SD	M	SD	M	SD	M	SD		
SCC	33.16	17.49	33.70	18.68	32.90	20.46	28.75	17.13	32.83	18.63	.53	ns
SE	3.83	1.03	3.45	1.21	3.91	1.03	3.74	1.08	3.60	1.21	1.38	ns
Hostility	2.16	0.72	2.23	0.74	2.02	0.66	2.00	0.61	2.16	0.71	1.01	ns
Anger	3.78	0.89	3.75	0.78	3.78	0.84	3.65	0.78	3.88	0.81	.54	ns
Aggressive Responses	0.59	1.02	0.77	1.32	0.86	1.48	0.49	0.87	0.89	1.38	.94	ns
Assertive Responses	4.98	2.42	4.65	2.22	4.65	2.50	4.58	2.33	4.77	2.24	.21	ns

Note: superscripts indicate which conditions scored significantly different from one another.

Table 10. Study 3: Interaction Effects between Status and Social Goals on Self-Concept Clarity and Self-Esteem.

Interaction	SCC		SE		Interaction	SCC		SE	
	β	<i>SE</i>	β	<i>SE</i>		β	<i>SE</i>	β	<i>SE</i>
AgGoalXPopular	-.06	1.82	-.08	.11	PopGoalXPopular	2.22	-.04	.13	
AgGoalXDislike	-.18	2.00	-.06	.12	PopGoalXDislike	2.18	.08	.14	
AgGoalXLike	-.10	2.07	-.14	.11	PopGoalXLike	2.44	-.02	.14	
AgGoalXUnpop	-.10	1.82	.01	.11	PopGoalXUnpop	2.30	.07	.14	
CommGoalXPopular	-.17	1.65	.08	.10	LikeGoalXPopular	2.22	.03	.13	
CommGoalXDislike	.04	1.57	.21	.10	LikeGoalXDislike	2.34	.00	.15	
CommGoalXLike	-.05	1.55	.06	.09	LikeGoalXLike	2.41	.07	.13	
CommGoalXUnpop	-.10	1.63	.19	.10	LikeGoalXUnpop	2.70	.11	.16	

*** $p < .001$; ** $p < .01$; * $p < .05$; + $p < .10$

Note: Each status is dummy-coded with (Control = 0; Status = 1). Because of the number of interactions examined, only the interaction terms themselves are presented. For each test, the interaction term and the respective two main effects were included as predictors of self-concept clarity and self-esteem (e.g., the AgGoalXPopular interaction included the main effect of agentic goals, main effect of popularity, and the interaction term between agentic goals and popularity). Popular = popular condition; Liked = liked condition; Disliked = disliked condition; Unpop = Unpopular condition SCC = self-concept clarity; SE = self-esteem; AgGoal = agentic goals; CommGoal = communal goals; LikeGoal = importance of being liked; PopGoal = importance of being popular.

Table 11. Study 3: Correlations, Means, and Standard Deviations of the Study Variables.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Popular	1													
2. Unpopular	-.65***	1												
3. Liked	.73***	-.56***	1											
4. Disliked	-.52***	.68***	-.64***	1										
5. SCC	.09	-.09	.10	-.09	1									
6. SE	.44***	-.45***	.39***	-.30***	.08	1								
7. AgGoal	.17**	-.11 ⁺	.10	-.01	.00	.24***	1							
8. CommGoal	.13*	-.06	.21**	-.20**	-.05	.13*	-.04	1						
9. PopGoal	.19**	-.13*	.07	-.03	-.01	.13*	.13*	-.05	1					
10. LikeGoal	.03	.04	.13*	-.08	-.06	-.14*	-.18**	.14*	.45***	1				
11. Hostility	-.27***	.33***	-.34***	.47***	.02	-.37***	.06	-.25***	.21**	-.13*	1			
12. Anger	.03	.03	.09	-.05	.01	-.13*	-.09	.05	-.05	.13*	.05	1		
13. Aggression	.04	.02	-.04	.20**	-.05	-.05	.29***	-.13*	.18**	-.10	.30***	.17**	1	
14. Assertive	.12*	-.11 ⁺	.13*	-.22**	-.04	.04	.04	.11 ⁺	-.13*	.09	-.22**	.21**	-.29***	1
<i>Mean</i>	5.61	3.51	6.80	2.74	32.32	3.70	-.23	2.13	2.98	4.48	2.12	3.77	.74	4.72
<i>SD</i>	2.35	2.52	2.09	2.20	18.49	1.13	1.99	2.42	1.61	1.55	.69	.82	1.26	2.32

*** $p < .001$; ** $p < .01$; * $p < .05$; ⁺ $p < .10$

Note: Correlations presented across conditions. Popular = perceiving self as popular; Liked = perceiving self as liked; Disliked = perceiving self as disliked; Unpop = perceiving self as unpopular; SCC = self-concept clarity; SE = self-esteem; AgGoal = agentic goals; CommGoal = communal goals; LikeGoal = importance of being liked; PopGoal = importance of being popular; Hostility = feelings of hostility; Anger = feelings of anger, frustration, and irritation following provocation; Aggression = aggressive responses following provocation; Assertive = assertive responses following provocation.

Table 12. Study 4: Manipulation Check Items by Status Condition

Item	Popular ^P		Unpopular ^U		Liked ^L		Disliked ^D		Neutral ^N		F	p
	M	SD	M	SD	M	SD	M	SD	M	SD		
I feel popular	5.06	1.77	5.59	2.07	6.00	2.08	5.27 ^N	2.13	5.97 ^D	1.98	2.46	< .05
I feel unpopular	4.26	1.78	3.71	2.46	3.51	2.16	3.83	2.61	3.12	1.97	2.13	= .08
I feel liked	7.00	1.38	7.32	1.84	7.22	1.56	6.97	2.08	7.05	1.67	2.41	= .05
I feel disliked	2.24	1.55	2.26	1.74	2.39	1.60	2.68	2.27	2.57	1.74	0.66	ns
I think I am popular	3.02	0.90	3.14	1.03	3.12	1.01	2.82	1.16	3.39	0.93	2.09	= .08
I think I am unpopular	3.91	0.41	4.04	0.76	4.02	0.76	3.69	0.99	3.97	0.56	1.81	ns
I think I am liked	2.11	0.73	1.88	0.88	2.02	0.91	2.31	0.99	2.29	0.89	0.41	ns
I think I am disliked	2.43	0.83	2.41	0.95	2.68	0.88	2.57	1.01	2.47	1.06	0.57	ns

Note: superscripts indicate which conditions scored significantly different from one another.

Table 13. Study 4: Main Effects of Peer Status on Self-Concept Clarity, Self-Esteem, Hostility, Anger, and Aggressive and Assertive Responses to Provocation

Variable	Popular ^P		Unpopular ^U		Liked ^L		Disliked ^D		Neutral ^N		F	p
	M	SD	M	SD	M	SD	M	SD	M	SD		
SCC	31.12	13.96	33.34	16.91	38.83	22.40	33.59	18.29	34.02	20.59	0.92	ns
SE	3.52	1.12	3.74	1.13	3.62	1.18	3.58	1.09	3.80	1.16	0.54	ns
Hostility	1.96 ^N	0.43	2.03	0.49	2.10	0.51	2.18	0.61	2.26 ^P	0.62	2.63	< .05
Anger	3.78	0.79	3.66	0.74	3.88	0.78	3.78	0.67	3.65	0.76	0.79	ns
Aggressive Responses	0.49	0.83	0.52	0.89	0.59	0.92	0.52	0.89	0.47	0.73	0.12	ns
Assertive Responses	4.74	2.35	4.84	1.96	5.00	2.02	4.69	2.04	4.54	2.29	0.31	ns

Note: superscripts indicate which conditions scored significantly different from one another.

Table 14. Study 4: Interaction Effects between Status and Social Goals on Self-Concept Clarity and Self-Esteem.

Interaction	SCC		SE		Interaction	SCC		SE	
	β	<i>SE</i>	β	<i>SE</i>		β	<i>SE</i>	β	<i>SE</i>
AgGoalXPopular	.12	1.74	.11	.11	PopGoalXPopular		2.47	.02	.15
AgGoalXDislike	.02	1.63	.20	.10	PopGoalXDislike		2.44	.02	.14
AgGoalXLike	.12	2.05	.37**	.11	PopGoalXLike		2.98	-.08	.16
AgGoalXUnpop	.11	1.67	.13	.10	PopGoalXUnpop		2.37	-.11	.14
CommGoalXPopular	.20	1.14	.08	.09	LikeGoalXPopular		2.79	-.10	.16
CommGoalXDislike	.07	1.95	.05	.08	LikeGoalXDislike		2.24	.07	.14
CommGoalXLike	.08	1.41	.21 ⁺	.10	LikeGoalXLike		2.94	-.03	.15
CommGoalXUnpop	.16	1.44	.25*	.08	LikeGoalXUnpop		2.24	.05	.13

*** $p < .001$; ** $p < .01$; * $p < .05$; ⁺ $p < .10$

Note: Each status is dummy-coded with (Control = 0; Status = 1). Because of the number of interactions examined, only the interaction terms themselves are presented. For each test, the interaction term and the respective two main effects were included as predictors of self-concept clarity and self-esteem (e.g., the AgGoalXPopular interaction included the main effect of agentic goals, main effect of popularity, and the interaction term between agentic goals and popularity). Popular = popular condition; Liked = liked condition; Disliked = disliked condition; Unpop = Unpopular condition SCC = self-concept clarity; SE = self-esteem; AgGoal = agentic goals; CommGoal = communal goals; LikeGoal = importance of being liked; PopGoal = importance of being popular

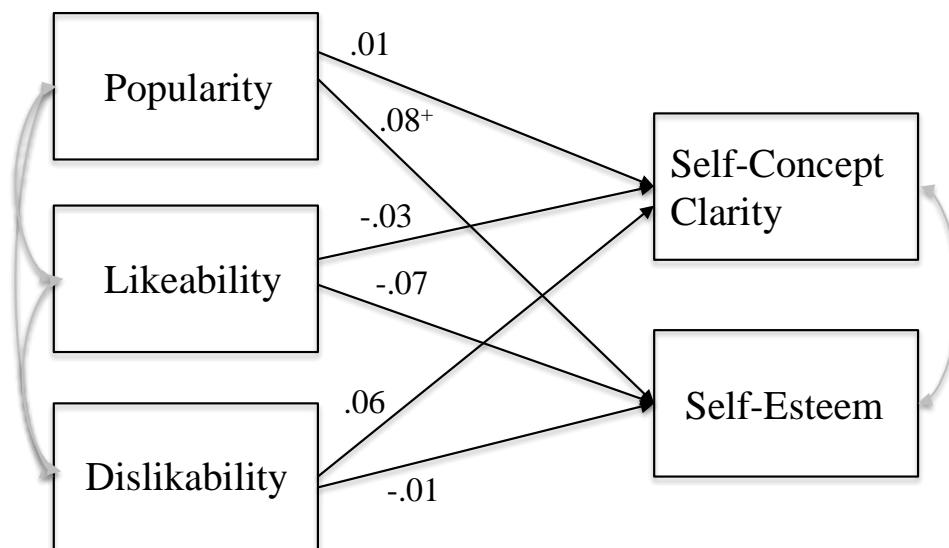
Table 15. Study 4: Correlations, Means, and Standard Deviations of the Study Variables.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Popular	1													
2. Unpopular	-.67***	1												
3. Liked	.56***	-.46***	1											
4. Disliked	-.20**	.43***	-.56***	1										
5. SCC	.12 ⁺	-.03	.07	-.01	1									
6. SE	.38***	-.31***	.38***	-.27***	.10	1								
7. AgGoal	.28***	-.26***	.12 ⁺	-.03	.12 ⁺	.30***	1							
8. CommGoal	.24***	-.13*	.34***	-.11 ⁺	-.02	.25***	.21***	1						
9. PopGoal	.16**	-.12 ⁺	-.05	.09	.00	-.04	-.10	-.09	1					
10. LikeGoal	-.06	.10	-.08	.03	-.12 ⁺	-.31***	-.38***	.03	.46***	1				
11. Hostility	-.07	.09	-.29***	.27***	.00	-.25***	.04	-.19**	.21***	.07	1			
12. Anger	.11 ⁺	-.02	.02	-.09	-.03	-.03	.08	-.01	.06	.11 ⁺	.15*	1		
13. Aggression	.08	-.11	.03	.07	.05	-.02	.28***	-.09	-.03	-.16*	.37***	.22***	1	
14. Assertive	.24***	-.17**	-.17**	-.18**	.04	.13*	.27***	.21**	-.04	-.11 ⁺	-.09	.32***	-.04	1
<i>Mean</i>	5.69	3.68	7.14	2.48	34.00	3.66	-.39	2.20	2.92	4.64	2.11	3.74	.52	4.75
<i>SD</i>	2.10	2.26	1.70	1.80	18.56	1.13	2.34	2.46	1.53	1.47	.55	.74	.84	2.13

*** $p < .001$; ** $p < .01$; * $p < .05$; ⁺ $p < .10$

Note: Correlations presented across conditions. Popular = perceiving self as popular; Liked = perceiving self as liked; Disliked = perceiving self as disliked; Unpop = perceiving self as unpopular; SCC = self-concept clarity; SE = self-esteem; AgGoal = agentic goals; CommGoal = communal goals; LikeGoal = importance of being liked; PopGoal = importance of being popular; Hostility = feelings of hostility; Anger = feelings of anger, frustration, and irritation following provocation; Aggression = aggressive responses following provocation; Assertive = assertive responses following provocation.

