Vulnerable Narcissism, Difficulties in Emotion Regulation, and Relational Aggression in College Students

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Vulnerable Narcissism, Difficulties in Emotion Regulation, and Relational Aggression in College Students

by

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Abstract

Relational aggression is a form of aggressive behavior involving the intentional infliction of harm to the victim’s sense of belonging, reputation, or social relationships. Although most of the research on relational aggression has focused on children and early adolescents, there is evidence that it can be a serious problem for college students as well. Several predictors of relational aggression have been identified, but the mechanisms through which many of them operate is not sufficiently clear. The present study examined the relationship of vulnerable narcissism and difficulties in emotion regulation to relational aggression in a college student sample. It was expected that vulnerable narcissism would be positively related to relational aggression and that difficulties in emotion regulation would mediate this relationship. Undergraduate volunteers ($N = 260$) at the University of Southern Mississippi ranging in age from 18 to 25 completed self-report measures of these variables as part of a larger online survey. Vulnerable narcissism was positively related to relational aggression, and difficulties in emotion regulation mediated this relationship. That is, participants higher in vulnerable narcissism reported more difficulties in emotion regulation, and difficulties in emotion regulation positively predicted relational aggression. These findings have implications for the study of relational aggression among college students.

Key Terms: vulnerable narcissism, relational aggression, emotion regulation
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Chapter 1: Introduction

Relational aggression refers to a form of aggressive behavior in which the aggressor intentionally harms or threatens to harm the victim by manipulating his or her relationships, sense of belonging, and/or overall social status (Archer & Coyne, 2005; Knight, Dahlen, Bullock-Yowell, & Madson, 2018; Linder, Crick, and Collins, 2002). Some examples of relationally aggressive behavior include social exclusion, starting malicious rumors or spreading gossip, and publicly humiliating the victim to adversely affect his or her reputation or self-concept (Archer & Coyne, 2005). A number of negative correlates of relational aggression and victimization have been identified. For example, relational aggression is associated with many indicators of decreased psychological adjustment, such as loneliness and social isolation (Goldstein, 2011; Storch, Werner, & Storch, 2003; Werner & Crick, 1999).

Much of the research on relational aggression initially focused on children and early adolescents; however, a number of studies now support the continuing relevance of relational aggression among older adolescents and emerging adults (Loudin, Loukas, & Robinson, 2003; Storch, Bagner, Geffken, & Baumeister, 2004; Sullivan, Helms, Kliewer, & Goodman, 2010). Given that college is an important developmental period and environment for developing independence and that relationships (both platonic and romantic) become increasingly important, it makes sense that relational aggression would be relevant to the social, emotional, and academic well-being of college students (Mulder & Clark, 2002).
This study contributes to the small but rapidly growing literature on relational aggression among college students by exploring the role of vulnerable narcissism and difficulties in emotion regulation. Although narcissism has been linked to relational aggression (i.e., individuals higher in narcissistic personality traits report engaging in more relationally aggressive behavior), much of this research has focused on grandiose narcissism (Golmaryami & Barry, 2009; Kerig & Stellwagen, 2010; Ojanen, Findley, & Fuller, 2012). As a result, far less is known about the potential role of vulnerable narcissism in relational aggression. In addition to expecting that vulnerable narcissism will be meaningfully related to relational aggression, we believe that difficulties in emotion regulation will help to explain this relationship. That is, we expect that difficulties in emotion regulation will mediate the predicted relationship between vulnerable narcissism and relational aggression among college students. Relational aggression, vulnerable narcissism, and difficulties in emotion regulation are addressed in detail below.

**Chapter 2: Literature Review**

**Relational Aggression**

Relational aggression is distinct from overt aggression in that it is non-physical, usually more covert and indirect, and involves the use of social tactics to inflict harm on a victim’s relationships, social status or reputation, and feelings of acceptance or belonging. Less direct examples of relational aggression would include spreading malicious gossip about someone behind his or her back or discouraging one’s friends from associating with the victim. More direct examples of relational aggression would
include giving someone the “silent treatment” or intentionally discussing social plans in front of someone without inviting them.

