

Fall 12-7-2018

Psychopathic Personality Traits as a Moderator of the Relationship Between Social Intelligence and Relational Aggression

Savannah Merold

University of Southern Mississippi

Follow this and additional works at: https://aquila.usm.edu/masters_theses

Part of the [Personality and Social Contexts Commons](#)

Recommended Citation

Merold, Savannah, "Psychopathic Personality Traits as a Moderator of the Relationship Between Social Intelligence and Relational Aggression" (2018). *Master's Theses*. 591.

https://aquila.usm.edu/masters_theses/591

This Masters Thesis is brought to you for free and open access by The Aquila Digital Community. It has been accepted for inclusion in Master's Theses by an authorized administrator of The Aquila Digital Community. For more information, please contact Joshua.Cromwell@usm.edu.

PSYCHOPATHIC TRAITS AS A MODERATOR OF THE RELATIONSHIP
BETWEEN SOCIAL INTELLIGENCE AND RELATIONAL AGGRESSION

by

Savannah J Merold

A Thesis
Submitted to the Graduate School,
the College of Education and Human Sciences
and the School of Psychology
at The University of Southern Mississippi
in Partial Fulfillment of the Requirements
for the Degree of Master of Arts

Approved by:

Dr. Eric Dahlen, Committee Chair
Dr. Michael Madson
Dr. Bonnie Nicholson

Dr. Eric Dahlen
Committee Chair

Dr. Joe Olmi
Director of School

Dr. Karen S. Coats
Dean of the Graduate School

December 2018

COPYRIGHT BY

Savannah J Merold

2018

Published by the Graduate School



THE UNIVERSITY OF
SOUTHERN
MISSISSIPPI.

ABSTRACT

Social intelligence has been identified as one of many predictors of relational aggression. It is likely that a certain level of social intelligence may be necessary for relationally aggressive behaviors to be effective (e.g., some ability to understand human behavior is necessary to effectively harm others through the manipulation of status, social relationships, or sense of belonging). And yet, social intelligence is unlikely to be sufficient to produce relationally aggressive behavior. Merely because someone has the requisite levels of social intelligence to use relational aggression does not mean that he or she will be motivated to do so. There is some evidence that empathy moderates the relationship between relational aggression and social intelligence (i.e., high empathy may suppress the relationship between relational aggression and social intelligence). We used hierarchical multiple regression to examine psychopathic personality traits as a potential moderator of the predicted relationship between relational aggression and social intelligence in a college student sample ($N = 274$). As predicted, psychopathic traits moderated the relationship between relational aggression and social intelligence (i.e., as psychopathic traits increased, the relationship between social intelligence and relational aggression grew stronger); however, the relationship between social intelligence and relational aggression was negative. Thus, students higher in social intelligence endorsed less relationally aggressive behaviors.

ACKNOWLEDGMENTS

I would like to thank my committee members, Dr. Michael Madson, Dr. Bonnie Nicholson, and especially my committee chair, Dr. Eric Dahlen for continually providing feedback and encouragement throughout the duration of this project.

TABLE OF CONTENTS

ABSTRACT.....	ii
ACKNOWLEDGMENTS	iii
LIST OF TABLES.....	vi
LIST OF ILLUSTRATIONS.....	vii
LIST OF ABBREVIATIONS.....	viii
CHAPTER I – INTRODUCTION.....	1
Relational Aggression.....	2
Social Intelligence.....	4
Psychopathic Personality Traits: A Potential Moderator.....	6
The Present Study	9
CHAPTER II - METHODS	11
Instruments.....	11
Demographic Questionnaire	11
Self-Report of Aggression and Social Behavior Measure (SRASBM)	11
Self-Report Psychopathy Scale-III (SRP-III)	12
Tromsø Social Intelligence Scale (TSIS).....	13
Procedure	13
CHAPTER III - RESULTS.....	15

Data Clean-Up and Preliminary Analyses	15
Primary Analyses	16
SRP-III	18
Exploratory Analyses.....	19
SRP-III Subscale.....	20
CHAPTER IV – DISCUSSION.....	21
Limitations and Future Directions	25
APPENDIX A Study Questionnaires.....	28
Participant Demographic Questionnaire	28
APPENDIX B Consent Form	31
APPENDIX C IRB Approval Letter	33
REFERENCES	34

LIST OF TABLES

Table 1 Scale Reliabilities, Means, Standard Deviations, and Gender Differences	16
Table 2 Correlations Among Variables	16
Table 3 Conditional Effects of Social Intelligence on Relational Aggression at Different Levels of Psychopathic Personality Traits	18
Table 4 Scale Reliabilities and Bivariate Relationships Between SRP-III Subscales and Relational Aggression.....	20

LIST OF ILLUSTRATIONS

Figure 1. 18

LIST OF ABBREVIATIONS

<i>USM</i>	The University of Southern Mississippi
<i>WCU</i>	William Carey University

CHAPTER I – INTRODUCTION

.Aggressive behavior warrants extensive research due to its negative interpersonal and societal implications. According to the Federal Bureau of Investigation’s National Press Office (2016), there were an estimated 1.2 million violent crimes in 2015 alone. While violent crime represents the most extreme form of overt aggression (i.e., homicide, aggravated assault, sexual assault), less extreme forms of aggression, including those manifested in more subtle and indirect ways, have the potential to be disruptive in many contexts. For example, relational aggression has been linked to several adverse correlates, including depression, suicidal ideation, social maladjustment, academic difficulties, and delinquency among children and adolescents (Crick, 1996; Crick & Grotpeter, 1995; Fite, Stoppelbein, Greening, & Preddy, 2011; Preddy & Fite, 2012; Spieker et.al., 2011). Not surprisingly, relational aggression has received increased attention in the psychological literature as researchers have sought to investigate its correlates and better understand its impact.

This study focused on the perpetration of relational aggression among emerging adults. Specifically, we aim to determine (1) whether social intelligence predicts relational aggression while accounting for respondent gender and (2) whether psychopathic personality traits moderate the expected relationship between relational aggression and social intelligence. It is hoped that learning more about relational aggression and the way it may be facilitated by various aspects of personality and social intelligence will ultimately aid in developing preventative measures and informing treatment approaches.

Relational Aggression

Relational aggression (RA) is a type of behavior through which the perpetrator intends to damage the victim's peer/romantic relationships, reputation, and/or feelings of inclusion (Crick, 1996; Crick & Grotpeter, 1995; Ellis, Crooks, & Wolfe, 2009; Werner & Crick, 1999). Common examples include intentional exclusion from social activities, spreading malicious rumors, and ignoring (Fite, et al., 2011; Werner & Crick, 1999). Among children and adolescents, RA is associated with social maladjustment, depression, loneliness, poor academic performance, and delinquency (Crick, 1996; Crick & Grotpeter, 1995; Fite et al., 2011; Preddy & Fite, 2012; Spieker et al., 2011). Additionally, Ellis and colleagues (2009) found that not only were difficulties in psychological adjustment predicted by the perpetration of peer RA among adolescents but that adolescent girls who perpetrated both dating and peer RA exhibited an increase in delinquent behaviors.

While the majority of research on RA has been on child and early adolescent samples, information on the presence, forms, functions, and correlates of RA in late adolescence and emerging adulthood is receiving greater attention. Werner and Crick (1999) found that, like RA in childhood, RA in emerging adulthood is related to antisocial personality features and low levels of prosocial behavior, as well as high levels of peer rejection. Additionally, peer RA among emerging adults is related to poor anger management, self-destructive and impulsive behaviors, difficulties with interpersonal relationships, and *DSM-IV* cluster B personality disorder traits (Schmeelk, Sylvers, & Lilienfeld, 2008; Werner & Crick, 1999).