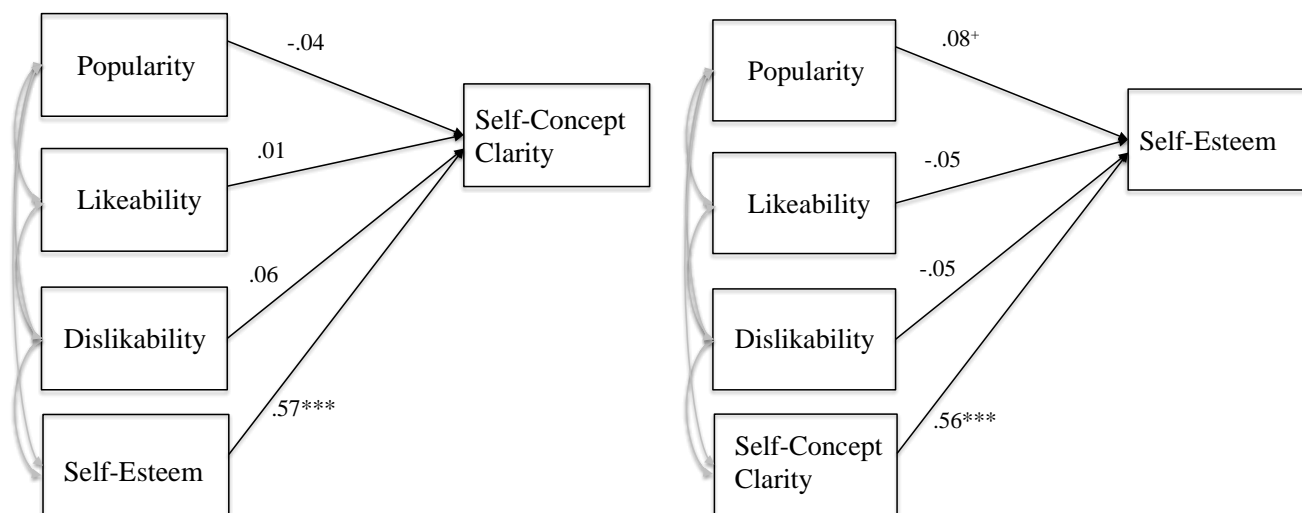
FIGURES



*** $p < .001$; ** $p < .01$; * $p < .05$; + $p < .10$

Figure 1. Study 1: Associations between popularity, likeability, and dislikeability and self-concept clarity and self-esteem.

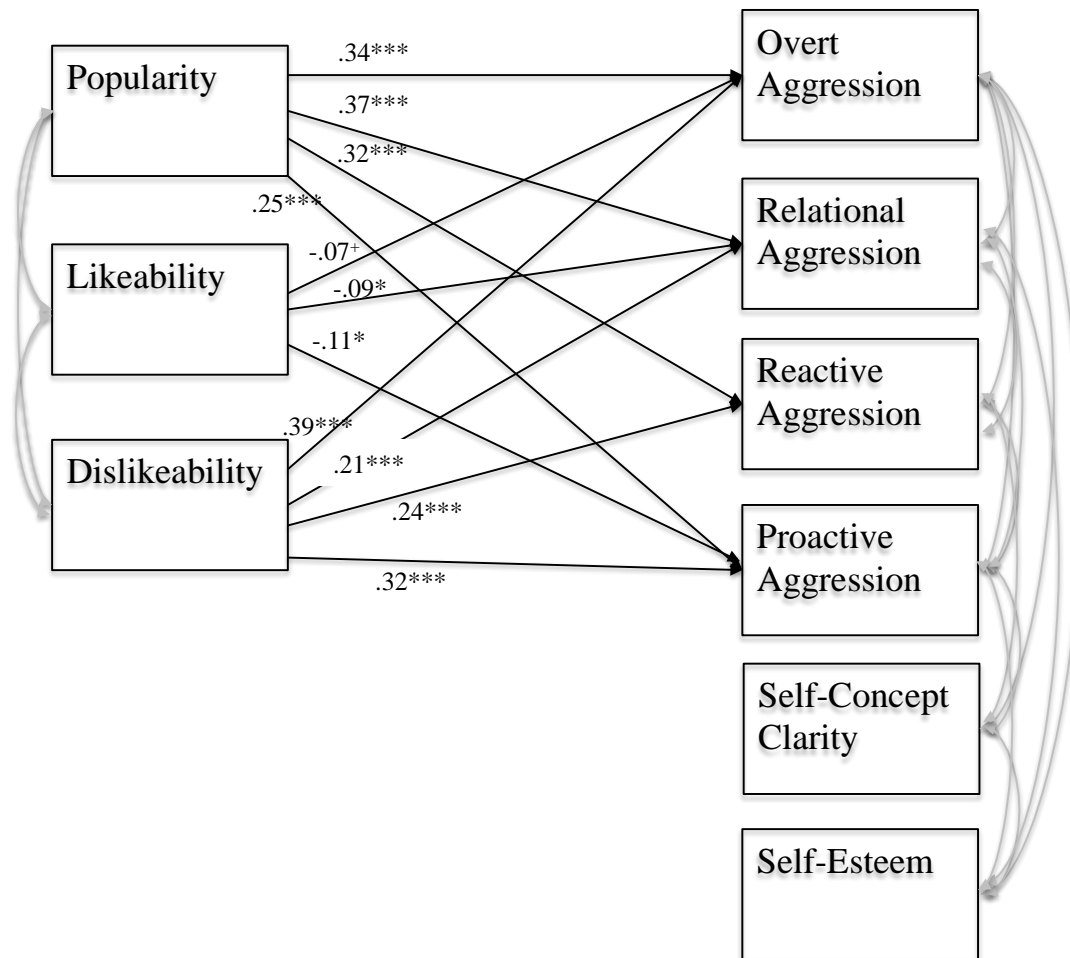
Note: Model fit is not reported, as no significant paths emerged.



*** $p < .001$; ** $p < .01$; * $p < .05$; + $p < .10$

Figure 2. Study 1: Associations between popularity, likeability, and dislikeability and self-concept clarity while controlling for self-esteem., and self-esteem while controlling for self-concept clarity.

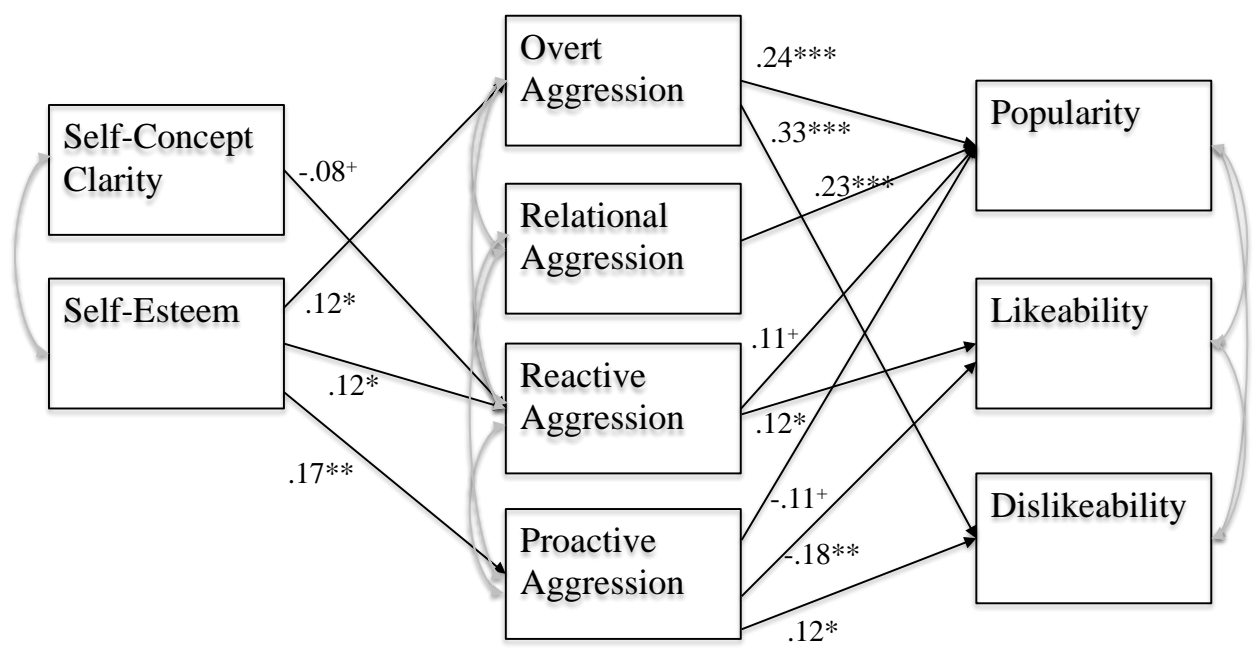
Note: non-significant paths were removed to report model fit, but are displayed for reference. Model fit: $\chi^2(3) = 4.21$; CFI = .99; RMSEA = .03^(CI: .00-.08); $\chi^2(1) = 2.01$; CFI = .99; RMSEA = .05^(CI: .01-.14).



*** $p < .001$; ** $p < .01$; * $p < .05$; ⁺ $p < .10$

Figure 3. Study 1: Associations among peer status, aggression, self-concept clarity and self-esteem for alternative model comparisons.

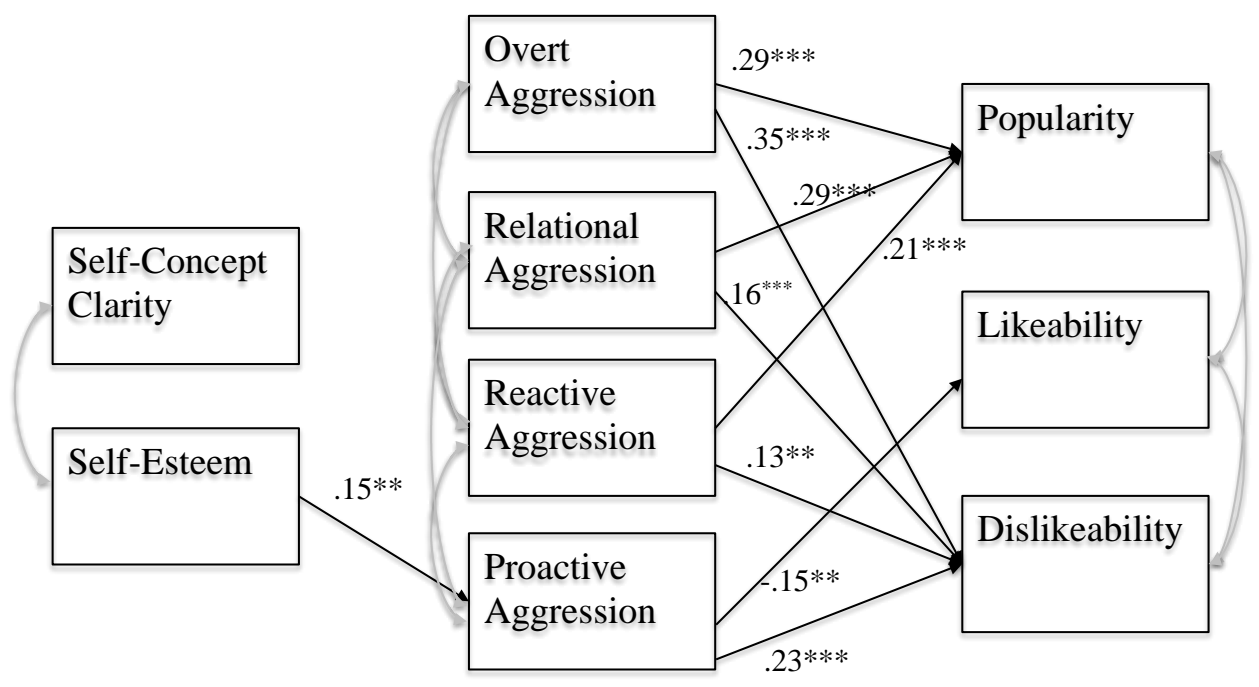
Note: Model fit: $\chi^2(9) = 17.77$; CFI = .99; RMSEA = .04^(CI: .01-.07).



*** $p < .001$; ** $p < .01$; * $p < .05$; + $p < .10$

Figure 4. Study 1: Associations among self-concept clarity, self-esteem, aggression, and peer status variables without orthogonalized aggression variables.

Note: Model fit: $\chi^2(1) = .74$; CFI = 1.00; RMSEA = .00^(CI: .00-.12).



*** $p < .001$; ** $p < .01$; * $p < .05$; + $p < .10$

Figure 5. Study 1: Associations among self-concept clarity, self-esteem, aggression, and peer status variables using orthogonalized aggression variables.

Note: Model fit: $\chi^2(14) = 15.05$; CFI = .99; RMSEA = .01 (CI: .00-.05).

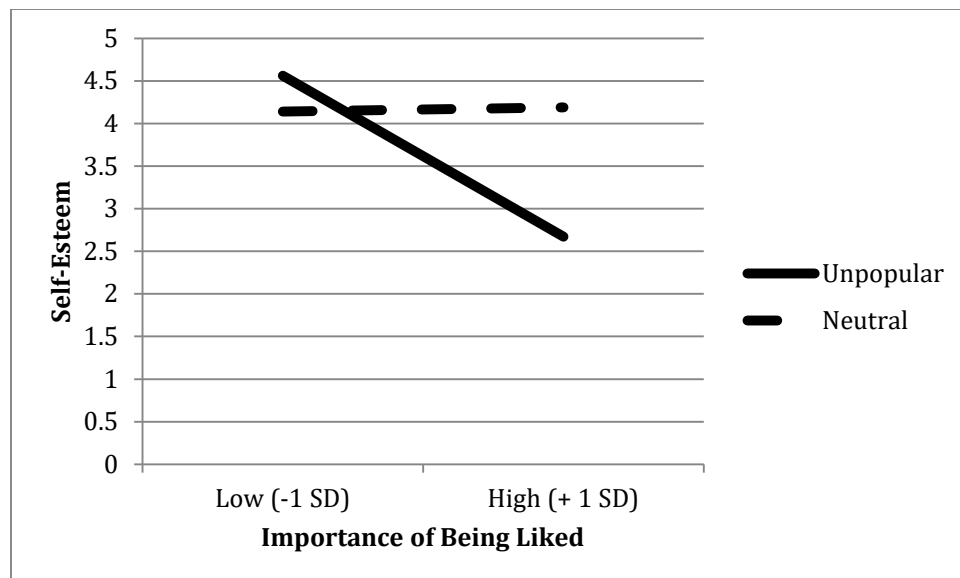


Figure 6. Study 2: Interaction between unpopular status and importance of being liked on self-esteem.