Consistent evidence that relational aggression is more common among girls than boys led some to suggest that women would be more likely to revert to relational aggression while men would be more overtly aggressive (Crick, Casas, & Ku, n.d.; Österman et al., 1998). Most of the literature on college students and emerging adults has not found significant gender differences in relational aggression, and some have found that men reported experiencing more relational victimization than did women (Dahlen, Czar, Prather, & Dyess, 2013; Storch, Bagner, Geffken, & Baumeister, 2004). Although there is some evidence that the correlates of relational aggression may vary to some degree by gender, there appear to be more similarities than differences. For example, relational aggression is positively associated with depression, the misuse of alcohol, and loneliness for both women and men (Dahlen, Czar, Prather, & Dyess, 2013; Storch, Bagner, Geffken, & Baumeister, 2004).

It is not surprising that relational aggression is relevant among college students. When one considers the developmental challenges faced by traditionally-aged college students and the challenges of the college environment, it is easy to understand why relational aggression can be so disruptive in a college setting. For many college students, the transition to college involves new levels of independence and autonomy. They are learning about themselves and how they function in a new environment and around a variety of new people. With the heightened stress of the academic environment and new friendships and romantic relationships, college students may be more susceptible to relational aggression and the emotional toll it can exert (e.g., social isolation, depression).
By studying relational aggression in college students, researchers can better understand methods of how to prevent it and reduce the impact of its effects on students’ psychosocial well-being and academic performance. Thus, it is in our interest to better understand why some students are more relationally aggressive than others and various pathways through which predictors of relational aggression may operate.

**Vulnerable Narcissism**

Many people assume that the social media-filled world we live in today is full of narcissists (Leung, 2013). A quick search through Twitter, Facebook, or other social media platforms would likely reveal a plethora of people posting multiple updates about their day-to-day lives or expecting sympathy from others for their problems. Several studies have investigated how social media sites, like Facebook and Twitter, are increasingly used by narcissists (Andreassen, Pallesen, & Griffiths, 2017; Davenport, Bergman, Bergman, & Fearrington, 2014; Ong et al., 2011). However, the people we perceive as being narcissistic only reflect a portion of what narcissism really is.

Narcissistic personality traits can be broken down into grandiose and vulnerable subtypes. Grandiose narcissism, the type most people think of when they think of narcissism, includes qualities such as being unempathetic, having an inflated sense of self-worth, entitlement, and showing an arrogant or condescending attitude to those around them (Gore & Widiger, 2016). These traits have been associated with difficulties in emotion regulation and a variety of aggressive behaviors (Baumeister, Bushman, & Campbell, 2000; Lau & Marsee, 2013; Smolewska & Dion, 2005). Individuals high in grandiose narcissism are more likely to engage in aggressive and other forms of manipulative behavior (Schoenleber, Sadeh, & Verona, 2011). Thus, there is considerable
evidence supporting an association of grandiose narcissism with increased aggression and reduced emotion regulation.

Vulnerable narcissism is similar to grandiose narcissism in some respects (e.g., individuals high in vulnerable narcissism may also display an arrogant demeanor at times); however, there are some important differences. Primarily, the two types differ in how they present themselves to others and in their daily, overall self-esteem levels (Rohmann, Neumann, Herner, & Bierhoff, 2012). Vulnerable narcissists generally have lower self-esteem, which they try to combat by seeking approval from others (Dickinson & Pincus, 2003). Often coming across as quiet and nervous, these individuals live a life filled with anxiety and fear of not being liked or accepted by those around them (Dickinson & Pincus, 2003). Compared with grandiose narcissism, less is known about vulnerable narcissism. Some studies have shown that vulnerable narcissism is positively associated with the experience of negative emotions (Donnellan, Trzesniewski, Robins, Moffitt, & Caspi, 2005; Gore & Widiger, 2016). One study even found that those high in vulnerable narcissism had more problems with emotional regulation than people high in grandiose narcissism (Gore & Widiger, 2016). Consequently, it seems like vulnerable narcissists, because of their low self-confidence and other characteristics, may be more likely to use relational aggression as a tool to control their relationships.