One noteworthy difference between studies of children and early adolescents and those of older adolescents and emerging adults concerns the role of gender in RA. Among children, boys engage primarily in overt forms of aggression while girls engage primarily in relational forms of aggression (Crick & Grotpeter, 1995). This explains why RA is often characterized as being more prevalent among girls than boys. In contrast, studies using older adolescent and/or emerging adult samples have found that both men and women engage in RA (Bailey & Ostrov, 2007; Czar, Dahlen, Bullock, & Nicholson, 2011; Linder, Crick, & Collins, 2002; Dahlen, Czar, Prather, & Dyess, 2013; Verona, Sadeh, Case, Reed, & Bhattacharjee, 2008). Some studies report no gender differences in the frequency of relationally aggressive behaviors (e.g., Czar et al., 2011); others have found that men are somewhat more likely to report engaging in RA than women (e.g., Dahlen et al., 2013; Lento-Zwolinski, 2007; Schmeelk, Sylvers, & Lilienfeld, 2008). When gender differences in mean scores on measures of RA are reported, the effect sizes tend to be fairly small (e.g., .20-.34).

Despite the lack of evidence for large gender differences in the frequency with which RA is perpetrated by older adolescents and emerging adults, there is evidence that at least some of the correlates of RA may differ by gender in this age range. Werner and Crick (1999) found that some correlates of RA among adults were more commonly reported by men (e.g., peer rejection and egocentricity) while others were more commonly reported by women (e.g., stimulus-seeking, antisocial behavior, identity problems, affective instability, self-harm behavior, negative relationships, bulimic symptoms, and affective features of depression,). Similarly, Burton, Hafetz, and Henninger (2007) found gender differences in some of the relationships of the Big Five

personality factors to RA in a college student sample. Additionally, Lento-Zwolinski (2007) found that peer exclusivity (i.e., being upset when a friend spends time with his or her other friends) was one of the strongest predictors of reactive RA among female college students. For male students, low prosocial behavior and peer exclusivity predicted reactive RA.

One correlate of RA that appears to be relatively consistent across both men and women is social intelligence (Kaukiainen et al., 1999). Social intelligence, which will be defined and reviewed below, has been shown to be a positive predictor of RA for both women and men (Andreou, 2006). Björkqvist, Österman, and Kaukiainen (2000) suggested that while it is viable that RA requires a certain amount of social understanding to be effective, it is unlikely that social intelligence alone would be expected to lead to RA. Specifically, they suggested that because social intelligence provides one with the ability to achieve social goals, social intelligence is a useful asset in conflict situations regardless of whether or not the socially intelligent individual chooses to act peacefully or aggressively. Thus, the relationship of social intelligence to RA warrants further investigation.

Social Intelligence

Social intelligence (SI) is a concept that was originally coined by Thorndike (1920) and was defined as, “the ability to understand and manage men and women, boys and girls- to act wisely in human relations” (pg. 228). Throughout the years, researchers have struggled to come to a consensus in defining SI. Silvera, Martinussen, and Dahl (2001) asked a panel of experts to define SI and found, “the ability to understand other people and how they will react to different social situations,” was the most common

response (reported by 73% of responding psychology faculty members at the University to Tromsø). In a follow-up study, Silvera and colleagues identified three factors of SI: social awareness (SA), social skills (SS), and social information processing (SP). Silvera and colleagues' definition and approach to assessing SI was used in this study. Thus, SI will be conceptualized as a multidimensional construct reflecting one's ability to understand others and anticipate their behavior in social situations.

As noted above, there is evidence that SI is positively related to the perpetration of RA. Kaukiainen and colleagues (1999), found that SI was positively related to RA in a group of early adolescents. Additionally, Björkqvist and colleagues (2000) found that, although SI was correlated with various forms of aggression, it was most strongly correlated to "safer" conflict behavior, including peaceful conflict resolution, followed by indirect forms of aggression, then withdrawal and verbal aggression. Physical aggression had the weakest relationship to SI. These findings align with those of previous studies indicating that RA may require a certain understanding of human relations and social skills (Björkqvist, Osterman, & Kaukiainen 2000), social perception accuracy, and nonverbal decoding skills, all of which are closely related to SI (Barnes & Sternberg, 1989; Sacco, Merold, Lui, Lustgraaf, & Barry, 2016).

The assumption that RA requires an understanding of human relations and social skills is also supported by a developmental theory of aggression suggested by Björkqvist and colleagues (1992). This theory proposed that forms of aggression represent development phases and that aggressive behaviors evolve from physical aggression to direct verbal aggression to indirect/relational aggression over the lifespan. Children who have not developed verbal or social skills must rely on physical aggression as a means of

conflict resolution. When verbal skills begin to develop but an adequate understanding of human relations has not, an individual has the capability of expressing aggression without using physical aggression, and will likely resort to direct verbal aggression. Finally, when an individual develops an adequate amount of SI, they no longer need to resort to either physical or direct verbal aggression.

Thus, RA may be a result of the ability to utilize SI in conflict behavior. At the same time, it is unclear that individuals high in SI would consistently choose RA vs. other forms of aggression or non-aggression (i.e., peaceful conflict resolution). Having the ability to utilize RA or non-aggressive alternatives does not necessarily mean that one will consistently utilize this ability. For this reason, variables that could strengthen the predicted relationship between SI and RA should be considered.

Psychopathic Personality Traits: A Potential Moderator

As was previously mentioned, although Andreou (2006) found that SI was a positive predictor of the perpetration of RA, she noted that, consistent with Björkqvist and colleagues (2000), it was unlikely that SI alone should lead to relationally aggressive behavior. Instead, Andreou suggested that SI should be viewed as a neutral stimulus that interacts with other variables to lead to relationally aggressive behaviors. One variable commonly seen in the literature which appears to affect the relationship between SI and RA is empathy. Specifically, both Björkqvist and colleagues (2000) and Kaukiainen and colleagues (1999) found that empathy weakens the relationship between SI and aggression. While this could be attributed to an inverse relationship between aggression and empathy, recent evidence suggests that the relationship between empathy and aggression is not as clear as once assumed (Vachon, Lynam, & Johnson, 2013). Vachon

and colleagues (2013) found that empathy accounted for only 1% of the variability in aggression in a meta-analysis of 86 studies. This differed from a 1988 meta-analysis by Miller and Eisenberg that found a significant negative relationship between empathy and aggression, albeit with a small effect size. One notable difference between the two studies was the age groups of the studies included. Miller and Eisenberg included only nine studies with adult samples. Vachon and Colleagues, on the other hand, only included studies with adult samples (86 total). For this reason, Vachon and colleagues' meta-analysis likely provides a better representation of the relationship between empathy and aggression among adults.

One explanation Vachon and colleagues provided for the absence of a relationship between aggression and empathy was that empathy alone is not sufficient to encourage pro-social behavior or suppress antisocial behavior. Empathy is usually broken down into two distinct types: cognitive empathy and affective empathy. Cognitive empathy, which is thought of as the ability to detect and understand the perspective of others, could provide an impetus for prosocial behavior, but the assumption that understanding another's perspective is analogous to caring about another's perspective is difficult to justify. Affective empathy is considered the ability to vicariously experience others' emotions. As suggested by Vachon and colleagues, associating this with aggression is acting under the assumption that individuals who do not experience the emotions of others are innately aggressive, which is also difficult to justify. Because of these assumptions, one can assume that, although empathy can provide the foundation to inhibit aggressive behavior, empathy alone is likely not enough to suppress aggressive behavior.