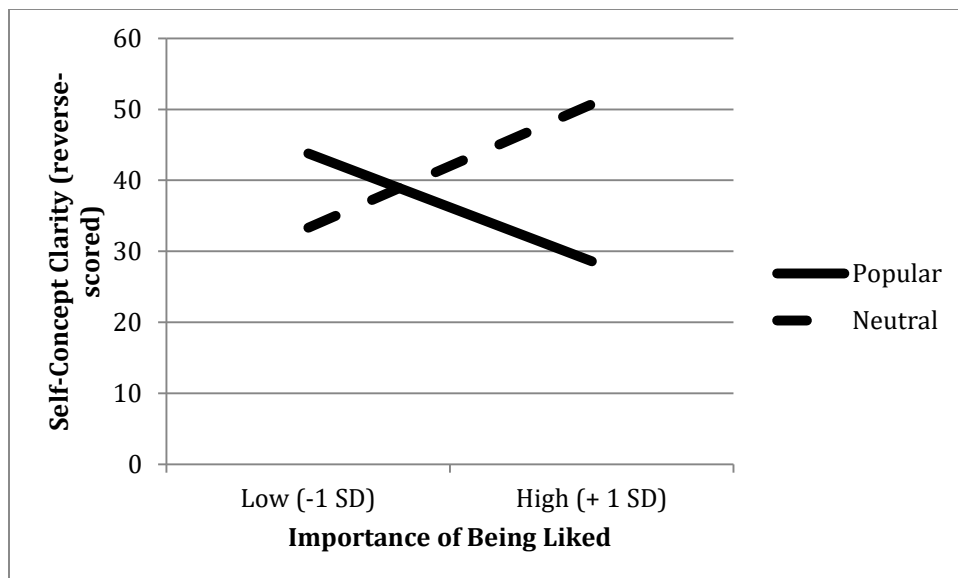


Figure 7. Study 2: Interaction between popular status and importance of being liked on self-concept clarity.

Note: Low scores indicate high self-concept clarity

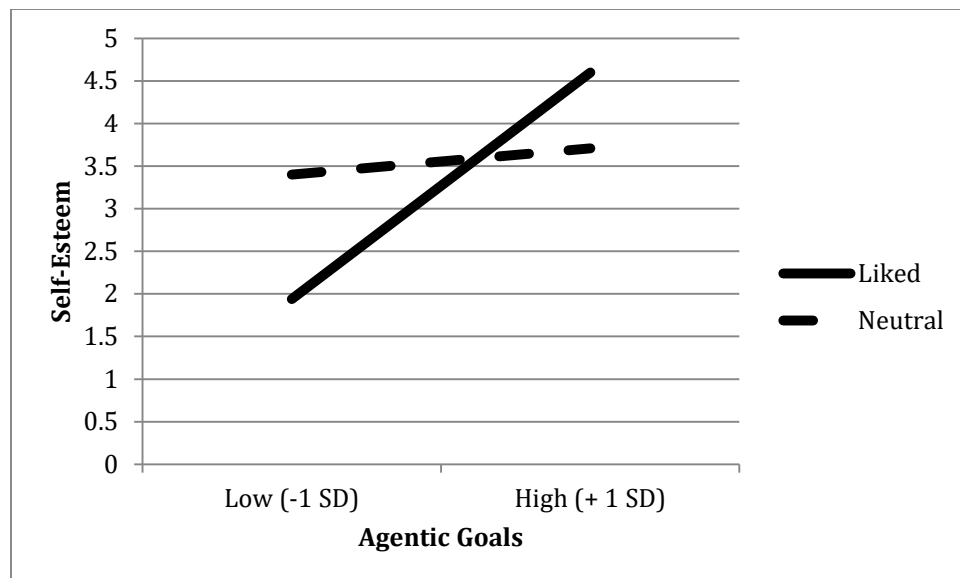


Figure 8. Study 4: Interaction between liked status and agentic goals on self-esteem.

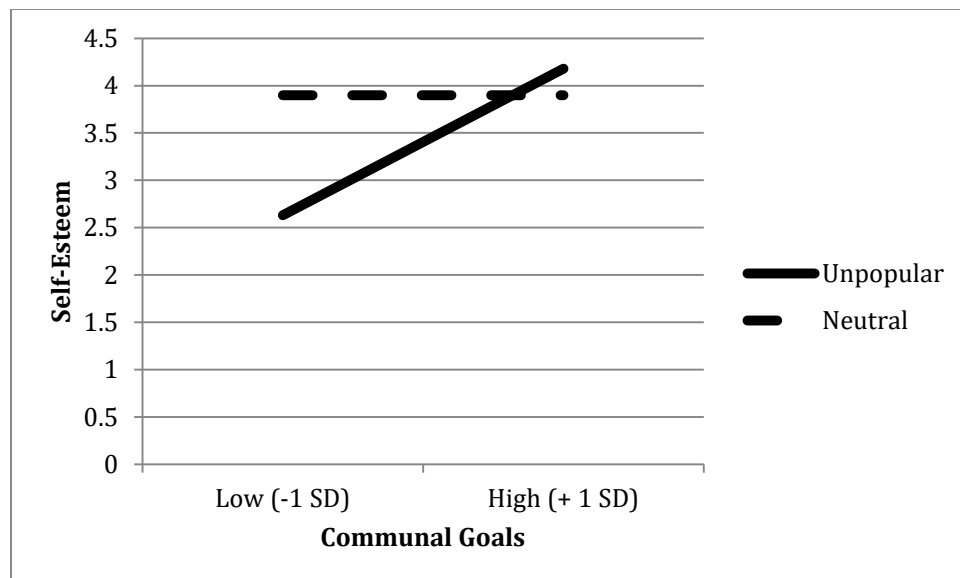


Figure 9. Study 4: Interaction between unpopular status and communal goals on self-esteem.

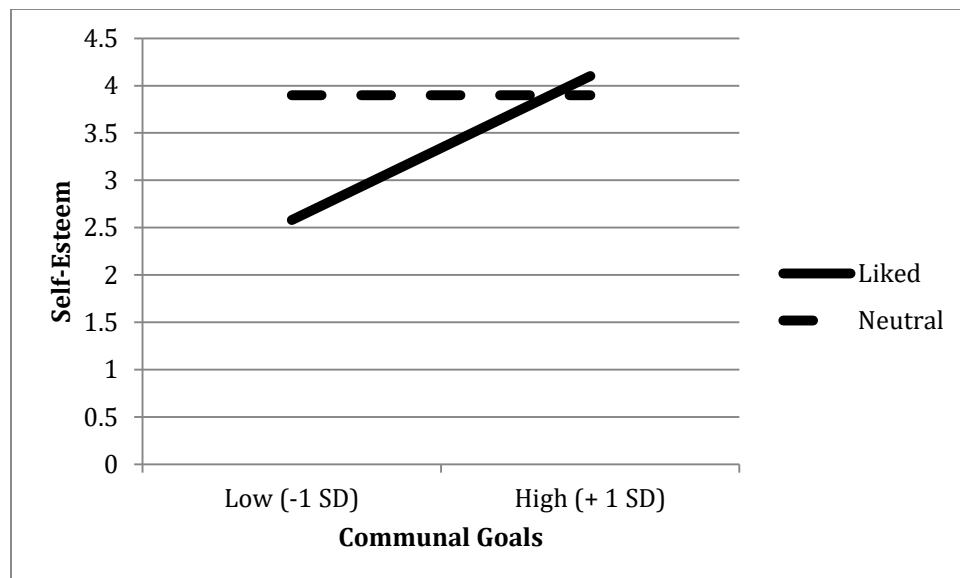


Figure 10. Study 4: Interaction between liked status and communal goals on self-esteem.

REFERENCES

- Adler, P. A., & Adler, P. (1995). Dynamics of inclusion and exclusion in preadolescent cliques. *Social Psychology Quarterly*, 58, 145-162.
- Aiken, L. S., & West, S. G. (1991). Multiple regression: Testing and interpreting interactions. Thousand Oaks, CA: Sage.
- Allen, J. P., Schad, M. M., Oudekerk, B. A., & Chango, J. (2014). What ever happened to the 'cool' kids? Long-term sequelae of early adolescent pseudomature behavior. *Child Development*, 85(5), 1866-1880.
- Anderson, C. & Carnagey, N.L. (2009). Causal effects of violent sports video games on aggression: Is it competitiveness or violent content? *Journal of Experimental Social Psychology*, 45(4), 731-739.
- Anderson, C.A, Deuser, W.E., DeNeve, K. (1995). Hot temperatures, hostile affect, hostile cognition, and arousal: Tests of a general model of affective aggression. *Personality and Social Psychology Bulletin*, 21, 434-448.
- Anderson, C., Hildreth, J. A. D., & Howland, L. (2015). Is the desire for status a fundamental human motive? A review of the empirical literature. *Psychological Bulletin*, 141, 574-601.
- Andreou, E. (2006). Social preference, perceived popularity, and social intelligence: Relations to overt and relational aggression. *School Psychology International*, 27, 339–351.
- Arnett, J.J. (1998). Learning to stand alone: The contemporary American transition to adulthood in cultural and historical context. *Human Development*, 41, 295-315.

- Arnett, J.J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist*, 55, 469-480
- Arnett, J.J. (2007). Emerging adulthood: What is it, and what is it good for? *Child Development Perspectives*, 1, 68-73.
- Asher, S.R., Coie, J.D., & French, D.C. (1992). Peer rejection in childhood. *Contemporary Psychology*, 37(12), 1275-1276.
- Babad, E. (2001). On the conception and measurement of popularity: More facts and some straight conclusions. *Social Psychology of Education*, 5, 3-30.
- Bailey, C., & Ostrov, J.M. (2007). Differentiating forms and functions of aggression in emerging adults: Associations with hostile attribution biases and normative beliefs. *Journal of Youth and Adolescence*, 37(6), 713-722.
- Baldwin, M.W. (1992). Relational schemas and the processing of social information. *Psychological Bulletin*, 112(3), 461-484.
- Barkow, J. H. (1975). Prestige and culture: A biosocial interpretation. *Current Anthropology*, 16, 553-572.
- Baumgardner, A. H. (1990). To know oneself is to like oneself: Self-certainty and self-affect. *Journal of Personality and Social Psychology*, 58, 1062-1072.
- Baumeister, R. F. (1997). The self and society: Changes, problems and opportunities. In R. D. Ashmore, & L. J. Jussim (Eds.), *Self and identity: Fundamental issues*. (pp. 191-217). New York: Oxford University Press.
- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117(3), 497.

- Bechtoldt, M.N., De Dreu, C.K.W., Nijstad, B.A., & Zapp, D. (2010). Self-concept clarity and the management of social conflict. *Journal of Personality, 78*(2), 539-574. doi: 10.1111/j.1467-6494.2010.00626.x
- Berndt, T.J. (1982). The features and effects of friendship in early adolescence. *Child Development, 53*(6), 1447-1460.
- Boivin, M. & Hymel, S. (1997). Peer experiences and social self-perceptions: A sequential model. *Developmental Psychology, 33*(1), 135-145.
- Card, N. A., Stucky, B. D., Sawalani, G. M., & Little, T. D. (2008). Direct and indirect aggression during childhood and adolescence: A meta-analytic review of gender differences, intercorrelations, and relations to maladjustment. *Child Development, 79*(5), 1185-1229.
- Campbell, J. D. (1990). Self-esteem and clarity of the self-concept. *Journal of Personality and Social Psychology, 59*, 538-549.
- Campbell, J.D., Assanand, S., & Di Paula, A. (2003). The structure of the self-concept and its relation to psychological adjustment. *Journal of Personality, 71*(1), 115-140.
- Campbell, J.D., Trapnell, P.D., Heine, S.J., Katz, I.M., Lavalley, L.F., & Lehman, D.R. (1996). Self-concept clarity: Measurement, personality correlates, and cultural boundaries. *Journal of Personality and Social Psychology, 70*(1), 141-156.
- Caravita, S. C. S., & Cillessen, A. H. N. (2012). Agentic or communal? Associations between interpersonal goals, popularity, and bullying in middle childhood and early adolescence. *Social Development, 21*(2), 376-395. doi: 10.1111/j.1467-9507.2011.00632.x

- Cheung, G. W., & Rensvold, R. B. (1999). Testing factorial invariance across groups: A reconceptualization and proposed new method. *Journal of Management*, 25(1), 1-27.
- Choukas-Bradley, S., Giletta, M., Neblett, E.W., & Prinstein, M.J. (2015). Ethnic differences in associations among popularity, likability, and trajectories of adolescents' alcohol use and frequency. *Child Development*, 86(2), 519-535.
- Cillessen, A.H.N. & Mayeux, L. (2004). From censure to reinforcement: Developmental changes in the association between aggression and social status. *Child Development*, 75, 147-163.
- Cillessen, A.H., & Rose, A.J. (2005). Understanding popularity in the peer system. *Current Directions in Psychological Science*, 14(2), 102-105.
- Cillessen, A.H., van Ijzendoorn, H., van Lieshout, C., & Hartup, W. (1992). Heterogeneity among peer rejected boys: Subtypes and stabilities. *Child Development*, 63, 893-905.
- Coie, J.D. (1990). Toward a theory of peer rejection. In S. R. Asher & J. D. Coie (Eds.), *Peer rejection in childhood* (pp. 17-59). Cambridge, England: Cambridge University Press.
- Coie, J. D., Dodge, K. A., & Coppotelli, H. (1982). Dimensions and types of social status: A cross-age perspective. *Developmental Psychology*, 18, 557-570.
- Coie, J. D, Dodge, K. A., & Kupersmidt, J. B. (1990). Peer group behavior and social status. In S. R. Asher & J. D. Coie (Eds.), *Peer rejection in childhood* (pp. 17-59). Cambridge, England: Cambridge University Press.
- Cooley, C.H. (1964; 1902). *Human Nature and the Social Order*. New York, NY: Schocken Books.
- Corsaro, W.A., & Eder, D. (1990). Children's peer cultures. *Annual Review of Psychology*, 16, 197-220.