Little attention has been given to the possible role of vulnerable narcissism in relational aggression; however, there is reason to suspect that it may be relevant. In their study of how aggressive behavior could be affected by social exclusion, Twenge, Baumeister, Tice, and Stucke (2001) administered a personality test to participants who were told that the test was assessing whether their traits would make them a desirable
contributor in a group project. After receiving their results, they were given the option to “shoot” a white noise machine at another person to get rid of any excess aggression they might have had due to the results. The study found that participants were more likely to use the white noise machine against another person if their results were neutral or less than favorable in a group project setting. Thus, the threat of social exclusion was associated with increased aggression. While this study did not directly assess vulnerable narcissism, persons high in vulnerable narcissism tend to be overly worried about being socially excluded (Okada, 2010). It seems reasonable to expect that the connection between social exclusion and aggression might be stronger for those who are more susceptible to concerns about social exclusion, such as those higher in vulnerable narcissism.

**Difficulties in Emotion Regulation**

It can be a common occurrence for individuals have days in which they struggle to control their emotions, whether it be due to stress or to some other environmental factor. However, persistent difficulties in emotion regulation have been associated with a number of mental health concerns and are often considered to be a factor that increases one’s vulnerability to a variety of mental disorders. Emotion regulation refers to the particular emotions that someone experiences and how they communicate and manage these emotions (Gross, 1998). Typically associated with negative emotions, emotion regulation also deals with controlling positive emotions. In a sense, emotion regulation involves one’s ability to manage one’s experience and expression of emotions in such a way that they conform to the demands of the situation. Thus, the expression of certain emotions that would be perfectly appropriate at a funeral might be less desirable in one’s
workplace. Effective emotion regulation often facilitates comfortable social interactions and is often considered an important indicator of mental health.

Emotion regulation is an important skill to learn and observe especially when dealing with young adults. Using social cues as a guide for emotion regulation teaches individuals more socially acceptable ways to behave in the world today. Difficulties in emotion regulation can disrupt the lives of individuals in a social aspect, stunting their ability to interact appropriately with those around them (Sharp et al., 2011). By studying emotion regulation more closely, individuals can learn skills to help them counteract this difficulty and work to improve their emotional health.

Difficulties with emotion regulation have been associated with several poor mental health outcomes, including eating disorders, depression, anxiety disorders, and borderline personality disorder (Berking & Wupperman, 2012; Gross, 1998). These are among the mental health problems that are becoming increasingly common for college-age students, with documented increases in both frequency and severity (Hunt & Eisenberg, 2010; Kitzrow, 2003). Thus, it is not surprising that we are hearing more about efforts to improve emotion regulation skills among college students. Learning more about the potential role of difficulties in emotion regulation in relational aggression could help to inform efforts to prevent it and develop effective interventions for relationally aggressive college students.

In the present study, we included difficulties in emotion regulation to determine how this variable could help to explain at least some of the expected relationship between vulnerable narcissism and relational aggression. Although vulnerable narcissism is likely to be positively related to relational aggression (i.e., students higher in vulnerable
narcissism report being more relationally aggressive), it would be helpful to better understand why this might be the case. We expect that difficulties in emotion regulation are an important part of the pathway through which vulnerable narcissism may lead to relational aggression. That is, students high in vulnerable narcissism are more likely to have difficulties regulating their emotions, and this can, in turn, make them more likely to be relationally aggressive. From looking at previous studies, it has been shown that narcissists tend to have difficulties with dealing with negative emotions, even more so when looking at vulnerable narcissists (Donnellan, Trzesniewski, Robins, Moffitt, & Caspi, 2005; Gore & Widiger, 2016). Other studies have revealed that individuals with lower emotion regulation are more likely to show problems with relational aggression (Bowie, 2010; Sullivan, Helms, Kliwer, & Goodman, 2010). Thus, we expect difficulties in emotion regulation to mediate the expected relationship between vulnerable narcissism and relational aggression.