Noting the inconsistent relationship between empathy and aggression, it is unclear why empathy appears to moderate the relationship between SI and RA. Perhaps, like the relationship between empathy and aggression, a lack of empathy provides an impetus to strengthen the relationship between SI and RA, but low empathy alone is not enough. A related construct that might be sufficient in providing the motivation for individuals high in SI to utilize RA is psychopathy. Psychopathic personality traits include several characteristics such as boldness, an erratic lifestyle, interpersonal manipulation, superficial charm, fearless dominance, antisocial behavior, callous affect, and low anxiety (Blair, Mitchell, & Blair, 2005; Hare & Neumann, 2005). Individuals with high levels of psychopathic traits tend to be egocentric, distrustful, and hold unconventional standards and values (Lynam & Derefinko, 2006). While psychopathy is associated with a marked lack of empathy (Skeem, Polaschek, Patrick, & Lilienfeld, 2011), it is much broader than empathy and has long been recognized as a robust predictor of overt aggression (Hare & McPherson, 1984; Hare & Neumann, 2005).

In addition to having a well-established relationship with overt aggression in criminal populations (Cale & Lilienfeld, 2006; Hare & McPherson, 1984) as well as college samples (Czar et al., 2011; Miller & Lynam, 2003), there is also evidence that psychopathy predicts RA in college samples. For example, Schmeelk, Sylvers, and Lilienfeld (2008) found that psychopathic traits were positively related to RA above and beyond overt aggression. Further, Czar and colleagues (2011) found that psychopathic traits predicted both peer and romantic RA beyond overt aggression. Considering that psychopathy is often defined by empathy deficits, and with evidence that psychopathic

traits predict RA, psychopathy could be a construct that provides both the impetus and the motivation for an individual high in SI to exhibit relationally aggressive behaviors.

Recognizing that SI is likely a neutral stimulus that is necessary for effective RA but not sufficient to serve as motivation to act aggressively, psychopathic personality traits will be examined as a potential moderator of the relationship between SI and RA. Because of the evidence that empathy affects the relationship between SI and RA and because psychopathy is often characterized by a marked lack of empathy and predictive of aggression, psychopathy should serve as the motivation for an individual high in SI to act aggressively. Therefore, as psychopathy increases, the relationship between SI and RA should strengthen.

The Present Study

We sought to expand upon the literature on relational aggression among emerging adults by examining the relationship between social intelligence (SI) and peer relational aggression (RA) in a college student sample and testing psychopathic personality traits as a potential moderator of the expected relationship between SI and RA. Given evidence that there are sometimes small mean gender differences in the perpetration of peer RA and that some of the correlates of peer RA may vary by gender, respondent gender was accounted for when testing the following hypotheses:

H1: Social intelligence (SI) will be positively related to the perpetration of peer RA.

H2: Psychopathic personality traits will moderate the predicted relationship between SI and the perpetration of peer RA such that this relationship will be stronger at higher levels of psychopathic personality traits (1 *SD* above the mean)

than at lower levels of psychopathic traits (1 *SD* below the mean) while taking respondent gender into account

CHAPTER II - METHODS

. The sample included 274 undergraduate participants aged 18-29 from the University of Southern Mississippi who were recruited through the university's online research system (SONA Systems, Ltd.). The sample consisted of 89 men (32.5%) and 185 women (67.5%) and was predominantly Caucasian/White (61.3%), followed by African American/Black (33.2%), Hispanic/Latino (2.2%), Asian (2.2%), and Other (1.1%). Participants consisted of mostly freshman (43.1%) followed by sophomores (20.8%), juniors (20.8%), then seniors (15.3%). The majority of participants reported living in an on-campus residence hall (50.7%) and others reported living in an off-campus apartment (27.4%), an off-campus house (8.4%), with parents (6.9%), or sorority/fraternity-based housing (5.8%). In total, 56.6% of participants reported living on-campus and 43.4% reported living off-campus. The study required approximately 30 minutes to complete, and participants who completed the study without failing quality assurance checks used to detect insufficient effort responding received research credit consistent with departmental policy

Instruments

The instruments described below were administered to participants online through Qualtrics.

Demographic Questionnaire

A brief demographic questionnaire was included to assess participants' age, gender, race, year in school, and other characteristics of interest (see Appendix A).

Self-Report of Aggression and Social Behavior Measure (SRASBM)

The 56-item SRASBM (Linder, Crick, & Collins, 2002; Morales, Ruh, & Werner, 2002) was used to assess peer relational aggression. The full measure forms 11 subscales; however, the present study is primarily interested in the 7-item General/Peer Relational Aggression subscale used by Linder and colleagues (2002). All SRASBM items are scored on a Likert-type scale ranging from 1 (“not at all true”) to 7 (“very true”). The General/Peer Relational Aggression subscale demonstrated adequate reliability ($\alpha = .69$ to $.88$) in college student samples (Clark, Dahlen, & Nicholson, 2015; Czar et al., 2011; Dahlen et al., 2013; Linder et al., 2002), and evidence for construct validity of the SRASBM subscales has been established through relationships with related constructs and other measures of RA (Linder et al., 2002; Murray-Close, Ostrov, Nelson, Crick, & Coccaro, 2009).

Self-Report Psychopathy Scale-III (SRP-III)

The SRP-III was created by Paulhus, Neumann, and Hare (2009) as a measure of psychopathic personality traits appropriate for use with non-offender samples that reflects the “gold standard” for psychopathy assessment in offender populations: the PCL-R. The SRP-III consists of 64 items forming four 16-item subscales: Interpersonal Manipulation (IPM), Callous Affect (CA), Erratic Life Style (ELS), and Anti-Social Behavior (ASB). Each item is rated on a five-point Likert scale from 1 “strongly disagree” to 5 “strongly agree.” The subscales demonstrated adequate reliability (as = $.754$ to $.82$), as has the total score ($\alpha = .81$). For the present study, we were primarily interested in the total score; however, subscale scores were examined in exploratory analyses. Construct validity of the SRP-III has been established through a positive relationship with measures of

antisocial traits, a positive relationship with other measures of psychopathic traits, and an inverse relationship with measures of empathy.

Tromsø Social Intelligence Scale (TSIS)

Silvera, Martinussen, and Dahl (2001) used a panel of experts and qualitative methods to produce a preliminary 103-item measure that was refined through factor analysis with an undergraduate sample to yield the 21-item TSIS. This was then confirmed in another undergraduate sample. Items are rated on a Likert-type scale from 1 (“Describes me extremely poorly”) to 7 (“Describes me extremely well”) and form three 7-item subscales: Social Awareness (SA), Social Skills (SS), and Social Information Processing (SP). Each subscale demonstrated adequate reliability in an undergraduate sample ($\alpha = .79$ to $.86$). The TSIS was validated through a series of studies that included qualitative methods, exploratory factor analysis, and confirmatory factor analysis (Silvera, Martinussen, & Dahl, 2001). For the purpose of this study, the subscales were combined to provide a generalized measurement of SI.

Procedure

Participants were recruited through the University of Southern Mississippi’s online research system (Sona Systems, Ltd.), which provided a short description of the study. Individuals who signed up for the study in Sona were directed to an online consent form hosted through Qualtrics (see Appendix B). After informed consent was obtained, participants were directed to complete the demographic questionnaire before moving on to the remaining measures. The three measures (SRASBM, SRP-III, TSIS) were presented in a randomized order to minimize potential order effects. Once the measures were completed, participants received 0.5 credits, as the study is expected to take

participants approximately 30 minutes to complete. Quality assurance checks were included in the survey in the form of two directed response items (e.g., “Answer ‘agree’ to this question”). Data from respondents who failed either item was omitted from analyses. Additionally, survey and questionnaire completion times were recorded, and data from participants who completed the measures in significantly less time than expected were examined. This procedure was approved by the university’s Institutional Review Board (see Appendix C).