- Crick, N.R., & Grotpeter, J. K. (1995). Relational aggression, gender, and social-psychological adjustment. *Child Development, 66*, 710- 722.
- Crick, N. R., & Dodge, K. A. (1994). A review and reformulation of social information-processing mechanisms in children's social adjustment. *Psychological Bulletin, 115*, 74-101. doi: 10.1037/0033-2909.115.1.74
- Dawes, M., & Xie, H. (2014). The role of popularity goal in early adolescents' behavior and popularity status. *Developmental Psychology, 50*(2), 489-497.
- De Bruyn, E.H., Cillessen, A.H.N. & Wissink, I.B. (2010). Associations of peer acceptance and perceived popularity with bullying and victimization in early adolescence. *Journal of Early Adolescence, 30*(4), 543-566.
- De Bruyn, E.H., & Van Den Boom, D.C. (2005). Interpersonal behavior, peer popularity, and self-esteem in early adolescence. *Social Development, 14*(4), 555-573.
- De Cremer, D., van Knippenberg, B., van Knippenberg, D., Mullenders, D., & Stinglhamber, F. (2005). Rewarding leadership and fair procedures as determinants of self-esteem. *Journal of Applied Psychology, 90*, 3-12.
- Diehl, D.S., Lemerise, E.A., Caverly, S.L., Ramsay, S., & Roberts, J. (1998). Peer relations and school adjustment in ungraded primary children. *Journal of Educational Psychology, 90*(3), 506–506.
- Dijkstra, J.K., Cillessen, A.H.N., Lindenberg, S., & Veenstra, R. (2010). Same-gender and cross-gender likeability: Associations with popularity and status enhancement: The TRAILS study. *Journal of Early Adolescence, 30*(6), 773-802.

- Dodge, K. A., Lansford, J. E., Burks, V. S., Bates, J. E., Pettit, G. S., Fontaine, R., & Price, J. M. (2003). Peer rejection and social information-processing factors in the development of aggressive behavior problems in children. *Child Development, 74*(2), 374–393.
- Dodge, K.A., Pettit, G.S., McClaskey, C.L., & Brown, M.M. (1986). Social competence in children. *Monographs of the Society for Research in Child Development, 51*(2), Serial No. 213.
- Donahue, E. M., Robins, R. W., Roberts, B. W., & John, O. P. (1993). The divided self: Concurrent and longitudinal effects of psychological adjustment and social roles on self-concept differentiation. *Journal of Personality and Social Psychology, 64*, 834–846.
- Donnellan, M.B., Trzesniewski, K. H., Robins, R.R., Moffitt, T.E., & Caspi, A. (2005). Low self-esteem is related to aggression, antisocial behaviors, and delinquency. *Psychological Science, 16*(4), 328-335.
- Downey, G., Lebolt, A., Rincon, C., & Freitas, A.L. (1998). Rejection sensitivity and children's interpersonal difficulties. *Child Development, 69*, 1074-1091.
- Doyle, A., Connolly, J. & Rivest, L. (1980). The effect of playmate familiarity on the social interactions of young children. *Child Development, 51*(1), 217-223.
- Eder, D. (1995). *School talk: Gender and adolescent culture*. New Brunswick, NJ: Rutgers University Press. ED 388 393.
- Fast, N.J. & Chen, S. (2009). When the boss feels inadequate: Power, incompetence, and aggression. *Psychological Science, 20*(11), 1406-1413.
- Festinger, L. (1962). Cognitive dissonance. *Scientific American, 207*(4), 93-107.

- Findley, D. & Ojanen, T. (2012). Agentic and communal goals in early adulthood: Associations with narcissism, empathy, and perceptions of self and others. *Self and Identity*, 12(5), 504-526.
- Findley, D. & Ojanen, T. (2013). Adolescent resource control: Associations with physical and relational aggression, prosocial and withdrawn behaviors, and peer regard. *International Journal of Behavioral Development*, 37(6), 518-529.
- Gavin, L.A. & Furman, W. (1989). Age differences in adolescents' perceptions of their peer groups. *Developmental Psychology*, 25(5), 827-834.
- Geldof, G.J., Pornpraswetmanit, S., Schoemann, A.M., & Little, T.D. (2013). Orthogonalizing through residual centering: Extended applications and caveats. *Educational and Psychological Measurements*, 73(1), 27-46.
- Gifford-Smith, M. E., & Brownell, C. A. (2003). Childhood peer relationships: Social acceptance, friendships, and peer networks. *Journal of School Psychology*, 41, 235-284.
- Graham, S., & Juvonen, J. (2001). An attributional approach to peer victimization. In J. Juvonen & S. Graham (Eds.), *Peer harassment in school. The plight of the vulnerable and victimized*, pp. 49-72. New York: Guilford Press.
- Hair, J.F., Tatham, R.L., Anderson, R.E. (1998). *Multivariate Data Analysis*. 5. Prentice Hall.
- Harris, J.R. (1995). Where is the child's environment? A group socialization theory of development. *Psychological Review*, 102, 458-489.
- Harter, S. (1999). *The construction of the self: A developmental perspective*. New York: Guilford Press
- Harter, S. (2006). The development of self-representations. In C. B. Fischer and R. Lerner (Eds.), *Applied developmental science: An encyclopedia of research, policies, and programs*.

- Harter, S., Stocker, C., & Robinson, N. (1996). The perceived directionality of the link between approval and self-worth: The liabilities of a looking glass self orientation among young adolescents. *Journal of Adolescence*, 6, 285-308.
- Harter, S., Waters, P., & Whitesell, N. R. (1998). Relational self-worth: Adolescents perceptions of their worth as a person in different relational contexts. *Child Development*, 69, 756-766
- Hartup (1983). Peer relations. In P.H. Mussen (Ed.), *Handbook of Child Psychology: Val. 4. Socialization, personality, and social development* (pp. 103-196). New York: Wiley.
- Hartup, W.W. (1996). The company they keep: Friendships and their developmental significance. *Child Development*, 67(1), 1-13.
- Hartup, W.W. & Stevens, N. (1997). Friendships and adaptations in the life course. *Psychological Bulletin*, 121, 355-370.
- Hawley, P.H. (2003). Prosocial and coercive configurations of resource control in early adolescence: A case for the well-adapted Machiavellian. *Merrill-Palmer Quarterly*, 49, 279-309.
- Hawley, P.H. (2006). Evolution and personality: A new look at Machiavellianism. In D. Mroczek & T. Little (Eds.), *Handbook of Personality Development*. New Jersey: Lawrence Erlbaum.
- Hergovich, A., Sirsch, U., & Felinger, M. (2002). Self-appraisals, actual appraisals and reflected appraisals of preadolescent children. *Social Behavior and Personality*, 30, 603– 612.
- Hopmeyer Gorman, A., Kim, J., & Schimmelbusch, A. (2002). The attributes adolescents associate with peer popularity and teacher preference. *Journal of School Psychology*, 40, 143–165.

- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1-55.
- James, W. (1890). *The Principles of Psychology*, Vol 1. Dover Publications, New York.
- Keltner, D., Gruenfeld, D.H., & Anderson, C. (2003). Power, approach, and inhibition. *Psychological Review*, 110(2), 265-284.
- Kernis, M.H., & Goldman, B.M. (2006). A multicomponent conceptualization of authenticity: Theory and research. *Advances in Experimental Social Psychology*, 38, 283-357.
- Kistner, J. A., David, C. F., & Repper, K. (2007). Self-enhancement of peer acceptance: Implications for children's self-worth and interpersonal functioning. *Social Development*, 16, 24-44.
- Kornbluh, M., & Neal, J.W. (2014). Examining the many dimensions of children's popularity: Interactions between aggression, prosocial behavior, and gender. *Journal of Social and Personal Relationships*,
- Kraus, M.W., Chen, S., & Keltner, D. (2011). The power to be me: Power elevates self-concept consistency and authenticity. *Journal of Experimental Social Psychology*, 47, 974-980.
- Ladd, G., & Troop-Gordon, W. (2003). The role of chronic peer difficulties in the development of children's psychological adjustment problems. *Child Development*, 74, 1344-1367.
- LaFontana, K. M., & Cillessen, A. H. N. (1999). Children's interpersonal perceptions as a function of sociometric and peer-perceived popularity. *Journal of Genetic Psychology*, 160, 225-242.
- LaFontana, K. M., & Cillessen, A. H. N. (2009). Developmental changes in the priority of perceived status in childhood and adolescence. *Social Development*, 19(1), 130-147.

- Lance, C. E. (1988). Residual centering, exploratory and confirmatory moderator analysis, and decomposition of effects in path models containing interactions. *Applied Psychological Measurement, 12*, 163-175.
- Lansu, T.A.M. & Cillessen, A.H.N. (2012). Peer status in emerging adulthood: Associations of popularity and preference with social roles and behavior. *Journal of Adolescent Research, 27*(1), 132-150.
- Larson, R.W., & Verma, S. (1999). How children and adolescents spend time across the world: Work, play, and developmental opportunities. *Psychological Bulletin, 125*(6), 701-736.
- Leary, M.R., Cottrell, C.A., & Phillips, M. (2001). Deconfounding the effects of dominance and social acceptance on self-esteem. *Journal of Personality and Social Psychology, 18*(5), 898-909.
- Leary, M. R., Tambor, E. S., Terdal, S. K., & Downs, D. L. (1995). Self-esteem as an interpersonal monitor: The sociometer hypothesis. *Journal of Personality and Social Psychology, 68*, 518-530.
- Lease, A. M., Kennedy, C. A., & Axelrod, J. L. (2002). Children's social constructions of popularity. *Social Development, 11*, 87-109.
- Lewandowski, G.W., Nardone, N., & Raines, A.J. (2010). The role of self-concept clarity in relationship quality. *Self and Identity, 9*, 416-433.
- Little, T. D., Bovaird, J. A., & Widaman, K. F. (2006). On the merits of orthogonalizing powered and product terms: Implications for modeling interactions among latent variables. *Structural Equation Modeling, 13*, 497-519.

- Little, T. D., Jones, S. M., Henrich, C. C., & Hawley, P. H. (2003). Disentangling the “whys” from the “whats” of aggressive behavior. *International Journal of Behavioral Development, 27*, 122–133.
- Locke, K. D. (2003). Status and solidarity in social comparison: Agentic and communal values and vertical and horizontal directions. *Journal of Personality and Social Psychology, 84*(3), 619-631. doi: 10.1037/0022-3514.84.3.619
- Luthar, S.S., & McMahon, T.J. (1996). Peer reputation among inner-city adolescents: Structure and correlates. *Journal of Research on Adolescence, 6*, 581-603.
- Mayeux, L., Houser, J. J., & Dyches, K. D. (2011). Social acceptance and popularity: Two distinct forms of peer status. In A. H. N. Cillessen, D. Schwartz, & L. Mayeux (Eds.), *Popularity in the peer system* (pp. 79–102). New York: Guilford Press
- Mayeux, L., Sandstrom, M. J., & Cillessen, A. N. (2008). Is being popular a risky proposition? *Journal of Research on Adolescence, 18*, 49–74. doi:10.1111/j.1532-7795.2008.00550.x
- McConnell, A. R., & Strain, L. M. (2007). Content and structure of the self-concept. In C. Sedikides & S. J. Spencer (Eds.), *The self: Frontiers of social psychology* (pp. 51–73). New York: Psychology Press.
- Mead, G.H. (1934). Mind, self, and society. In A. Strauss (ed.), *G.H. Mead on Social Psychology” Selected Papers*. Chicago, IL: University of Chicago Press.
- Merten, D.E. (2004). Securing her experience: Friendship vs. popularity. *Feminism and Psychology, 14*, 361-365.
- Moreno, J. L. (1953). Sociometry: A Journal of Interpersonal Relations and Experimental Design 18 (4).

- Newcomb, A. F., Bukowski, W. M., & Pattee, L. (1993). Children's peer relations: A meta-analytic review of popular, rejected, neglected, controversial, and average sociometric status. *Psychological Bulletin*, *113*(1), 99-128. doi: 10.1037/0033-2909.113.1.99
- O'Connor, D.B., Archer, J., & Wu, F.W.C. (2001). Measuring aggression: Self-reports, partner reports, and responses to provoking scenarios. *Aggressive Behavior*, *27*(2), 79-101.
- Ojanen, T., Findley, D., & Fuller, S. (2012). Overt and relational aggression in early adolescence: Associations with narcissism, temperament, and social goals. *Aggressive Behavior*, *38* (2), 99-107.
- Ojanen, T., & Findley-Van Nostrand, D. (2014). Social goals, aggression, peer preference, and popularity: Longitudinal links during middle school. *Developmental Psychology*, *50*, 2134-2143.
- Ojanen, T., Grönroos, M., & Salmivalli, C. (2005). An interpersonal circumplex model of children's social goals: Links with peer-reported behavior and sociometric status. *Developmental Psychology*, *41*(5), 699-710. doi: 10.1037/0012-1649.41.5.699
- Ojanen, T., & Kiefer, S. (2013). Instrumental and reactive functions and overt and relational forms of aggression: Developmental trajectories and prospective associations during middle school. *International Journal of Behavioral Development*, *37*(6), 514-517.
- Orobio de Castro, B., Thomaes, S., & Reijntjes, A. (2013). Using experimental designs to understand the development of peer relations. *Journal of Research on Adolescence*, *25*(1), 1-13.
- Parker, J.G., & Asher, S.R. (1987). Peer relations and later personal adjustment: Are low-accepted children at risk? *Psychological Bulletin*, *102*(3), 357-389.