The Present Study

Relational aggression is a relatively common form of aggressive behavior with clear evidence of adverse correlates among college students (Dahlen, Czar, Prather, & Dyess, 2013). The present study sought to increase our understanding of how personality traits predict relationally aggressive behaviors in a college student sample. We expected that vulnerable narcissism would be positively related to relational aggression (i.e., students higher in vulnerable narcissism would report more relational aggression). In addition, we expected that the relationship between vulnerable narcissism and relational aggression would be mediated by difficulties in emotion regulation. Specifically, we
expected that this relationship between vulnerable narcissism and relational aggression would be stronger for those students with greater difficulties in emotional regulation.

Chapter 3: Method

Participants

The sample on which all statistical analyses were completed consisted of 260 undergraduate students of traditional college age (18-25; \( M = 19.5 \)) enrolled at the University of Southern Mississippi who participated in a previous study focusing on vulnerable narcissism, difficulties in emotion regulation, self-injurious behavior, and self-criticism. That is, the present study utilized archival data which were collected as part of this previous study, but which included variables which had not previously been examined (e.g., relational aggression). The sample was predominately female (66.9%), with 32.3% identifying as male and 0.8% not specifying gender. Most participants identified themselves as White (62.7%) or Black (31.9%), with the remaining 5.4% identifying as a different race/ethnicity.

Procedure

Participants were recruited through the online research system used by the School of Psychology (i.e., Sona Systems, Ltd.) to participate in a larger study that included additional variables (e.g., self-injurious behavior, self-criticism, depression, anxiety, stress). Before beginning the study, potential participants were provided with information about the nature of the study, the inclusion requirement that they be between the ages of 18 and 25, and the use of quality assurance checks. Those who signed up for the study in Sona were directed to an online consent form that was presented through Qualtrics. This
consent form provided additional information about the study and further noted that participants who completed the study without passing the quality assurance checks would not receive credit for doing so. After providing informed consent, participants were presented with all questionnaires through Qualtrics. That is, the entire study was completed online. To reduce order effects, the study questionnaires were presented in random order.

Consistent with published recommendations on promoting data integrity when conducting online survey research (Huang, Curran, Keeney, Poposki, & DeShon, 2012; Meade & Craig, 2012), two types of quality assurance checks were used to identify participants who demonstrated evidence of insufficient effort responding (i.e., responding so quickly that they were unlikely to be reading the items or responding randomly). These included survey completion time and the use of two directed response items (e.g., “answer ‘strongly disagree’ to this item”) which were blended in to two of the longer questionnaires. Participants who answered either of these items incorrectly were routed out of the study without research credit, and their data was removed prior to analyses. Although total survey completion time was examined, it was not used to withhold research credit. Participants who completed the study and passed the quality assurance checks received 0.5 research credits. These procedures were approved by the University of Southern Mississippi’s IRB.

Instruments

Demographic Questionnaire. A short demographic questionnaire was included to gather general information about the participants like age, school classification, race, and gender.
Pathological Narcissism Inventory (PNI). The PNI is a 52-item self-report measure of pathological narcissism developed by Pincus, Ansell, Pimentel, Cain, Wright, & Levy (2009) that forms two higher-order factors: Narcissistic Vulnerability ($\alpha = .96$) and Narcissistic Grandiosity ($\alpha = .89$) (Wright, Lukowitsky, Pincus & Conroy, 2010). Item response options range from 0 ("not at all like me") to 5 ("very much like me"), and higher scores reflect higher levels of pathological narcissism for the individual. There are seven subscales that make up the PNI: Self-Sacrificing Self-Enhancement ($\alpha = .78$), Grandiose Fantasy ($\alpha = .89$), Exploitative Tendencies ($\alpha = .93$), Contingent Self-Esteem ($\alpha = .93$), Hiding to the Self ($\alpha = .79$), Devaluing ($\alpha = .86$), and Entitlement Rage ($\alpha = .87$) (Wright, Lukowitsky, Pincus & Conroy, 2010). Support for the convergent validity of the PNI comes from comparisons with other measures of narcissism and self-esteem (Pincus et al., 2009; Wright et al., 2010). For this study, the Narcissistic Vulnerability factor was used since the primary interest was a broad measure of vulnerable narcissism.