CHAPTER III - RESULTS

Data Clean-Up and Preliminary Analyses.

After downloading the data file from Qualtrics into SPSS, study variables were formed using SPSS syntax. The data file was then inspected for missing data and coding errors. Of the 338 cases initially present in the data set, one was removed for excessive missing data. The responses of 44 participants were removed for failing one or both directed response items, resulting in a sample of 293. Nineteen responses from participants over the age of 29 were removed to restrict the sample to emerging adults. This resulted in a final sample of 274 that was used for all analyses.

Next, all variables were examined for normality. Both the SRP-III total score and the SRASBM peer/general relational aggression scale were positively skewed. Due to the nature of these variables, a positive skew was expected. Based on the degree of skewness, bootstrapping was used to create 95% bias-corrected and accelerated confidence intervals with 10,000 bootstrap resamples for all analyses.

The scale reliabilities, descriptive statistics, and gender differences are presented in Table 1. Independent samples t-tests were used to create the 95% bias-corrected and accelerated CIs reported. All scales demonstrated adequate internal consistency. Gender differences were found only on the SRP-III. Men scored higher on psychopathic personality traits than women.

Table 1 *Scale Reliabilities, Means, Standard Deviations, and Gender Differences*

Variable	α	Men	Women	t (272)	BCa 95% CI	d
		M (SD)	M (SD)			
TSIS	.80	4.49 (.75)	4.54 (.65)	.06	-.23, .12	-
SRP-III	.91	2.41 (.45)	2.08 (.41)	5.95	.22, .43	.77
Peer/General RA	.86	14.64 (8.18)	13.07 (6.11)	1.77	-.17, 3.31	-

Note. TSIS = Tromsø Social Intelligence Scale; SRP-III = Self-Report of Psychopathy Scale-III; RA = Relational Aggression. BCa 95% confidence intervals (CIs) estimated with 10,000 bootstrap resamples of the data. Significant values (i.e., CIs that do not contain 0) are in bold.

Primary Analyses

Bivariate correlations were initially computed separately by respondent gender and were followed with tests of differences between independent correlations using the Fisher r -to- z transformation (see Bruning & Kintz, 1997). The lack of significant gender differences in the relationships among variables led us to report correlations for the full sample (see Table 2). Although scores on the TSIS were related to peer/general RA, the direction of this relationship differed from what was predicted. We predicted that SI would be positively related to peer relational aggression (H1); however, this relationship was negative. That is, participants higher in SI reported less engagement in relationally aggressive behavior. Scores on the TSIS were also inversely related to scores on the SRP-III, and peer/general RA was positively correlated to SRP-III total score.

Table 2 *Correlations Among Variables*

	1	2	3
1. TSIS	-		
2. SRP-III	-.22	-	

		[-.33, -.10]	
3. Peer/general RA	-.32	.57	-
	[-.41, -.22]	[.48, .64]	

Note. TSIS = Tromsø Social Intelligence Scale; SRP-III = Self-Report of Psychopathy Scale-III; RA = Relational

Aggression. BCa 95% confidence intervals (CIs) estimated with 10,000 bootstrap resamples of the data. All correlations were significant at a level of $p < .01$ based on the 95% CIs.

To examine the effect of psychopathic personality traits on the relationship between SI and peer RA, a hierarchical multiple regression was conducted using the PROCESS macro for SPSS (Hayes, 2013). Model one (i.e., simple moderation) was selected. The SRASBM peer/general RA scale was entered as the outcome variable, TSIS total score was entered as the independent variable, SRP-III total score was entered as a moderator, and gender was entered as a covariate. The overall regression model was significant ($F(4, 269) = 39.07, p < .0001$), with an R^2 of .40. There was a significant interaction between TSIS total score and SRP-III total score in the prediction of peer/general RA ($\Delta R^2 = .03, F(1, 269) = 14.46, p < .001$), indicating that scores on the SRP-III moderated the relationship between the TSIS and peer/general RA, as predicted. We predicted that the relationship between SI and relational aggression would be stronger at higher levels of psychopathic personality traits (H2), and this hypothesis was supported. At low levels of psychopathic personality traits (i.e., low scores on the SRP-III), there did not appear to be a relationship between SI and relational aggression (see Table 3). At average and above average levels of psychopathic personality traits, there was a relationship between SI and relational aggression; however, this relationship is inverse. That is, at both average and elevated levels of psychopathic personality traits, SI

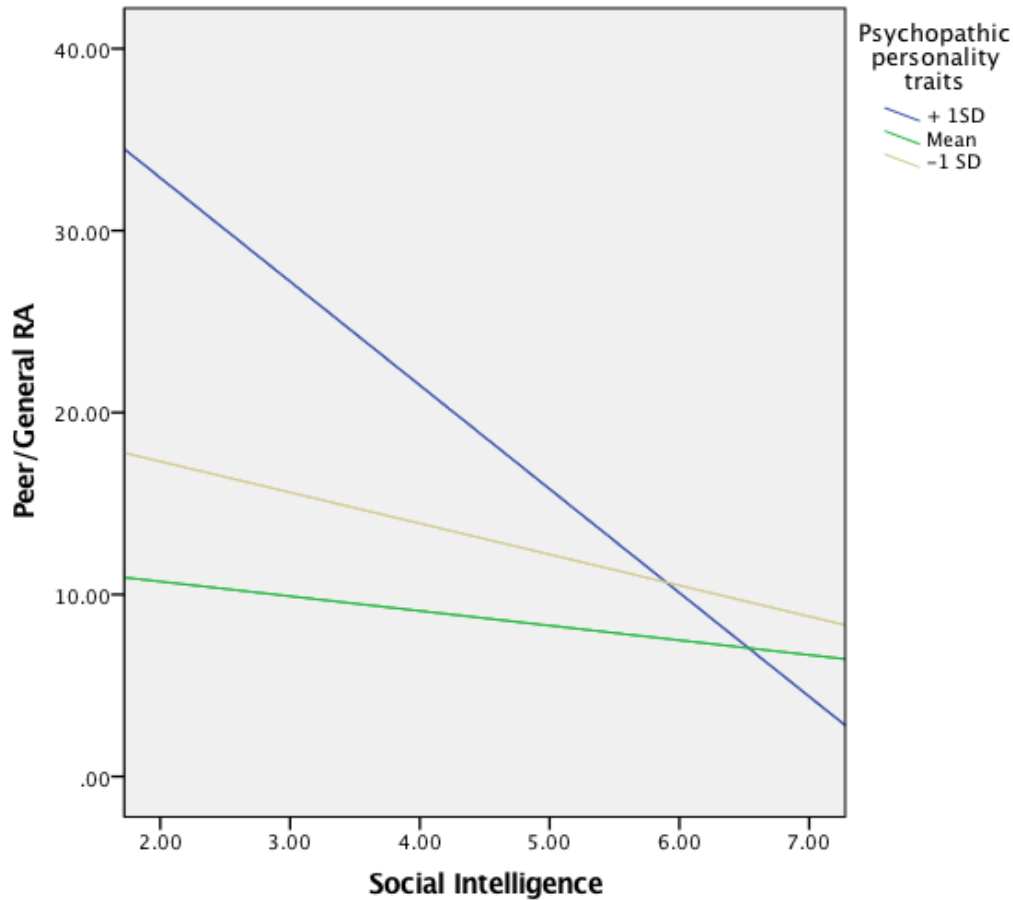
was negatively correlated with relational aggression (see Figure 1). The analysis was re-run without gender as a covariate, and the results did not change.