- Parker, J.G., Rubin, K.H., Price, J., & DeRosier, M.E. (1995). Peer relationships, child development, and adjustment: A developmental psychopathology perspective. In D. Cicchetti & D. Cohen (Eds.), *Developmental Psychopathology*, Vol. 2: Risk, disorder, and adaptation (pp. 96-161). New York: Wiley.
- Parkhurst, J.T. & Hopmeyer, A. (1998). Sociometric popularity and peer-perceived popularity: Two distinct dimensions of peer status. *Journal of Early Adolescence*, *18*, 125-144.
- Pellegrini, A.D., & Long, J.D. (2003). A longitudinal study of bullying, dominance, and victimization during the transition from primary school through middle school. *British Journal of Developmental Psychology*, *20*, 259-280.
- Perez, M., Vohs, K. D., & Joiner, Jr., T. E. (2005). Discrepancies between self and other-esteem as correlates of aggression. *Journal of Social and Clinical Psychology*, *24*(5), 607-620.
- Prinstein, M.J. & Cillessen, A.H.N. (2003). Forms and functions of adolescent peer aggression associated with high levels of peer status. *Merrill-Palmer Quarterly*, *49*, 310-342.
- Puckett, M.B., Aikins, J.W. & Cillessen, A.H.N. (2008). Moderators of the association between relational aggression and perceived popularity. *Aggressive Behavior*, *34*(6), 563–576. doi: 10.1002/ab.20280.
- Raine, A., Dodge, K.A., Loeber, R., Gatzke-Kopp, L., Lynam D, Reynolds C, et al. The Reactive–Proactive Aggression Questionnaire: Differential correlates of reactive and proactive aggression in adolescent boys. *Aggressive Behavior*, *32*, 159–171.
- Ritchie, T. D., Sedikides, C., Wildschut, T., Arndt, J., & Gidron, Y. (2011). Self-concept clarity mediates the relation between stress and subjective well-being. *Self and Identity*, *10*, 493-508.

- Robins, R. W., Hendin, H. M., & Trzesniewski, K. H. (2001). Measuring Global Self-Esteem: Construct Validation of a Single-Item Measure and the Rosenberg Self-Esteem Scale. *Personality and Social Psychology Bulletin*, 27, 151-161.
- Rodkin, P.C., Farmer, T.W., Pearl, R., & Van Acker, R. (2000). Heterogeneity of popular boys: Antisocial and prosocial configurations. *Developmental Psychology*, 36(1), 14-24.
- Rodkin, P. C., & Roisman, G. I. (2010). Antecedents and correlates of the popular-aggressive phenomenon in elementary school. *Child Development*, 81, 837– 850.
<http://dx.doi.org/10.1111/j.1467-8624.2010.01437.x>
- Rodkin, P.C., Ryan, A.M., Jamison, R., & Wilson, T. (2012). Social goals, social behavior, and social status in middle childhood. *Developmental Psychology*, 49(6), 1139-1150.
- Rose, A. J., & Rudolph, K. D. (2006). A review of sex differences in peer relationship processes: Potential trade-offs for the emotional and behavioral development of girls and boys. *Psychological Bulletin*, 132(1), 98-131. doi: 10.1037/0033-2909.132.1.98
- Rose, A.J., Swenson, L.P., & Waller, E.M. (2004). Overt and relational aggression and perceived popularity: Developmental differences in concurrent and prospective relations. *Developmental Psychology*, 40, 378–387
- Rosenberg, M. (1962). Society and the adolescent self-image. Princeton, NJ: Princeton University Press
- Rubin, K.H., Bukowski, W., & Parker, J. (2006). Peer interactions, relationships, and groups. In N. Eisenberg (Ed), *Handbook of Child Psychology (6th edition): Social, emotional, and personality development*. (pp. 571-645) New York: Wiley.
- Salmivalli, C. (2001). Feeling good about oneself, being bad to others? Remarks on self-esteem, hostility, and aggressive behavior. *Aggression and Violent Behavior*, 6(4), 375-393.

- Salmivalli, C. & Neiminen, E. (2002). Proactive and reactive aggression among school bullies, victims, and bully-victims. *Aggressive Behavior*, 28, 30-44.
- Salmivalli, C., & Isaacs, J. (2005). Prospective relations among victimization, rejection, friendlessness, and children's self- and peer-perceptions. *Child Development*, 76, 1161–1171.
- Salmivalli, C., Ojanen, T., Haanpää, & Peets (2005). “I’m ok but you’re not” and other peer-relational schemas: Explaining individual differences in children’s social goals. *Developmental Psychology*, 41(2), 363-375.
- Sandstrom, M.J. & Cillessen, A.H.N. (2010). Life after high school: Adjustment of popular teens in emerging adulthood. *Merrill-Palmer Quaterly*, 56(4), 474-499.
- Schwartz, D., Hopmeyer Gorman, A., Nakamoto, J., & McKAy, T. (2006). Popularity, social acceptance, and aggression in adolescent peer groups: Links with academic performance and attendance. *Developmental Psychology*, 42(6), 1116-1127.
- Schwartz, S.J., Klimstra, T.A., Luyckx, K., Hale, W.W., Frijns, T., Oosterwegel, A., Van Lier, V.A.C., Koot, H.M., & Meeus, W.H.J (2010). Daily dynamics of personal identity and self-concept clarity. *European Journal of Personality*, 25, 373-385.
- Sijtsema, J. J., Veenstra, R., Lindenberg, S., & Salmivalli, C. (2009). Empirical test of bullies’ status goals: Assessing direct goals, aggression, and prestige. *Aggressive Behavior*, 35, 57– 67. doi:10.1002/ab.20282
- Stinson, D.A., Wood, J.V., & Doxey, J.R. (2008). In search of clarity: Self-esteem and domains of confidence and confusion. *Personality and Social Psychology Bulletin*, 34(11), 1541-1555.

- Stoltz, S., Cillessen, A.H.N., van den Berg, Y.H.M., & Gommans, R. (2015). Popularity differentially predicts reactive and proactive aggression in early adolescence. *Aggressive Behavior*, online first publication.
- Stucke, T. S., & Sporer, S. (2002). When a grandiose self-image is threatened: Narcissism and self-concept clarity as predictors of negative emotions and aggression following ego-threat. *Journal of Personality*, *70*, 509–532.
- Sullivan, H.S. (1953). *The Interpersonal Theory of Psychiatry*.
- Sullivan, K. & Sullivan, A. (1980). Adolescent-parent separation. *Developmental Psychology*, *16*(2), 93-99.
- Tesser, A., & Campbell, J. (1983). Self-definition and self-evaluation maintenance. In J. Suls & A. Greenwald (Eds.), *Psychological perspectives on the self* (Vol. 2) (pp. 1–31). Hillsdale, N.J.: Lawrence Erlbaum Associates.
- Thomaes, S., Reijntjes, A., Orobio de Castro, B., Bushman, B. J., Poorthuis, A., & Telch, M. J. (2010). I like me if you like me: On the interpersonal modulation and regulation of preadolescents' state self-esteem. *Child Development*, *81*, 811-825.
- Thomaes, S., Stegge, H., Bushman, B.J., Olthof, T. & Denissen, J. (2008) Development and validation of the childhood narcissism scale. *Journal of Personality Assessment*, *90*(4), 382-391.
- Tiedens, L. Z., Unzueta, M. M., & Young, M. J. (2007). An unconscious desire for hierarchy? The motivated perception of dominance complementarity in task partners. *Journal of Personality and Social Psychology*, *93*, 402–414.

- Tucker, J.S., Green, H.D., Zhou, A.J., Miles, J.N.V., Shih, R.A., & D'Amico, E.J. (2011). Substance use among middle school students: Associations with self-rated and peer-nominated popularity. *Journal of Adolescence*, 34(3), 513-519.
- Verschueren, K., Buyck, P., & Marcoen, A. (2001). Self-representations and socioemotional competence in young children: A 3-year longitudinal study. *Developmental Psychology*, 37, 126-134.
- Washburn, J.J., McMahon, S.D., King, C.A., Reinecke, M.A., & Silver, C. (2004). Narcissistic features in young adolescents: Relations to aggression and internalizing symptoms. *Journal of Youth and Adolescence*, 33(3), 247-260.
- Wentzel, K. R. (2003). Sociometric status and adjustment in middle school: A longitudinal study. *Journal of Early Adolescence*, 23, 5–28.
- Willer, R. (2009). Groups reward individual sacrifice: The status solution to the collective action problem. *American Sociological Review*, 74, 23–43
- Wu, C. (2009). The relationship between attachment style and self-concept clarity: The mediation effect of self-esteem. *Personality and Individual Differences*, 47, 42-46.
doi:10.1016/j.paid.2009.01.043
- Wu, J., Watkins, D., & Hattie, J. (2010). Self-concept clarity: A longitudinal study of Hong Kong adolescents. *Personality and Individual Differences*, 48, 277-282.
- Yoo, W., Mayberry, R., Bae, S., Singh, K., He, Q., & Lillard, J.W. (2014). A study of effects of multicollinearity in the multivariable analysis. *International Journal of Applied Science Technology*, 4(5), 9-19.

- Zadro, L., Williams, K.D., & Richardson, R. (2004). How low can you go? Ostracism by computer is sufficient to lower self-reported levels of belonging, control, self-esteem, and meaningful existence. *Journal of Experimental Social Psychology*, 40(4), 560-567.
- Zettergren, P., Bergman, L.R., & Wangby, M. (2006). Girls' stable peer status and their adulthood adjustment: A longitudinal study from age 10 to age 43. *International Journal of Behavioral Development*, 30, 315-325.
- Zimmer-Gembeck, M.J., & Collins, W.A. (2003). Autonomy development during adolescence. In G.R. Adams & M. Berzonsky (Eds.), *Blackwell Handbook of adolescence* (pp. 175-204). Oxford: Blackwell Publishers.
- Zimmer-Gembeck, M. J., Geiger, T. C., & Crick, N. R. (2005). Relational and physical aggression, prosocial behavior, and peer relations: Gender moderation and bidirectional associations. *Journal of Early Adolescence*, 25, 421– 452

APPENDIX A

STUDY 1: SELF-REPORT MEASURES

Self-concept clarity

1 2 3 4 5
Does not describe me at all Describes me a lot

- My beliefs about myself often conflict with one another.
- On one day I might have one opinion of myself and on another day I might have a different opinion
- I spend a lot of time wondering about what kind of person I really am.
- Sometimes I feel that I am not really the person that I appear to be
- When I think about the kind of person I have been in the past, I'm not sure what I was really like
- I seldom experience conflict between the different aspects of my personality
- Sometimes I think I know other people better than I know myself
- My beliefs about myself seem to change very frequently
- If I were asked to describe my personality, my description might end up being different from one day to another day
- Even if I wanted to, I don't think I could tell someone what I'm really like
- In general, I have a clear sense of who I am and what I am
- It is often hard for me to make up my mind about things because I don't really know what I want

Self-esteem

1 2 3 4 5
Strongly disagree Strongly agree

- At times I think I am no good at all
- On the whole, I am satisfied with myself
- All in all, I am inclined to feel that I am a failure
- I take a positive attitude toward myself
- I feel that I have a number of good qualities
- I feel I do not have much to be proud of
- I am able to do things as well as most other people
- I certainly feel useless at times
- I feel that I am a person of worth, at least on an equal plane with others
- I wish I could have more respect for myself

APPENDIX B

STUDY 1: PEER-REPORT MEASURES

Aggression

Overt

Who hits or pushes others?

Who yells at others or calls them names?

Who starts fights?

Relational

Who, when mad, gets even by keeping the person from being in their group of friends?

Who tells friends they will stop liking them unless friends do what they say?

Who, when mad at a person, ignores or stops talking to them?

Who tries to keep certain people from being I their group during activity or play time?

Reactive

Who overreacts angrily to accidents?

Who blames others in fights?

Who strikes back when teased?

Proactive

Who uses physical force to dominate others?

Who gets others to hang up on a peer?

Who threatens and bullies others?

Peer Status

Acceptance: Who do you like the most?

Rejection: Who do you dislike the most?

Popularity: Who is the most popular?

- You don't do anything ridiculous
- You don't say stupid things when others are listening
- Your peers don't laugh at you
- You don't make a fool of yourself in front of others
- You don't show your feelings in front of your peers
- You don't give away too much about yourself
- You keep your thoughts to yourself
- You keep the others at a suitable distance
- You don't let anyone get too close to you
- You don't show that you care about them
- The others agree to do what you suggest
- You get to decide what to do
- The group does as you say

5. *Independent* 6. *Loyal*
 7. *Vulnerable* 8. *Dominant*
 9. *Assertive* 10. *Helpful*
 11. *Shy* 12. *Hardhearted*

Hostility

Instructions: Please indicate the extent to which you agree or disagree with each of the following mood statements. Use the following 5-pt rating scale. Write the number corresponding to your rating on the blank line in front of each statement.

Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
1	2	3	4	5
___ I feel furious.		___ I feel like I'm about to explode.		
___ I feel willful.		___ I feel friendly.		
___ I feel aggravated.		___ I feel understanding.		
___ I feel tender.		___ I feel amiable.		
___ I feel stormy.		___ I feel mad.		
___ I feel polite.		___ I feel mean.		
___ I feel discontented.		___ I feel bitter.		
___ I feel like banging on a table.		___ I feel burned up.		
___ I feel irritated.		___ I feel like yelling at somebody.		
___ I feel frustrated.		___ I feel cooperative.		
___ I feel kindly.		___ I feel like swearing.		
___ I feel unsociable.		___ I feel cruel.		
___ I feel outraged.		___ I feel good-natured.		
___ I feel agreeable.		___ I feel disagreeable.		
___ I feel angry.		___ I feel enraged.		
___ I feel offended.		___ I feel sympathetic.		
___ I feel disgusted.		___ I feel vexed.		
___ I feel tame.				