Self-Report of Aggression and Social Behavior Measure (SRASBM). The SRASBM is a 56-item self-report instrument developed by Morales and Crick (1998) that measures aggression and closely related constructs. The SRASBM assesses six domains: Exclusivity, Physical Aggression, Physical Victimization, Relational Aggression, Relational Victimization, and Prosocial Behavior. Each of these domains was determined to be reliable ($\alpha > .71$) and to be associated with other measures of aggression (Lento-Zwolinski, 2007). These domains can be further divided into Cross-Gender/Romantic, Proactive, and Reactive Aggression. All items are rated on a scale from 1 ("not at all true") to 7 ("very true") with higher scores indicating a higher likelihood that the
individual would participate in behavior. The 7-item Relational Aggression scale was the focus of this study to look at overall relational aggression.

Difficulties in Emotion Regulation Scale (DERS). The DERS is a 36-item self-report measure developed by Gratz and Roemer (2004) to assess the emotional dysregulation. The DERS includes six subscales: Lack of Emotional Clarity, Lack of Emotional Awareness, Limited Access to Emotion Regulation Strategies, Impulse Control Difficulties, Difficulty Engaging in Goal-Directed Behavior, and Nonacceptance of Emotional Responses. The participants answered the items on a scale ranging from 1 (“almost never”) to 5 (almost always”). The DERS reflected good internal consistency ($\alpha = .93$) and was correlated in the expected directions with similar measures of emotion regulation (Gratz & Roemer, 2004). The scores reflected difficulties in regulating emotion in that the higher the score, the higher the difficulty in emotion regulation. The total DERS score was used in this study as an overall index of difficulties in emotion regulation.

Chapter 4: Results

Data Screening

Following the completion of data collection, the electronic data were downloaded from Qualtrics, the online survey platform used to collect data for this project. These data were saved as an SPSS data file. All potentially identifying information was removed from this file, which was used for all analyses described in this project. Measures were scored using SPSS syntax based on the instructions published in the articles describing their development.
Prior to screening, the data file contained data from 352 respondents. The data from one respondent was removed because this respondent did not complete any of the study questionnaires. The data from nine additional respondents were removed because these respondents reported their age as being outside the 18-25 age range that was required for the study. Next, the quality assurance checks used to detect insufficient effort responding (e.g., answering questions without reading them carefully, responding too quickly) were examined. The data from 63 respondents were removed because these respondents failed either of the two directed response items used to detect insufficient effort responding, and the data from another 19 respondents who completed the study in less than half the median completion time were removed from the study. This resulted in the final sample of 260 traditionally-aged college student volunteers ($M = 19.5$ years-of-age) which was used for all analyses.

**Preliminary Analyses**

Alpha coefficients, means, standard deviations, and bivariate correlations among study variables are reported in Table 1. The alpha coefficients for all variables exceeded .85, indicating that the items on each measure of these variables held together to form unitary constructs (i.e., evidence of good internal consistency reliability). As expected, narcissistic vulnerability was positively related to relational aggression, indicating that participants higher in vulnerable narcissism reported being more likely to engage in relationally aggressive behaviors. Vulnerable narcissism was also positively related to difficulties in emotion regulation as measured by the DERS total score. Participants higher in vulnerable narcissism indicated having greater difficulty regulating their emotions. Finally, difficulties in emotion regulation were positively related to relational
aggression, suggesting that participants who indicated emotion regulation difficulties reported perpetrating more relational aggression.