Table 3 *Conditional Effects of Social Intelligence on Relational Aggression at Different Levels of Psychopathic Personality Traits*

SRP-III	Effect	SE	<i>t</i>	<i>p</i>	BCa 95% CI
One SD below mean	-.51	.66	-.77	.44	[-1.80, .79]
At the mean	-2.18	.49	-4.44	.00	[-3.15, -1.22]
One SD above mean	-3.86	.71	-5.45	.00	[-5.25, -2.46]

Note. SRP-III = Self-Report of Psychopathy Scale-III. BCa 95% confidence intervals (CIs) estimated with 10,000 bootstrap resamples of the data.

Figure 1.



Note. RA= Relational Aggression.

Exploratory Analyses

Exploratory analyses were completed to determine whether certain SRP-III subscales were better predictors of RA than others. All SRP-III subscales demonstrated adequate internal consistency, and positive bivariate relationships with peer/general RA (see Table 4). The relationships among the four SRP-III subscales ranged from .41 to .70, so the strength of their bivariate relationships with peer/general RA may not be the best reflection of their relative contribution.

A hierarchical multiple regression was computed in which peer/general RA served as the dependent variable, respondent gender was entered on Step 1, and all four

SRP-III subscales were entered simultaneously on Step 2. The overall regression model was significant ($F(4, 268) = 29.99, p < .001$), with an R^2 of .36. After taking respondent gender into account, two SRP-III subscales were significant predictors of peer/general RA on Step 2: Interpersonal Manipulation ($b = 3.73, 95\% \text{ BCa CI } [1.67, 5.67]$) and Antisocial Behavior ($b = 4.03, 95\% \text{ BCa CI } [2.33, 5.72]$). This analysis was repeated without respondent gender, and the results did not change. Thus, at least in the present sample, it appears that Interpersonal Manipulation and Antisocial Behavior may be more relevant to peer/general relational aggression than Callous Affect or Erratic Lifestyle.

Table 4 *Scale Reliabilities and Bivariate Relationships Between SRP-III Subscales and Relational Aggression*

SRP-III Subscale	α	Peer/General RA	BCa 95% CI
		r	
Interpersonal Manipulation	.82	.52	[.42, .61]
Callous Affect	.79	.43	[.33, .53]
Antisocial Behavior	.79	.49	[.39, .58]
Erratic Life Style	.77	.38	[.28, .47]

Note. SRP-III = Self-Report of Psychopathy Scale-III; RA = Relational Aggression. BCa 95% confidence intervals (CIs) estimated with 10,000 bootstrap resamples of the data.

CHAPTER IV – DISCUSSION

The present study expanded the literature on relational aggression in emerging adults by examining the interaction between social intelligence and psychopathic personality traits in the prediction of peer relational aggression. It was hypothesized that social intelligence would be positively related to relational aggression and that psychopathic personality traits would moderate this relationship. Contrary to what was expected, we found that social intelligence was *inversely* related to both relational aggression and psychopathic personality traits. Despite this, psychopathic personality traits did moderate the relationship between relational aggression and social intelligence, as expected. That is, as psychopathic personality traits increased, the relationship between social intelligence and relational aggression grew stronger.

Previous research has found that social intelligence was associated with peer relational aggression; however, this relationship was generally positive (Andreou, 2006; Björkqvist et al., 2000; Kaukiainen et al., 1999). It is commonly suggested that this is because a certain amount of social understanding is required for relational aggression to be effective (Björkqvist, Osterman, & Kaukiainen 2000). Despite this, our findings indicated an inverse relationship between relational aggression and social intelligence, meaning that students lower in social intelligence were more likely to report engaging in relational aggression in their peer relationships.

There are many possible reasons our results may have differed from those of previous studies. First, most of the previous research on social intelligence and relational aggression utilized peer-estimates of all major variables (Andreou, 2006; Björkqvist et

al., 2000; Kaukiainen et al., 1999). Although there is evidence to support the validity of self-reported social intelligence (Grieve & Mahar, 2012), there is no current research comparing self-reported social intelligence to peer-estimates of social intelligence. Vasil'ová and Baumgartner (2005) compared three self-report measures of social intelligence in a group of college students in Slovakia and found that the TSIS had no relationship or negative relationships with behavioral components of social intelligence. Peer estimates of social intelligence likely rely largely on an individual's ability to behave in a way that reflects adequate social intelligence; therefore, there may be differences in an individual's perception of his or her own social intelligence and the engagement in behaviors that reflect social intelligence in ways that would be detected by peers. Second, previous research on social intelligence and relational aggression has used primarily child and early adolescent samples (Andreou, 2006; Björkqvist et al., 2000; Kaukiainen et al., 1999). Perhaps, our finding of a negative relationship between social intelligence and relational aggression in a college sample could reflect further development according to Björkqvist and colleagues' (1992) developmental theory of aggression and Björkqvist and colleagues' (2000) finding that SI is associated with "safer" conflict behavior. There is some evidence that social intelligence may increase with age (Bar-On, 2006) especially from adolescence to young adulthood (Hunt, 1928). Potentially, the inverse relationship could be due to individuals with social intelligence no longer needing to utilize any form of aggressive behavior as a means of conflict resolution.

It should be noted that the mean score from this sample (4.53) was comparable to other studies using the Tromsø Social Intelligence Scale (Silvera, Martinussen, and Dahl,

2001) in adult samples. While some studies found slightly lower mean levels of social intelligence (3.9, 4.35, 3.54; Fedakova and Jelenova, 2004; Zautra, Zautra, Gallardo, and Velasco, 2015), others found slightly higher levels (4.74, 4.94, 4.82; Delic, Novak, Kovacic, Avsec, 2011; Silvera, Martinussen, and Dahl, 2001). Sacco and colleagues (2016) found levels similar to the current sample (4.59, 4.61). Moreover, the variability of scores in the present sample ($SD = .69$) was somewhat lower but still comparable to that of Sacco and colleagues ($SDs = .89-.90$). This suggests that our differing results are unlikely to be attributable to atypical levels of social intelligence in this sample.

The inverse relationship between social intelligence and psychopathic personality traits was consistent with previous research looking at this relationship in adults. There is some evidence that individuals high in psychopathic personality traits show limited affective theory of mind, a construct that is considered highly related to social intelligence (Shamay-Tsoory, Harari, Aharon-Peretz, & Levkovitz, 2010). Similarly, Ermer and Kiehl (2010) found that individuals high in psychopathic personality traits showed reduced reasoning abilities regarding social contract rules, which could be due to impairments in social intelligence. Additionally, Sacco et al. (2016) found an inverse relationship between social intelligence and some psychopathic personality traits among college students.

Despite the unexpected direction of the relationship between social intelligence and peer relational aggression, psychopathic personality traits strengthened the relationship between social intelligence and relational aggression such that as psychopathic personality traits increased, the (inverse) relationship grew stronger. Similar to the positive relationship between relational aggression and high social intelligence, it is

unlikely that low social intelligence alone would be sufficient to lead one to engage in relational aggressive behaviors. While it was originally expected that psychopathic personality traits would serve as a motivating factor for individuals high in social intelligence to engage in relational aggression, it appears that psychopathic personality traits may have served as a motivating factor for individuals low in social intelligence.

It is not surprising that the presence of psychopathic personality traits would be relevant in the relationship between social intelligence and relational aggression.