Angry Feelings, and Aggressive and Assertive Responses to Provocation

**note: content has been partially modified to be more appropriate for American English.*

Instructions: Please imagine yourself in each of the following situations, and rate **first** how you would feel in the situation, and **second**, which option best describes how you think you would behave in the situation. There are no right or wrong answers- just select an option based on your immediate reaction.

1. It is Saturday evening, and you are in line to buy a lottery ticket. It's very busy and the store is closing soon. You have already been waiting for 10 minutes. Just when it's your turn, someone else pushes in front of you.

How would you feel in this situation?

	<i>Not at all</i>	<i>A little bit</i>	<i>Moderately</i>	<i>Quite a bit</i>	<i>Extremely</i>
Angry	0	1	2	3	4
Frustrated	0	1	2	3	4
Irritated	0	1	2	3	4

What do you think you would do in this situation?

- Feel angry but do nothing.
- Push him/her and shout "wait your turn"
- Wait patiently until he/she had been served.
- Say "I'm sorry but it was my turn".
- Walk out of the store.

2. You have gone out to have a couple of drinks with your partner. While you are away for a few minutes, a stranger approaches your partner and grabs his/her backside. When you return, your partner tells you what happened.

How would you feel in this situation?

	<i>Not at all</i>	<i>A little bit</i>	<i>Moderately</i>	<i>Quite a bit</i>	<i>Extremely</i>
Angry	0	1	2	3	4
Frustrated	0	1	2	3	4
Irritated	0	1	2	3	4

What do you think you would do in this situation?

- Leave and go somewhere else
- Do nothing
- Threaten the stranger and/or swear at him/her
- Tell him/her that such behavior is unacceptable and out of order.
- Feel angry but do nothing at the time.

3. You are driving and in a rush, and the car in front of you stops. The driver proceeds to carry on a conversation with someone else on the road, and you cannot get past the car. Even after you honk, the car does not move.

How would you feel in this situation?

	<i>Not at all</i>	<i>A little bit</i>	<i>Moderately</i>	<i>Quite a bit</i>	<i>Extremely</i>
Angry	0	1	2	3	4
Frustrated	0	1	2	3	4

Irritated	0	1	2	3	4
------------------	---	---	---	---	---

What do you think you would do in this situation?

- Get out of your car, walk over to the man, and threaten him.
- Reverse the car and take another route.
- Sit angrily in the car, but do nothing.
- Calmly wait until he moves.
- Go over to him, tell him he is being unreasonable, and ask him to move.

4. Your boss believes you made a minor mistake at work. In front of your colleagues, he/she embarrasses you by publicly calling your competence into question.

How would you feel in this situation?

	<i>Not at all</i>	<i>A little bit</i>	<i>Moderately</i>	<i>Quite a bit</i>	<i>Extremely</i>
Angry	0	1	2	3	4
Frustrated	0	1	2	3	4
Irritated	0	1	2	3	4

What do you think you would do in this situation?

- Loudly tell him/her that it wasn't your fault.
- Tell him/her that this is not the right way to talk to employees.
- Feel angry, but do not do anything.
- Shrug it off, and go back to work.
- Walk away from him/her.

5. You are in the theater watching a movie. Behind you, two people are talking, laughing loudly, and kicking your seat over and over.

How would you feel in this situation?

	<i>Not at all</i>	<i>A little bit</i>	<i>Moderately</i>	<i>Quite a bit</i>	<i>Extremely</i>
Angry	0	1	2	3	4
Frustrated	0	1	2	3	4
Irritated	0	1	2	3	4

What do you think you would do in this situation?

- Turn around and ask them to be quiet or leave.
- Feel angry, and do nothing.
- Move to another seat.
- Try to ignore them.
- Turn around and threaten to hit them if they do not be quiet.

6. You are driving down the interstate. As you are in the process of changing lanes, a reckless driver speeds from an inside lane, cutting you off and causing you to hit your brakes, swerve, and almost lose control of your car.

How would you feel in this situation?

	<i>Not at all</i>	<i>A little bit</i>	<i>Moderately</i>	<i>Quite a bit</i>	<i>Extremely</i>
Angry	0	1	2	3	4
Frustrated	0	1	2	3	4
Irritated	0	1	2	3	4

What do you think you would do in this situation?

- Feel angry but do nothing.
- Honk your horn several times.
- Try to move away from the driver.
- Chase after the car and try to do the same thing to them.
- Just carry on driving.

7. You are out with a group of your friends, and there is someone who keeps teasing you in a mean way, including insulting your family.

How would you feel in this situation?

	<i>Not at all</i>	<i>A little bit</i>	<i>Moderately</i>	<i>Quite a bit</i>	<i>Extremely</i>
Angry	0	1	2	3	4
Frustrated	0	1	2	3	4
Irritated	0	1	2	3	4

What do you think you would do in this situation?

- Tell him/her to shut their mouth and threaten them if they don't
- Leave and go home.
- Feel angry but do nothing.
- Tell him/her that they are not funny and that they should stop.
- Laugh it off and try to not let it get to you.

8. You find out from your friend that your partner has been unfaithful to you on one occasion.

How would you feel in this situation?

	<i>Not at all</i>	<i>A little bit</i>	<i>Moderately</i>	<i>Quite a bit</i>	<i>Extremely</i>
Angry	0	1	2	3	4
Frustrated	0	1	2	3	4
Irritated	0	1	2	3	4

What do you think you would do in this situation?

- Confront your partner about it next time you see him/her.
- Get angry, creating a big scene next time you see him/her.
- Be inclined not to believe what you heard.
- Just not deal with it.
- Feel angry but do nothing.

9. You are walking down the street in downtown, on your way to an interview for a new job. As you turn the corner, someone cleaning windows above you accidentally drops hot and soapy water on your newly dry-cleaned outfit.

How would you feel in this situation?

	<i>Not at all</i>	<i>A little bit</i>	<i>Moderately</i>	<i>Quite a bit</i>	<i>Extremely</i>
Angry	0	1	2	3	4
Frustrated	0	1	2	3	4
Irritated	0	1	2	3	4

What do you think you would do in this situation?

- Move away from the scene as quickly as possible.
- Feel angry but don't do anything.
- Attract his attention, shout and swear at him.
- Attract his attention and point out what he had done.
- Just keep walking and think that you were unlucky today.

10. You're sitting on the train or subway quietly reading the news. A couple of football supporters are sitting a few rows in front of you and shouting, swearing, and generally being obnoxious. Suddenly, one of them throws an empty beer can and it accidentally hits you.

How would you feel in this situation?

	<i>Not at all</i>	<i>A little bit</i>	<i>Moderately</i>	<i>Quite a bit</i>	<i>Extremely</i>
Angry	0	1	2	3	4
Frustrated	0	1	2	3	4
Irritated	0	1	2	3	4

What do you think you would do in this situation?

- Sit there feeling angry.
- Try to ignore them.
- Find somewhere else to sit.
- Attract their attention and ask them to be more careful.
- Go over and threaten them.

APPENDIX E

STUDIES 2-4: MANIPULATION CHECK ITEMS

1. Think of your peer group. Among your peers, how popular do you think you are?

Not at all popular (1)-----Very popular (10)

2. Think of your peer group. Among your peers, how liked do you think you are?

Not at all liked (1)-----Very liked (10)

3. Think of your peer group. Among your peers, how disliked do you think you are?

Not at all disliked (1)-----Very disliked (10)

4. Think of your peer group. Among your peers, how unpopular do you think you are?

Not at all unpopular (1)-----Very unpopular (10)

5. I feel popular (strongly disagree = 1; strongly agree = 5)

6. I feel liked (strongly disagree = 1; strongly agree = 5)

7. I feel disliked (strongly disagree = 1; strongly agree = 5)

8. I feel unpopular (strongly disagree = 1; strongly agree = 5)

APPENDIX F

STUDIES 2 AND 3: PEER STATUS MANIPULATION, WRITING TASK

Writing Prompt: Liked Condition

Instructions: Think about yourself as a part of your peer group. Your peers are those people who you are exposed to regularly, but who are not necessarily your friends. Peers are people in your social network that you see often but do not necessarily know well.

Write about a time *in the last year* that you felt like you were **liked** by your peer group. Being **liked** means that you are **viewed positively**, are usually warm and friendly, and are **desirable as a social partner**. Peers accept and like to spend time with those they like.

It might also help to think about how you compare to others in your group. Was there a time in the last year that you felt like you were **more liked** than some of the others? Spend about five minutes writing about this experience.

Examples might include times that your peers let you know how much they enjoy your company, times that you made your peers laugh or feel good, or times that others showed appreciation for you.

Writing Prompt: Popular Condition

Instructions: Think about yourself as a part of your peer group. Your peers are those people who you are exposed to regularly, but who are not necessarily your friends. Peers are people in your social network that you see often but do not necessarily know well.

Write about a time *in the last year* that you felt like you were **popular** in your peer group. Being **popular** means that you are **highly visible**, are perceived as **powerful and high in social status**, and get a **great deal of attention** from peers of both sexes. Peers acknowledge the leadership and status of those they consider popular.

It might also help to think about how you compare to others in your group. Was there a time in the last year that you felt like you were **more popular** than some of the others? Spend about five minutes writing about this experience.

Examples might include times that your peers let you know that they considered you a leader, times that you had higher social status than your peers, or times that others changed their behavior or opinions based on your own.

Writing Prompt: Disliked Condition

Instructions: Think about yourself as a part of your peer group. Your peers are those people who you are exposed to regularly, but who are not necessarily your friends. Peers are people in your social network that you see often but do not necessarily know well.

Write about a time *in the last year* that you felt like you were **disliked** by your peer group. Being **disliked** means that you are **negatively regarded**, may be perceived as cold or unfriendly, and **are not desirable as a social partner**. Peers generally avoid spending time with those they dislike.

It might also help to think about how you compare to others in your group. Was there a time in the last year that you felt like you were **more disliked** than some of the others? Spend about five minutes writing about this experience.

Examples might include times that your peers expressed their dislike of your behavior, times that you made your peers feel bad or get angry, or times that others showed that they did not appreciate you.

Writing Prompt: Unpopular Condition

Instructions: Think about yourself as a part of your peer group. Your peers are those people who you are exposed to regularly, but who are not necessarily your friends. Peers are people in your social network that you see often but do not necessarily know well.

Write about a time *in the last year* that you felt like you were **unpopular** in your peer group as a whole. Being **unpopular** means that you are **not very visible**, are perceived as **lacking power and social status**, and get **very little attention** from peers of both sexes. Peers do not acknowledge the leadership and status of those they consider unpopular.

It might also help to think about how you compare to others in your group. Was there a time in the last year that you felt like you were **more unpopular** than some of the others? Spend about five minutes writing about this experience.

Examples might include times that your peers ignored or didn't seem to value your opinions, times you had lower social status than your peers, or times that others didn't listen or value your opinions.

Writing Prompt: Neutral Condition

Instructions: Think about what you have done in the last 24 hours. Spend a few minutes writing about the events of your day.

APPENDIX G

STUDY 4: PEER STATUS MANIPULATION, FALSE FEEDBACK TASK

Test Prompt: Page 1 of 2 (description of test)

Peers' Perceptions of You Self-Report Questionnaire (PPY-Q)© Results



(click next)

Test Prompt: Page 2 of 2 (description of test)

**Peers' Perceptions of You Self-Report Questionnaire (PPY-Q)©
Explanation of Results**

The Peers' Perceptions of You Self-Report Questionnaire measures your social standing or status in your peer group via self-report questions.

Peers are similar aged people who you are familiar with and encounter relatively frequently, but are not necessarily your friends.

Measuring social standing or status in adulthood is difficult given the complexity of peer groups. Thus, this measure was developed by Dr. Young at the University of New Mexico in order to assess social standing of an individual by asking them a series of questions. This measure has been found valid and reliable across dozens of studies and thousands of participants from all genders and ethnicities. That is, **your social standing or status as indicated by your test score tends to map onto your actual social status in real life and how your peers would rate you.**



Your score is calculated using a formula that takes into account your varying levels of agreement with several statements about your social patterns around peers that you just completed. Please keep in mind that although it may seem odd, this measure is proven to be a valid and reliable measure of your social status.

Please click “next” to receive your survey results.

Manipulation: Page 3 (popular condition)

Peers' Perceptions of You Self-Report Questionnaire (PPY-Q) ©

Individual Test Results

Your responses on the PPY-Q© indicate that you are most likely **highly popular** in your peer group. You are **highly visible**, are perceived as **powerful and high in social status**, and tend to get a **great deal of attention** from peers of both sexes, and are frequently sought out for social occasions and leadership. Your peers acknowledge your leadership and status.



Please continue to the next part of the study.

Manipulation: Page 3 (liked condition)

Peers' Perceptions of You Self-Report Questionnaire (PPY-Q) ©

Individual Test Results

Your responses on the PPY-Q© indicate that you are most likely **highly liked** in your peer group. You are **viewed positively**, tend to be perceived as warm and friendly, and are **desirable as a social partner**. Your peers accept you and like to spend time with you.



Please continue to the next part of the study.

Manipulation: Page 3 (disliked condition)

Peers' Perceptions of You Self-Report Questionnaire (PPY-Q) ©

Individual Test Results

Your responses on the PPY-Q© indicate that you are most likely **highly disliked** in your peer group. You tend to be **negatively regarded**, may be perceived as cold or unfriendly, and are **not desirable as a social partner**. Peers may prefer to spend more time with others than with you.



Please continue to the next part of the study.

Manipulation: Page 3 (unpopular condition)

Peers' Perceptions of You Self-Report Questionnaire (PPY-Q) ©

Individual Test Results

Your responses on the PPY-Q© indicate that you are most likely **highly unpopular** in your peer group. You are **not very visible**, are perceived as **lacking in power and social status**, and get **very little attention** from peers of both sexes. Peers do not acknowledge your leadership and status.