Main Analysis

To test the hypothesis that difficulties in emotion regulation would mediate the relationship between vulnerable narcissism and relational aggression, an ordinary least squares (OLS) multiple regression was run using version 3.3 of the PROCESS macro for SPSS (Hayes, 2018). As suggested by Field (2013), scores on vulnerable narcissism and difficulties in emotion regulation were centered to reduce multicollinearity, and bootstrapping (i.e., 10,000 bias corrected bootstrap samples) was used to improve generalizability (Russell & Dean, 2000). Simple mediation was tested (i.e., model 4 in PROCESS) in which narcissistic vulnerability served as the predictor (X), difficulties in emotion regulation as the mediator (M), and relational aggression as the outcome (Y).

Results indicated that narcissistic vulnerability predicted difficulties with emotion regulation, $B = 17.61$, $SE = 1.09$, $p < .0001$ [15.46, 19.76], and that difficulties in emotion regulation predicted relational aggression, $B = .07$, $SE = .02$, $p < .001$ [.03, 12]. These results support the predicted mediation. Vulnerable narcissism was no longer a significant predictor of relational aggression after controlling for difficulties in emotion regulation, $B = .94$, $SE = .55$, $p = .09$, consistent with mediation (see Figure 1).

Approximately 15% of the variance in relational aggression was accounted for by the predictors ($R^2 = .15$). The indirect effect was tested using 10,000 bootstrap samples. These results indicated the indirect coefficient was significant, $B = 1.29$, $SE = .52$, 95% CI = [.35, 2.38]. Narcissistic vulnerability was associated with relational aggression scores
that were approximately 1.29 points higher as mediated by difficulties in emotion regulation.

Chapter 5: Discussion

It is becoming increasingly clear that relational aggression has several adverse correlates among college students, and rapid progress is being made in the work to identify the variables that predict relational aggression. Unfortunately, relatively little is known about the mechanisms through which many of the predictors may operate. The current study used archival data to determine whether vulnerable narcissism would be positively related to relational aggression and whether difficulties in emotion regulation would mediate this relationship. As predicted, vulnerable narcissism was positively related to relational aggression. Students who scored higher on vulnerable narcissism reported more relational aggression. Moreover, difficulties in emotion regulation mediated the relationship between vulnerable narcissism and relational aggression. In fact, vulnerable narcissism was not a significant predictor of relational aggression when difficulties in emotion regulations were considered. Thus, vulnerable narcissism predicted difficulties in emotion regulation, and difficulties in emotion regulation predicted relational aggression.

Although the present study was limited in many ways that prevented us from carrying out a comprehensive test of mediation (e.g., all measures were self-report and administered at one point in time, the design did not utilize the sort of experimental controls that would allow for causal inferences), these findings are consistent with mediation. The relationship between vulnerable narcissism, difficulties in emotion regulation, and relational aggression may be expressed as sort of a domino effect.
Vulnerable narcissism may lead to difficulties in emotion regulation, which may then lead to relational aggression. These findings are consistent with previous work showing that individuals high on vulnerable narcissism tend to have difficulties regulating their emotions (Baumeister, Bushman, & Campbell, 2000; Lau & Marsee, 2013; Smolewska & Dion, 2005) and that individuals who find it difficult to regulate their emotions tend to show more relational aggression (Bowie, 2010; Sullivan, Helms, Kliewer, & Goodman, 2010).