Previous studies have found that psychopathic personality traits predicted peer relational aggression (Schmeelk et al., 2008; Czar et al., 2011). Confirming this, the results from this study indicated a positive correlation between psychopathic personality traits and peer relational aggression. Scores on the Interpersonal Manipulation and Antisocial Behavior subscales predicted peer relational aggression. The Interpersonal Manipulation subscale measures the degree to which an individual sees oneself as manipulative or tricky, the degree to which one feels guilt for engaging in manipulative behaviors, as well as the degree to which one is impressed by the manipulative behaviors of others (Williams, Nathanson, Paulhus, 2003). Thus, an individual skilled at manipulation would likely engage in relationally aggressive behaviors more easily while also avoiding feelings of guilt. Additionally, the Antisocial Behavior subscale measures deviant behaviors (e.g., stealing, cheating) as well as aggressive behaviors (e.g., physical aggression, sexual aggression; Williams, Nathanson, and Paulhus, 2003). Despite measuring physical and sexual aggression specifically, previous research has linked antisocial behaviors and to relational aggression as well (Werner and Crick, 1999).

Additionally, it is likely that an individual prone to engaging in deviant behaviors would have little reservation engaging in relationally aggressive behaviors.

Limitations and Future Directions

This study includes several limitations that should be considered. First, the sample consisted entirely of students at a Southeastern, mid-sized university, and there is evidence that regional differences may play a role in the presence of relational aggression among college students (Czar, 2012). Therefore, the present findings may not be an accurate representation of college students in general. Additionally, the sample consisted of primarily women (67.5%) and may not be representative of young adults in general. All data were collected using self-report measures, which may limit participants' willingness to disclose potentially negative information such as indicators of psychopathic personality traits or relationally aggressive behaviors. Despite this, Björkqvist and colleagues (1992) and Green, Richardson, and Lago (1996) suggest the use of self-report over peer ratings when measuring RA in young adult populations. Additionally, like emotional intelligence, the accuracy of self-report social intelligence may be contingent on the individual's level of SI (Brackett, Rivers, Shiffman, Lerner & Salovey, 2006). That is, an individual low in SI may lack the insight to accurately estimate their own social competencies.

Given the sparse literature on social intelligence and relational aggression among emerging adults and adults, further research is needed to better understand how this relationship may change from childhood and early adolescence into early adulthood. A good first step would involve attempting to replicate these results in another sample of college students to make sure they were not anomalous. Additionally, it might be helpful

to assess both self-reported and peer-rated social intelligence with an emerging adult sample to improve our understanding of the relationship between relational aggression and social intelligence from a developmental perspective by making research on these variables more easily comparable across age groups. Additionally, more research on the developmental theory of aggression in adults is needed to further understand changes in SI from adolescence into emerging adulthood and how those changes impact conflict resolution styles. Finally, research is needed on the relationship between self-report measures of social intelligence and peer-estimates of social intelligence to determine if there are significant discrepancies between how an individual perceives their own social competencies and how others perceive that individual's social competencies.

Additionally, as mentioned above, Vasil'ová and Baumgartner (2005) found that the TSIS had no relationship or a negative relationship with behavioral components of social intelligence. Given that peer-estimates of social intelligence likely rely on observable indicators of social intelligence, peer-estimates of social intelligence and self-reported social intelligence could be measuring distinct constructs.

In summary, the present study revealed an inverse relationship between peer relational aggression and social intelligence in a college student sample, which is inconsistent with previous studies using child and early adolescent samples and peer-estimated vs. self-report measures of these constructs. These findings could indicate a shift in this relationship when individuals transition into adulthood. As predicted, the relationship between peer relational aggression and social intelligence was strengthened by the presence of psychopathic personality traits. This seems consistent with the

possibility that psychopathic traits facilitate relational aggression among students low in social intelligence.

APPENDIX A Study Questionnaires

Thank you for agreeing to participate in this study. The success of this research depends on the quality of the data you provide. Please be aware that quality assurance checks are used in this study to make sure that participants are reading each question carefully and providing meaningful responses. **Participants who do not pass these checks will NOT receive credit for completing the study.**

To make sure you receive credit, please make sure that you take the time to read each question before answering it.

For this study, we are trying to collect responses from a wide variety of participants to ensure a representative sample. This requires us to limit the number of participants in certain groups (e.g., age, gender). Please answer the following questions about yourself so we can determine whether you are eligible to participate in this study.

If you are not eligible, you will be redirected to the Department of Psychology's Psychology Research Participation System (SONA) to sign up for a different study.

Participant Demographic Questionnaire

The following questions will be used to gather information about participants in this study.

Please answer the questions accordingly.

Age (in years): _____

What sex were you assigned at birth on your original birth certificate?

____ Male

____ Female

What is your current gender identity?

____ Male

____ Female

____ Transgender

____ Something else, please specify _____

Race/Ethnicity:

____ African American/Black

____ Caucasian/White

____ Hispanic/Latino

____ Native Hawaiian/Pacific Islander

American Indian/Alaska Native
 Asian
 Other (specify)

College Status:

Freshman
 Sophomore
 Junior
 Senior

Cumulative GPA: _____ (please use the traditional numerical format; 2.67, 3.00)

Are you a member of a sorority or fraternity?

Yes
 No

Do you live on campus or off campus?

On campus
 Off campus

Which of the following best describes where you live while attending school?

Dorm
 Greek house
 Apartment – on campus
 Apartment – off campus
 House – off campus
 With parent(s)

Which of the following best describes your sexual orientation?

Heterosexual or straight
 Gay
 Lesbian
 Bisexual
 Other (specify)
 Questioning or unsure

Are you currently in a romantic relationship?

Yes
 No

If yes:

Which of the following best describes your current romantic relationship?

Woman & Man
 Man & Man
 Woman & Woman

___ Other (specify)
How long has this relationship lasted (in months)? _____

Which of the following best describes this relationship?

- ___ We are dating
- ___ We live together
- ___ We are engaged
- ___ We live together and we are engaged
- ___ We are married

If no:

Have you been in a romantic relationship within the last year?

- ___ Yes
- ___ No

If yes:

Which of the following best describes this relationship?

- ___ Woman & Man
- ___ Man & Man
- ___ Woman & Woman
- ___ Other (specify)

How long did this relationship last (in months)? _____

Which of the following best describes this relationship?

- ___ We were dating
- ___ We lived together
- ___ We were engaged
- ___ We lived together and were engaged
- ___ We were married

APPENDIX B Consent Form

PROJECT INFORMATION

Project Title: Psychopathic Traits as a Moderator of the Relationship Between Social Intelligence and Relational Aggression
Principle Investigator: Savannah Merold
Email: savannah.merold@usm.edu
College: Education and Psychology
Department: Psychology

RESEARCH DESCRIPTION

- 1. Purpose:** The purpose of this study is to examine relationships between aspects of your personality and social behavior.
- 2. Description of Study:** Participants will be asked to complete online questionnaires about various aspects of their personality and social behavior. The study is completely online and will take no more than 30 minutes to complete. Participants who complete the study will receive 0.5 research credits. Quality assurance checks will be used to make sure that participants are reading each question carefully and answering thoughtfully. Participants who do not pass these checks will NOT receive credit for completing the study.
- 3. Benefits:** Participants who complete the study and pass all quality assurance checks will earn 0.5 research credits; those who do not complete the study or do not pass all quality assurance checks will not receive research credit. Participants will receive no other direct benefits; however, the results of this study will enable researchers to better understand the role of personality in social behavior, contributing to the general knowledge in the field.
- 4. Risks:** There are no foreseeable risks associated with participating in this study. If you feel that participation has resulted in emotional distress, please stop and notify the researcher (Savannah Merold; savannah.merold@usm.edu). If you should continue to be troubled by participation in this study, please contact the research supervisor, Dr. Eric Dahlen (Eric.Dahlen@usm.edu). Alternatively, you may contact one of several local agencies, such as:

Student Counseling Services

601.266.4829

Pine Belt Mental Healthcare Resources

601.544.4641

Community Counseling and Assessment Clinic
601.266.4601

5. **Confidentiality:** The online questionnaires are intended to be anonymous, and the information you provide will be kept strictly confidential. Any potentially identifying information will not be retained with your responses.
6. **Alternative Procedures:** Students who do not wish to participate in this study may sign up for another study instead or talk with their instructor(s) about non-research options.
7. **Participant's Assurance:** This project has been reviewed by the Institutional Review Board, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research participant should be directed to the Chair of the IRB at 601-266-5997. Participation in this project is completely voluntary, and participants may withdraw from this study at any time without penalty, prejudice, or loss of benefits.