Please continue to the next part of the study.

APPENDIX H

STUDY 4: DEBRIEFING STATEMENT

Thank you for taking the survey today. Your response has been recorded.

During the survey, you received feedback stating that the answers you provided suggested that you most likely have a certain status among your peers. This was a randomly generated response that was ****not actually based on your individual responses in any form****. This deception was used in order to examine how in-the-moment experiences of status may influence how you see yourself or how you think you might behave without changing the way in which you would have responded if you were made aware of the hypotheses of the study.

Based on this deception, you have the option to either allow us to use your responses for our study, or to have your responses deleted and not used in the study. Your decision will not affect your compensation. If you have any questions or concerns regarding this deception, please contact the principal investigator, and we will be happy to answer your questions. Also, if you feel upset or are experiencing any emotional turmoil, please contact us (via email at dfindley@mail.usf.edu, or by phone at 813-974-8346).

Please click next to your decision below.

- I understand and allow my responses to be used for the study
 I prefer to have my data/responses removed from this study

APPENDIX I

STUDY 1: USE IRB APPROVAL LETTERS: INITIAL AND CONTINUING REVIEW



RESEARCH INTEGRITY AND COMPLIANCE
 Institutional Review Boards, FWA No. 00001669
 12901 Bruce B. Downs Blvd., MDC035 • Tampa, FL 33612-4799
 (813) 974-5638 • FAX (813) 974-7091

December 16, 2013

Tiina Ojanen, Ph.D.
 Psychology
 4202 E. Fowler Avenue
 PCD4118G
 Tampa, FL 33620

RE: Expedited Approval for Initial Review

IRB#: Pro00014783

Title: Bullying and the Sense of Self: Advancing Understanding of Social Adjustment in Middle School

Study Approval Period: 12/16/2013 to 12/16/2014

Dear Dr. Ojanen:

On 12/16/2013, the Institutional Review Board (IRB) reviewed and **APPROVED** the above application and all documents outlined below.

Approved Item(s):

Protocol Document(s):

[IRB STUDY PROTOCOL_12-2.docx](#)

Study involves children and falls under 45 CFR 46.404: Research not involving more than minimal risk.

Research activities cannot begin until the school district letter of approval and any other letters required by the school district (e.g. local school principal) are submitted and approved by the IRB thru the eIRB Amendment process.

Consent/Assent Document(s)*:

[Parental Consent- Spanish.pdf](#)

[Parental Consent.pdf](#)

[Student Assent.pdf](#)

*Please use only the official IRB stamped informed consent/assent document(s) found under the

"Attachments" tab. Please note, these consent/assent document(s) are only valid during the approval period indicated at the top of the form(s).

It was the determination of the IRB that your study qualified for expedited review which includes activities that (1) present no more than minimal risk to human subjects, and (2) involve only procedures listed in one or more of the categories outlined below. The IRB may review research through the expedited review procedure authorized by 45CFR46.110 and 21 CFR 56.110. The research proposed in this study is categorized under the following expedited review category:

(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.

As the principal investigator of this study, it is your responsibility to conduct this study in accordance with IRB policies and procedures and as approved by the IRB. Any changes to the approved research must be submitted to the IRB for review and approval by an amendment.

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,



Kristen Salomon, Ph.D., Vice Chairperson
USF Institutional Review Board



RESEARCH INTEGRITY AND COMPLIANCE
 Institutional Review Boards, FWA No. 00001669
 12901 Bruce B. Downs Blvd., MDC035 • Tampa, FL 33612-4799
 (813) 974-5638 • FAX (813) 974-7091

11/23/2015

Tiina Ojanen, Ph.D.
 Psychology
 4202 E. Fowler Avenue
 Tampa, FL 33620

RE: Expedited Approval for Continuing Review

IRB#: CR2_Pro00014783

Title: Bullying and the Sense of Self: Advancing Understanding of Social Adjustment in Middle School

Study Approval Period: 12/16/2015 to 12/16/2016

Dear Dr. Ojanen:

On 11/22/2015, the Institutional Review Board (IRB) reviewed and **APPROVED** the above application and all documents contained within including those outlined below.

Approved Item(s):

Protocol Document(s):

[IRB STUDY PROTOCOL_12-2.docx](#)

The IRB determined that your study qualified for expedited review based on federal expedited category number(s):

(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.

Per CFR 45 Part 46, Subpart D, this research involving children was approved under the minimal risk category 45 CFR 46.404: Research not involving greater than minimal risk.

As the principal investigator of this study, it is your responsibility to conduct this study in accordance with USF HRPP policies and procedures and as approved by the USF IRB. Any changes to the approved research must be submitted to the IRB for review and approval by an amendment. Additionally, all unanticipated problems must be reported to the USF IRB within

five (5) calendar days.

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 Schinka, Ph.D., Chairperson
USF Institutional Review Board

APPENDIX J
STUDIES 2-4: IRB APPROVAL LETTER: INITIAL AND AMENDMENT



RESEARCH INTEGRITY AND COMPLIANCE
 Institutional Review Boards, FWA No. 00001669
 12901 Bruce B. Downs Blvd., MDC035 • Tampa, FL 33612-4799
 (813) 974-5638 • FAX(813)974-7091

February 5, 2016

Danielle Findley
 Psychology
 4202 East Fowler Avenue, PCD4118G
 Tampa, FL 33620

RE: **Expedited Approval for Initial Review**
 IRB#: Pro00022968
 Title: Peer Status and the Self

Study Approval Period: 2/5/2016 to 2/5/2017

Dear Ms. Findley:

On 2/5/2016, the Institutional Review Board (IRB) reviewed and **APPROVED** the above application and all documents contained within, including those outlined below.

Approved Item(s):

Protocol Document(s):

[IRB Protocol Peer Status and the Self Version 1 1-7-2016.docx](#)

Consent/Assent Document(s)*:

[Informed Consent SONA Version 1.docx](#) **Granted a waiver

*Please use only the official IRB stamped informed consent/assent document(s) found under the "Attachments" tab. Please note, these consent/assent document(s) are only valid during the approval period indicated at the top of the form(s). **Waivers are not stamped.

It was the determination of the IRB that your study qualified for expedited review which includes activities that (1) present no more than minimal risk to human subjects, and (2) involve only procedures listed in one or more of the categories outlined below. The IRB may review research through the expedited review procedure authorized by 45CFR46.110 and 21 CFR 56.110. The research proposed in this study is categorized under the following expedited review

category:

(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.

Your study qualifies for a waiver of the requirements for the documentation of informed consent as outlined in the federal regulations at 45CFR46.117(c) which states that an IRB may waive the requirement for the investigator to obtain a signed consent form for some or all subjects if it finds either: (1) That the only record linking the subject and the research would be the consent document and the principal risk would be potential harm resulting from a breach of confidentiality. Each subject will be asked whether the subject wants documentation linking the subject with the research, and the subject's wishes will govern; or (2) That the research presents no more than minimal risk of harm to subjects and involves no procedures for which written consent is normally required outside of the research context.

As the principal investigator of this study, it is your responsibility to conduct this study in accordance with IRB policies and procedures and as approved by the IRB. Any changes to the approved research must be submitted to the IRB for review and approval via an amendment. Additionally, all unanticipated problems must be reported to the USF IRB within five (5) calendar days.

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 Schinka, Ph.D., Chairperson
USF Institutional Review Board



RESEARCH INTEGRITY AND COMPLIANCE
 Institutional Review Boards, FWA No. 00001669
 12901 Bruce B. Downs Blvd., MDC035 • Tampa, FL 33612-4799
 (813) 974-5638 • FAX (813) 974-7091

2/18/2016

Danielle Findley
 Psychology
 4202 East Fowler Avenue, PCD4118G
 Tampa, FL 33620

RE: **Expedited Approval of Amendment**
 IRB#: Ame1_Pro00022968
 Title: Peer Status and the Self

Dear Ms. Findley:

On 2/18/2016, the Institutional Review Board (IRB) reviewed and **APPROVED** your Amendment. The submitted request and all documents contained within have been approved, including those outlined below.

Revised Protocol, version 3, dated 02/10/2016
 Added Informed Consent MTURK, version 1, dated 02/10/2016
 Added MTurk Study Description, version 1, dated 02/10/2016

Approved Item(s):

Protocol Document(s):

[IRB Protocol Peer Status and the Self Version 3 2-10-2016.docx](#)

Consent Document(s):

[Informed Consent MTURK Version 1.docx](#)

The IRB does not require that subjects be reconsented.

As the principal investigator of this study, it is your responsibility to conduct this study in accordance with USF HRPP policies and procedures and as approved by the USF IRB. Any changes to the approved research must be submitted to the IRB for review and approval via an amendment. Additionally, all unanticipated problems must be reported to the USF IRB within five (5) calendar days.

category:

(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.

Your study qualifies for a waiver of the requirements for the documentation of informed consent as outlined in the federal regulations at 45CFR46.117(c) which states that an IRB may waive the requirement for the investigator to obtain a signed consent form for some or all subjects if it finds either: (1) That the only record linking the subject and the research would be the consent document and the principal risk would be potential harm resulting from a breach of confidentiality. Each subject will be asked whether the subject wants documentation linking the subject with the research, and the subject's wishes will govern; or (2) That the research presents no more than minimal risk of harm to subjects and involves no procedures for which written consent is normally required outside of the research context.

As the principal investigator of this study, it is your responsibility to conduct this study in accordance with IRB policies and procedures and as approved by the IRB. Any changes to the approved research must be submitted to the IRB for review and approval via an amendment. Additionally, all unanticipated problems must be reported to the USF IRB within five (5) calendar days.

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 Schinka, Ph.D., Chairperson
USF Institutional Review Board

APPENDIX K
STUDY 1: INFORMED CONSENT DOCUMENTS

Study ID:CR1_Pro00014783 Date Approved: 12/20/2014 Expiration Date: 12/16/2015

Bullying and the Sense of Self: Advancing Understanding of Social Adjustment in Middle School

Parental Permission to Participate in Research

IRB Study # Pro14783

Dear GUARDIAN,

In collaboration with [REDACTED] Middle Schools and with the District's approval, The Social Development Research Laboratory at the University of South Florida is conducting research on adolescent social behavior and adjustment in middle school students. With the support of your Principal (district approval #RR1314-44), we are asking your permission for your child to participate. Participating students will fill out a paper survey at school during school hours. The co-PIs, a research assistant, and teachers will supervise this period during a social studies class as a part of a usual school day. This does not interfere with testing, or other important academic activities. In the survey, the students will be asked to report demographic information (gender and ethnicity) and to evaluate their social behaviors (friendliness and bullying), perceptions of themselves and their life in general, and peer interactions. Also as a part of this survey, your student will evaluate the behaviors of other participating students whose names will be included on the survey (in order to most accurately understand behaviors). Answers are strictly **confidential**. Your child is not being evaluated or identified individually in any way. The answers of individual students will **never** be disclosed to anyone at the school, or elsewhere. This project is part of a larger research project on adolescent behaviors and well-being at school. *We hope you chose to allow your child to participate and sincerely appreciate your support!*

What to expect

During early February, you will complete a survey together with other participating students in one of your social studies classes as agreed by the schools. The survey includes multiple choice questions and a section in which they will check which behaviors might describe other participating students takes about 30 min to complete. Students who do not wish to participate or do not have parental permission will be working on school tasks, such as homework, during this period. If your child wishes to participate but is absent at this time, we will try to make arrangements to facilitate his/her participation at another time. Please note that:

- All collected information is **confidential**; the data will be shared or published only in terms of mean level information in a sample of hundreds of participants
- Participants can be identified only by the researchers (the data file will have no names, only numbers), for statistical reasons only (e.g., even if a student is rated as someone who bullies, identifying information of the student will never be disclosed)
- Participation is voluntary and you/your child can withdraw from the study at any time – *not* participating will not be harmful in any way and if participation is withdrawn at a later date, the student will be excluded from the study and their data deleted
- Data will be stored in password protected computers and these forms in locked cabinets for five years before deleting

Timelines and Benefits

To participate, your child should return this consent to his/her homeroom teacher by 1/24/14. Your child will also be given a second form indicating their decision to participate. Students will only participate if both parental consent and student assent is obtained. All students who return the consent **on time** will receive a piece of candy, regardless of decision to participate. Additionally, all participating students will 1) be entered into a raffle with multiple gift cards (to movies) and 2) receive a small gift after completing the survey (including USF-themed study supplies). Participation will provide an opportunity to contribute to important research on adolescent social behavior, adjustment and well-being at school. There will be no punishment for not participating. Participation is possible only if permission is received from both the Guardian and the student. If you have any questions, please feel free to contact us at any time. You may also contact the USF Institutional Review Board at 813-974-5638.

Your support is valuable to us and much appreciated.

Melanie McVean, M.S.W., Co-PI

Doctoral Graduate Student

Email: melanie.mcvean@sdhc.k12.fl.us

Phone: 813-744-8400, ext. 232

Danielle Findley, M.A., Co-PI

Doctoral Graduate Student

Email: dfindley@mail.usf.edu

Phone: 813-728-4122

Tiina Ojanen, Ph.D., Co-PI

Assistant Professor

Email: tojanen@usf.edu

Phone: 813-974-8346



Guardian/Participant Consent: Please return one copy to the school and keep the other for yourself.

Please print the FULL NAME OF STUDENT _____

Printed Name of Parent/Guardian _____

I have read and understand the above description, and I hereby... (check one box)

grant permission for my child to participate. do not grant permission for my child to participate.