Any questions about the research should be directed to the Principal Investigator using the contact information provided in Project Information Section above.

Consent is hereby given to participate in this research project. All procedures and/or investigations to be followed and their purpose, including any experimental procedures, were explained to me. Information was given about all benefits, risks, inconveniences, or discomforts that might be expected.

The opportunity to ask questions regarding the research and procedures was given. Participation in the project is completely voluntary, and participants may withdraw at any time without penalty, prejudice, or loss of benefits. All personal information is strictly confidential, and no names will be disclosed. Any new information that develops during the project will be provided if that information may affect the willingness to continue participation in the project.

Questions concerning the research, at any time during or after the project, should be directed to the Principal Investigator with the contact information provided above. This project and this consent form have been reviewed by the Institutional Review Board, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research participant should be directed to the Chair of the Institutional Review Board, The University of Southern Mississippi, 118 College Drive #5147, Hattiesburg, MS 39406-0001, (601) 266-5997.

APPENDIX C IRB Approval Letter



INSTITUTIONAL REVIEW BOARD

118 College Drive #5147 | Hattiesburg, MS 39406-0001

Phone: 601.266.5997 | Fax: 601.266.4377 | www.usm.edu/research/institutional.review.board

NOTICE OF COMMITTEE ACTION

The project has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
- The risks to subjects are reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the "Adverse Effect Report Form".
- If approved, the maximum period of approval is limited to twelve months.
Projects that exceed this period must [submit an application](#) for renewal or continuation.

PROTOCOL NUMBER: 1710171704

PROJECT TITLE: Psychopathic Traits, Social Intelligence, and Social Behavior PROJECT

TYPE: Master's Thesis

RESEARCHER(S): Savannah Merold

COLLEGE/DIVISION: College of Education and Psychology

DEPARTMENT: Psychology

FUNDING AGENCY/SPONSOR: N/A

IRB COMMITTEE ACTION: Expedited Review Approval

PERIOD OF APPROVAL: 10/18/2017 to 10/17/2018

Lawrence A. Hosman,
Ph.D. Institutional
Review Board

REFERENCES

- Andreou, E. (2006). Social preference, perceived popularity and social intelligence. *School Psychology International*, 27(3), 339-351.
[dx.doi.org/10.1177/0143034306067286](https://doi.org/10.1177/0143034306067286)
- Bailey, C., & Ostrov, J. (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.
doi.org/10.1007/s10964-007-9211-5
- Barnes, M., & Sternberg, R. (1989). Social intelligence and decoding of nonverbal cues. *Intelligence*, 13(3), 263-287. [doi.org/10.1016/0160-2896\(89\)90022-6](https://doi.org/10.1016/0160-2896(89)90022-6)
- Bar-On, R. (2006). The Bar-On model of emotional-social intelligence (ESI). *Psicothema*, 18(Suplemento), 13-25.
- Björkqvist, K., Österman, K., & Kaukiainen, A. (1992). The development of direct and indirect aggressive strategies in males and females. In K. Björkqvist & P. Niemelä (Eds.), *Of mice and women: Aspects of female aggression* (pp. 51-64). doi.org/10.1016/B978-0-12-102590-8.50010-6
- Björkqvist, K., Österman, K., & Kaukiainen, A. (2000). Social intelligence – empathy = aggression? *Aggression and Violent Behavior*, 5(2), 191-200.
[dx.doi.org/10.1016/S1359-1789\(98\)00029-9](https://doi.org/10.1016/S1359-1789(98)00029-9)
- Blair, J., Mitchell, D., & Blair, K. (2005). *The psychopath* (1st ed.). Malden, MA: Blackwell Pub.
- Brackett, M., Rivers, S., Shiffman, S., Lerner, N., & Salovey, P. (2006). Relating emotional abilities to social functioning: A comparison of self-report and

- performance measures of emotional intelligence. *Journal of Personality and Social Psychology*, 91(4), 780-795. doi: 10.1037/0022-3514.91.4.780
- Bruning, J. L., & Kintz, B. L. (1997). *Computational handbook of statistics (4th ed.)*. New York: Longman
- Burton, L. A., Hafetz, J., & Henninger, D. (2007). Gender differences in relational and physical aggression. *Social Behavior and Personality*, 35, 41-50.
doi.org/10.2224/sbp.2007.35.1.41
- Cale, E., & Lilienfeld, S. (2006). Psychopathy factors and risk for aggressive behavior: A test of the "threatened egotism" hypothesis. *Law and Human Behavior*, 30(1), 51-74. doi.org/10.1007/s10979-006-9004-5
- Clark, C., Dahlen, E., & Nicholson, B. (2015). The role of parenting in relational aggression and prosocial behavior among emerging adults. *Journal of Aggression, Maltreatment & Trauma*, 24(2), 185-202. doi.org/10.1080/10926771.2015.1002653
- Crick, N. (1996). The role of overt aggression, relational aggression, and prosocial behavior in the prediction of children's future social adjustment. *Child Development*, 67(5), 2317. doi.org/10.2307/1131625
- Crick, N., & Grotpeter, J. (1995). Relational aggression, gender, and social-psychological adjustment. *Child Development*, 66(3), 710. doi.org/10.2307/1131945
- Czar, K. A. (2012). Regional differences in relational aggression: The role of culture. Available from Dissertations & Theses @ University of Southern Mississippi; ProQuest Dissertations & Theses Full Text. Retrieved from <http://search.proquest.com/docview/1113327842?accountid=13946>.

- Czar, K., Dahlen, E., Bullock, E., & Nicholson, B. (2011). Psychopathic personality traits in relational aggression among young adults. *Aggressive Behavior, 37*(2), 207-214. doi.org/10.1002/ab.20381
- Dahlen, E., Czar, K., Prather, E., & Dyess, C. (2013). Relational aggression and victimization in college students. *Journal of College Student Development, 54*(2), 140-154. doi.org/10.1353/csd.2013.0021
- Delič, L., Novak, P., Kavačič, J. and Avsec, A. (2011). Self-reported Emotional and Social Intelligence and Empathy as Distinctive Predictors of Narcissism. *Psychological Topics, 20*(3), pp.477-488.
- Ellis, W., Crooks, C., & Wolfe, D. (2009). Relational aggression in peer and dating relationships: Links to psychological and behavioral adjustment. *Social Development, 18*(2), 253-269. doi.org/10.1111/j.1467-9507.2008.00468.x
- Ermer, E., & Kiehl, K. (2010). Psychopaths Are Impaired in Social Exchange and Precautionary Reasoning. *Psychological Science, 21*(10), 1399-1405. doi: 10.1177/0956797610384148
- Fedakova, D. and Jelenova, I. (2004). Correlates of social and emotional intelligence. *Studia psychologica, 46*(4), 291-295.
- Fite, P., Stoppelbein, L., Greening, L., & Preddy, T. (2011). Associations between relational aggression, depression, and suicidal ideation in a child psychiatric inpatient sample. *Child Psychiatry & Human Development, 42*(6), 666-678. doi.org/10.1007/s10578-011-0243-4

- Grieve, R., & Mahar, D. (2013). Can social intelligence be measured? Psychometric properties of the Tromsø Social Intelligence Scale – English Version. *The Irish Journal of Psychology, 34*(1), 1-12. doi: 10.1080/03033910.2012.737758
- Hare, R., & McPherson, L. (1984). Violent and aggressive behavior by criminal psychopaths. *International Journal of Law and Psychiatry, 7*(1), 35-50. doi.org/10.1016/0160-2527(84)90005-0
- Hare, R., & Neumann, C. (2005). Structural models of psychopathy. *Current Psychiatry Reports, 7*(1), 57-64. doi.org/10.1007/s11920-005-0026-3
- Hunt, T. (1928). The measurement of social intelligence. *Journal of Applied Psychology, 12*(3), 317-334. doi: 10.1037/h0075832
- Kaukiainen, A., Björkqvist, K., Lagerspetz, K., Sterman, K., Salmivalli, C., Rothberg, S., & Ahlbom, A. (1999). The relationships between social intelligence, empathy, and three types of aggression. *Aggressive Behavior, 25*(2), 81-89. doi.org/10.1002/(sici)1098-2337(1999)25:2<81::aid-ab1>3.0.co;2-m
- Latest Crime Statistics Released. (2016). *Federal Bureau of Investigation*. Retrieved 29 December 2016, from <https://www.fbi.gov/news/stories/latest-crime-statistics-released>
- Lento-Zwolinski, J. (2007). College students' self-report of psychosocial factors in reactive forms of relational and physical aggression. *Journal of Social and Personal Relationships, 24*(3), 407-421. doi.org/10.1177/0265407507077229
- Linder, J., Crick, N., & Collins, W. (2002). Relational aggression and victimization in young adults' romantic relationships: Associations with perceptions of parent,

- peer, and romantic relationship quality. *Social Development*, *11*(1), 69-86.
doi.org/10.1111/1467-9507.00187
- Lynam, D., & Derefinko, K. (2006). Psychopathy and Personality. In C. Patrick, *Handbook of Psychopathy* (1st ed., pp. 133-155). New York: The Guilford Press.
- Mahmut, M. K., Menictas, C., Stevenson, R. J., & Homewood, J. (2011). Validating the factor structure of the Self-Report Psychopathy Scale in a community sample. *Psychological Assessment*, *23*(3), 670. Doi.org/10.1037/a0023090
- Miller, P., & Eisenberg, N. (1988). The relation of empathy to aggressive and externalizing/antisocial behavior. *Psychological Bulletin*, *103*(3), 324-344.
dx.doi.org/10.1037//0033-2909.103.3.324
- Miller, J., & Lynam, D. (2003). Psychopathy and the five-factor model of personality: A replication and extension. *Journal of Personality Assessment*, *81*(2), 168-178.
doi.org/10.1207/s15327752jpa8102_08
- Morales, J. R., Ruh, J., & Werner, N. (2002). *Adult aggression/victimization measure*. Unpublished manuscript.
- Murray-Close, D., Ostrov, J., Nelson, D., Crick, N., & Coccaro, E. (2009). Proactive, reactive, and romantic relational aggression in adulthood: Measurement, predictive validity, gender differences, and association with Intermittent Explosive Disorder. *Journal of Psychiatric Research*, *44*(6), 393-404.
doi.org/10.1016/j.jpsychires.2009.09.005
- Paulhus, D. L., Neumann, C. S., & Hare, R. D. (2009). Manual for the self-report psychopathy scale. *Toronto: Multi-health systems*.

- Preddy, T., & Fite, P. (2012). Differential associations between relational and overt aggression and children's psychosocial adjustment. *Journal of Psychopathology and Behavioral Assessment*, 34(2), 182-190. doi.org/10.1007/s10862-011-9274-1
- Sacco, D., Merold, S., Lui, J., Lustgraaf, C., & Barry, C. (2016). Social and emotional intelligence moderate the relationship between psychopathy traits and social perception. *Personality and Individual Differences*, 95, 95-104. doi.org/10.1016/j.paid.2016.02.031
- Schmeelk, K. M., Sylvers, P., & Lilienfeld, S. O. (2008). Trait correlates of relational aggression in a nonclinical sample: DSM-IV personality disorders and psychopathy. *Journal of personality disorders*, 22(3), 269-283. doi.org/10.1521/pedi.2008.22.3.269
- Shamay-Tsoory, S., Harari, H., Aharon-Peretz, J., & Levkovitz, Y. (2010). The role of the orbitofrontal cortex in affective theory of mind deficits in criminal offenders with psychopathic tendencies. *Cortex*, 46(5), 668-677. doi: 10.1016/j.cortex.2009.04.008
- Silvera, D., Martinussen, M., & Dahl, T. (2001). The Tromso Social Intelligence Scale, a self-report measure of social intelligence. *Scandinavian Journal of Psychology*, 42(4), 313-319. doi.org/10.1111/1467-9450.00242
- Skeem, J., Polaschek, D., Patrick, C., & Lilienfeld, S. (2011). Psychopathic personality: Bridging the gap between scientific evidence and public policy. *Psychological Science in the Public Interest*, 12(3), 95-162. doi.org/10.1177/152910061142670

- Spieker, S., Campbell, S., Vandergrift, N., Pierce, K., Cauffman, E., Susman, E., & Roisman, G. (2011). Relational aggression in middle childhood: Predictors and adolescent outcomes. *Social Development, 21*(2), 354-375.
doi.org/10.1111/j.1467-9507.2011.00631.x
- Thorndike, E. L. (1920). Intelligence and its uses. *Harper's magazine, 140*, 227-235.
- Vachon, D., Lynam, D., & Johnson, J. (2013). The (non)relation between empathy and aggression: Surprising results from a meta-analysis. *Psychological Bulletin, 140*(3), 751-773. dx.doi.org/10.1037/a003523
- Vasil'ová, K., & Baumgartner, F. (2018). Why is Social Intelligence Difficult to Measure | Intelligence | Intelligence Quotient. Retrieved from
<https://www.scribd.com/document/124654263/Why-is-Social-Intelligence-Difficult-to-Measure>
- Verona, E., Sadeh, N., Case, S., Reed, A., & Bhattacharjee, A. (2008). Self-reported use of different forms of aggression in late adolescence and emerging adulthood. *Assessment, 15*(4), 493-510. doi.org/10.1177/1073191108318250
- Visser, B. A., Ashton, M. C., & Pozzebon, J. A. (2012). Is low anxiety part of the psychopathy construct? *Journal of Personality, 80*(3), 725-747. doi.org/10.1111/j.1467-6494.2011.00745.x
- Werner, N., & Crick, N. (1999). Relational aggression and social-psychological adjustment in a college sample. *Journal of Abnormal Psychology, 108*(4), 615-623. doi.org/10.1037//0021-843x.108.4.615
- Williams, K., Nathanson, C., & Paulhus, D. (2003, August). *Structure and Validity of the Self-Report Psychopathy Scale-III in Normal Populations*. Poster presented at the

111th annual convention of the American Psychological Association, Toronto,
Canada

Zautra, E., Zautra, A., Gallardo, C. and Velasco, L. (2015). Can We Learn to Treat One
Another Better? A Test of a Social Intelligence Curriculum. *PLoS ONE*, 10(6),
p.e0128638.