X _____

Parent/ Legal Guardian Signature



Date

For Researchers only: Name of Person Obtaining Informed Consent _____

Date

12/19/13 Version 2

Study ID:CR1_Pro00014783 Date Approved: 12/20/2014 Expiration Date: 12/16/2015

La Intimidation y el Sentido de Si Mismo: Progresando el Entendimiento de Ajuste Social en la Escuela Secundaria
Permiso Parental Para Tomar Participe en un Estudio Académico **Estudio IRB # 14783**

Querido Guardián,

12/19/13 Version 2

En colaboración con ██████████ Middle Schools y con la aprobación del distrito, el Laboratorio de Investigación del Desarrollo Social de la Universidad del Sur de la Florida estará conduciendo un estudio en el comportamiento social y ajuste de estudiantes en la secundaria. Con el apoyo de la Directora, Barbara Fillhart (district aprobación #RR1314-44), pedimos su permiso para la participación de su hijo/hija. Estudiantes participando en el estudio llenarán una encuesta, en copia impresa, durante horarios escolares con otros compañeros de la clase. Los investigadores principales, asistentes, y maestros supervisarán los estudiantes durante su clase de educación física. El estudio no interferirá con exámenes u otras actividades académicas. En la encuesta, se les pedirá a los estudiantes que informen sobre información demográfica (genero, origen étnico, edad) y evalúen sus comportamientos sociales (amigabilidad, aislamiento social e intimidación), auto percepción, sus vidas en general, intereses académicos e interacciones con compañeros. Como parte de la encuesta su estudiante contestará preguntas sobre sus opiniones de compañeros de escuela marcando en la encuesta los comportamientos que describen algunos individuos. Las respuestas son estrictamente **confidenciales**. Su hijo/hija no será evaluado(a) o identificado(a) en ninguna forma. Las respuestas de cada estudiante **nunca** serán reveladas con ninguno de la escuela o en otro lugar. Este proyecto es parte de un estudio mas amplio sobre la conducta y el bienestar de adolescentes en la escuela. *Esperemos que decide permitir a su hijo/hija en tomar parte de este estudio. Sinceramente apreciamos su apoyo!*

Lo Que Puede Esperar

Durante el final de Enero, estudiantes completarán la encuesta durante sus clases de educación física o estudios sociales con la asistencia y supervisión de nuestro equipo de investigadores y maestros. La encuesta incluye preguntas de múltiples respuestas que llevara aproximadamente 30 minutos para completar. Estudiantes que no deseen participar o no obtuvieron permiso de sus padres para participar trabajarán en tareas durante este tiempo. Si su hijo/hija desea participar pero esta ausente durante este tiempo trataremos de hacer preparativos para facilitar su participación en otro tiempo. Por favor tenga en cuenta:

- Toda información coleccionada son **confidenciales**; los datos serán compartidos o publicados solamente en términos de un promedio de información de una muestra de cientos de participantes.
- Los participantes solo pueden ser identificados por los investigadores (el archivo de datos no incluirá nombres, solo números) por razones estadísticas solamente.
- Participación en el estudio es voluntario y usted, su hijo/hija podrán retirarse del estudio en cualquier momento.
- Los datos se almacenarán en computadoras protegidas por contraseña y las encuestas estarán protegidas en gabinetes de archivos cerrados con llave por 5 años antes de ser destruidos.

Duración y Beneficios

Para participar, su hijo/hija debe de entregar esta forma a su maestra o maestro antes del 24 de Enero del 2014. También le daremos una forma de consentimiento a su hijo/hija indicando su decisión para participar en el estudio. Solamente estudiantes que entregan ambas formas de consentimiento de los padres y del estudiante podrán participar. Cada estudiante entregando el consentimiento a tiempo recibirá dulces, independientemente de su decisión de ser participe. Adicionalmente, cada estudiante participando será incluido 1) en una rifa de múltiples tarjetas de regalo (para películas y tiendas) y 2) recibirán un pequeño regalo después de completar la encuesta (incluyendo suministros de estudio de USF). Participación proveerá la oportunidad de contribuir a importantes investigaciones sobre el comportamiento social y ajuste y el bienestar de adolescentes en la escuela. Para ser elegible para premios, este formulario tiene que ser firmado por un padre/guardián legal y ser entregado a la escuela a tiempo. Si tiene alguna pregunta, por favor siéntase libre de contactarnos en cualquier momento. También puede contactar a la Junta de Revisión Institucional (IRB) de la universidad al numero siguiente 813-974-5638.

Su apoyo es invaluable y muy apreciado.

Melanie McVean, M.S.W., Co-PI
 Estudiante de Postgrado de Doctorado
melanie.mcvean@sdhc.k12.fl.us
 Teléfono: 813-744-8400, ext. 232

Danielle Findley, M.A., Co-PI
 Estudiante de Postgrado de Doctorado
dfindley@mail.usf.edu
 Teléfono: 813-728-4122

Tiina Ojanen, Ph.D., Co-PI
 Profesor Asistente
tojanen@usf.edu
 Teléfono: 813-974-8346



Consentimiento del Guardián: Por favor devuelva una copia a la escuela y guarde el otro para usted.

Por favor escriba el NOMBRE COMPLETO DEL ESTUDIANTE _____ Escriba el nombre del Guardián _____

E leído y entiendo la descripción anterior, y por el presente... (Marque una opción)

- Yo doy permiso para que mi estudiante participe
- Yo no doy permiso para que mi estudiante participe

 Firma del Guardián

 Fecha



 Nombre de la persona que obtenga el consentimiento

 Fecha

Study ID:CR1_Pro00014783 Date Approved: 12/20/2014 Expiration Date: 12/16/2015

**Bullying and the Sense of Self: Advancing Understanding of Social Adjustment in Middle School
Assent to Participate in Research**

IRB Study # Pro14783

Dear STUDENT,

You are being asked to take part in a research study about the social behaviors and adjustment of adolescents in middle school. We are from the University of South Florida Social Development Laboratory. This study is in collaboration you're your Principal, and is approved by the Hillsborough County School District (#RR1314-44). You are being asked to take part in this research study because you are a student at either ██████████ Middle School. If you take part in this study, you will be one of hundreds at these sites. If you decide to participate, you will fill out a paper survey at school during school hours, along with your classmates. This will take place during your social studies class as a part of a usual school day, and will be supervised by our researchers and your teacher. You will not miss any testing, or other important academic activities. In the survey, you will be asked to report demographic information (gender and ethnicity), information about your social behaviors (friendliness and bullying), perceptions of yourself and your life in general, and peer interactions. In addition to this self-report survey, this survey will also ask you to evaluate the behaviors of your participating peers at school (you will check which behaviors describe certain peers whose names will be listed). Your answers are strictly **confidential**. This means that we will never tell anyone, including your parents and people at the school, about your responses. You are not being evaluated in any way. Below, you will read about what you get for participating. Your parent will sign a separate form, and you cannot participate without their permission. However, even if your parents say you can, you don't have to do the survey. You will not be punished in any way for not participating. *We hope you decide to participate!*

What to expect

During early February, you will complete a survey together with other participating students in one of your social studies classes. The survey includes multiple choice questions and a section where you will check items that describe the behaviors of others participating in your class, and takes about 30 min to complete. If you do not wish to participate or do not have parental permission, you will be working on school tasks, such as homework, during this period. If you wish to participate but are absent during the survey, we will try to make arrangements for you to fill it out at another time. Please note that:

- All collected information is confidential; your information will be added to the information from other people taking part in the study so no one will know who you are. Even if you report bullying or someone says you bully others, this information will never be disclosed to anyone.
- You can be identified only by the researchers (the data file will have no names, only numbers)
- If you decide to take part in the study you still have the right to change your mind later. No one will think badly of you if you decide to stop participating. If you do, you will simply be excluded from the study and your data will be deleted.

Timelines and Benefits

To participate, you should return this consent to your homeroom teacher by 1/24/14. If you return the consent on time, you will receive a piece of candy, whether you agree to participate or not. Additionally, if you decide to participate, you will 1) be entered into a raffle with multiple gift cards (to movies) and 2) receive a small gift after completing the survey (including study supplies). By participating, you will contribute to important research on adolescent social behavior and adjustment and well-being at school. You can only participate and get prizes if you sign this form, and your parent has to sign their form, and both forms have to be returned to the school on time. If you have any questions, please feel free to contact us at any time. You may also contact the USF Institutional Review Board at 813-974-5638.

Your support is much appreciated!

Melanie McVean, M.S.W., Co-PI
Doctoral Graduate Student
Email: melanie.mcvean@sdc.k12.fl.us
Phone: 813-744-8400, ext. 232

Danielle Findley, M.A., Co-PI
Doctoral Graduate Student
Email: dfindley@mail.usf.edu
Phone: 813-728-4122

Tiina Ojanen, Ph.D., Co-PI
Assistant Professor
Email: tojanen@usf.edu
Phone: 813-974-8346



Participant Assent

Please print your FULL NAME.

I understand what the person conducting this study is asking me to do. I have thought about whether I want to take part in this study. (check one box)

I want to participate. I do not want to participate.

X _____
Signature



Date

For Researchers only: Name of person providing information (assent) to subject

Date

12/19/13 Version 2

APPENDIX L
STUDIES 2 and 4: INFORMED CONSENT PAGE



Informed Consent to Participate in Research

Information to Consider Before Taking Part in this Research Study

Pro # 22968

Researchers at the University of South Florida (USF) study many topics. To do this, we need the help of people who agree to take part in a research study. This form tells you about this research study. We are asking you to take part in a research study that is called: Peer Status and the Self. The person who is in charge of this research study is Danielle Findley. This person is called the Principal Investigator.

Purpose of the Study

The purpose of this study is to examine how your social status among peers may relate to various aspects of yourself, including your self-esteem.

Why are you being asked to take part?

We are asking you to take part in this research study because you are a student registered in the SONA system.

Study Procedures

If you take part in this study, you will be asked to complete an online survey containing several measures about yourself and read over your personal results of a portion the survey. The data will be collected anonymously and thus not linked to you personally. You will only participate once, and the survey is expected to last around 40 minutes.

Alternatives / Voluntary Participation / Withdrawal

You have the alternative to choose not to participate in this research study. There are other studies available to you on SONA.

You should only take part in this study if you want to volunteer; you are free to participate in this research or withdraw at any time. There will be no penalty or loss of benefits you are entitled to receive if you stop taking part in this study. Your decision to participate or not to participate will not affect your student status.

Benefits and Risks

We are unsure if you will receive any benefits by taking part in this research study.

This research is considered to be minimal risk.

Compensation

Social Behavioral

Version #1

Version Date 1-6-2016

1

You will receive one (1) SONA point for participating in this study.

Privacy and Confidentiality

Certain people may need to see your study records. By law, anyone who looks at your records must keep them completely confidential. The only people who will be allowed to see these records are: the Principal and co-Principal investigators and the University of South Florida Institutional Review Board (IRB).

- It is possible, although unlikely, that unauthorized individuals could gain access to your responses. Confidentiality will be maintained to the degree permitted by the technology used. No guarantees can be made regarding the interception of data sent via the Internet. However, your participation in this online survey involves risks similar to a person's everyday use of the Internet. If you complete and submit an anonymous survey and later request your data be withdrawn, this may or may not be possible as the researcher may be unable to extract anonymous data from the database.

Contact Information

If you have any questions about your rights as a research participant, please contact the USF IRB at 974-5638. If you have questions regarding the research, please contact the Principal Investigator at 813-974-8346.

We may publish what we learn from this study. If we do, we will not let anyone know your name. We will not publish anything else that would let people know who you are. You can print a copy of this consent form for your records.

I freely give my consent to take part in this study. I understand that by proceeding with this survey that I am agreeing to take part in research and I am 18 years of age or older.

I have read the above, agree to participate, and would like to begin the survey.

APPENDIX M
STUDY 3: INFORMED CONSENT PAGE



Informed Consent to Participate in Research

Information to Consider Before Taking Part in this Research Study

Pro # 22968

Researchers at the University of South Florida (USF) study many topics. To do this, we need the help of people who agree to take part in a research study. This form tells you about this research study. We are asking you to take part in a research study that is called: Peer Status and the Self. The person who is in charge of this research study is Danielle Findley. This person is called the Principal Investigator.

Purpose of the Study

The purpose of this study is to examine how your social status among peers may relate to various aspects of yourself and behaviors, including your self-esteem.

Why are you being asked to take part?

We are asking you to take part in this research study because you are registered in MTurk.

Study Procedures

If you take part in this study, you will be asked to complete an online survey containing several measures about yourself and read over your personal results of a portion the survey. The data will be collected anonymously and thus not linked to you personally. You will only participate once, and the survey is expected to last around 40 minutes.

Alternatives / Voluntary Participation / Withdrawal

You have the alternative to choose not to participate in this research study. There are other studies available to you on MTurk.

You should only take part in this study if you want to volunteer; you are free to participate in this research or withdraw at any time. There will be no penalty or loss of benefits you are entitled to receive if you stop taking part in this study.

Benefits and Risks

We are unsure if you will receive any benefits by taking part in this research study.

This research is considered to be minimal risk.

Compensation

You will receive \$0.25 for participating in this study.

Social Behavioral

Version #1

Version Date 2-10-2016

1

Privacy and Confidentiality

Certain people may need to see your study records. By law, anyone who looks at your records must keep them completely confidential. The only people who will be allowed to see these records are: the Principal and co-Principal investigators and the University of South Florida Institutional Review Board (IRB).

- It is possible, although unlikely, that unauthorized individuals could gain access to your responses. Confidentiality will be maintained to the degree permitted by the technology used. No guarantees can be made regarding the interception of data sent via the Internet. However, your participation in this online survey involves risks similar to a person's everyday use of the Internet. If you complete and submit an anonymous survey and later request your data be withdrawn, this may or may not be possible as the researcher may be unable to extract anonymous data from the database.

Contact Information

If you have any questions about your rights as a research participant, please contact the USF IRB at 974-5638. If you have questions regarding the research, please contact the Principal Investigator at 813-974-8346.

We may publish what we learn from this study. If we do, we will not let anyone know your name. We will not publish anything else that would let people know who you are. You can print a copy of this consent form for your records.

I freely give my consent to take part in this study. I understand that by proceeding with this survey that I am agreeing to take part in research and I am 18 years of age or older.

I have read the above information, agree to participate, and would like to begin the survey.