Vulnerable narcissism has received far less attention in the literature on relational aggression than has grandiose narcissism; however, the present findings suggest that its inclusion may be helpful in advancing our understanding of relational aggression. If individuals high on vulnerable narcissism are more relationally aggressive and if this is the case because of increased difficulties in emotion regulation, then improving emotion regulation skills may be a useful component of preventing relational aggression or developing treatments for relationally aggressive college students. Perhaps some of the interventions currently being used to improve emotion regulation (e.g., distress tolerance, mindfulness) could have utility in the context of relational aggression. Rather than trying to eliminate negative feelings, students could be helped to deal with negative emotions in a more adaptive manner that creates a balance between the good and bad emotions (Gratz & Roemer, 2003). Gaining this control could be especially beneficial for students with vulnerable narcissism since they tend to struggle with controlling their negative emotions (Donnellan, Trzesniewski, Robins, Moffitt, & Caspi, 2005; Gore & Widiger, 2016). From a preventative standpoint, improved emotion regulation could be widely implemented since it is likely to be beneficial for many college students, regardless of narcissism or
relational aggression. Since their lives are filled with negative emotions such as stress and anxiety, learning to balance out the negative with the positive would greatly could help to improve their overall well-being (Brougham, Zail, Mendoza, & Miller, 2009).

**Limitations**

As noted above, the primary limitation of the present study was that the cross-sectional and correlational design did not permit a comprehensive test of mediation. By assessing all variables at one point in time, it is not possible to establish the chronological order of variables required for mediation. In other words, it is not possible to know whether vulnerable narcissism preceded or followed difficulties in emotion regulation and/or relational aggression. While the present findings are consistent with a model in which vulnerable narcissism leads to difficulties in emotion regulation which then leads to relational aggression, several other possibilities cannot be excluded. Related to this, the sort of experimental controls that would be necessary to infer that one variable caused another were absent here. That means that it is not possible to conclude that vulnerable narcissism causes people to experience difficulties in emotion regulation or that difficulties in emotion regulation cause people to be relationally aggressive.

Another limitation involves the degree to which results can be generalized. The sample utilized in the current study was taken from a single medium-sized public university in the South. The degree to which the students sampled for this study may represent a larger college population is unknown; however, it is possible that there are some important differences between the current sample and the larger college population. For example, there might be regional differences in the prevalence and/or meaning of relational aggression. Another limitation is that all the measures used in this study were
self-report and face valid. This raises questions about the degree to which participants responded honestly, as well as how much insight or self-awareness they might have had. Although most studies of relational aggression among emerging adults and adults utilize self-report measures, it would have been helpful to have sources of information from other sources.

**Directions for Future Research**

One direction for future research would be to take a larger sample size from a variety of college campuses around the country. This would allow for a more accurate representation of how the factors interact with one another and whether there might be regional differences. A larger and more diverse sample would also permit comparisons by gender, ethnicity, race, and other areas to determine the degree to which the present findings generalized to groups that might not have been adequately represented in the present study.

Perhaps the most important direction for future research would be to conduct more of a longitudinal study and attempt to control for potential confounds through a different design. By doing so, it would be possible to conduct a more thorough test of mediation. Assessing the variables over time could help to determine which are antecedents and which are consequences (e.g., does vulnerable narcissism lead to difficulties in emotion regulation or do difficulties in emotion regulation lead to vulnerable narcissism?). Incorporating experimental controls might help to eliminate competing explanations that could not be ruled-out in the present study.

It would also be interesting to develop and evaluate programs designed to prevent and/or treat relational aggression among college students based on improved emotion
regulation. It seems likely that some of the methods used to improve emotion regulation in clinical groups would be beneficial. Testing such programs would likely require some combination of longitudinal and treatment outcome studies. For example, one approach might involve developing and testing a prevention approach to see whether students who received it differed on relational aggression from those who did not at a later point in time. One could also conduct controlled treatment study where relationally aggressive students were randomly assigned to emotion regulation training or a no-treatment control and compared pre- and post-treatment.

**Conclusions**

The current study contributed to the literature on relational aggression in college students by showing that vulnerable narcissism is positively related to relational aggression and that difficulties in emotion regulation mediated this relationship. These findings are consistent with the possibility that the relationship between vulnerable narcissism and relational aggression is due to difficulties in emotion regulation. If confirmed by future research employing designs better suited for testing mediation, these findings may help to inform the prevention and treatment of relational aggression among college students.
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Table 1

*Alpha Coefficients, Means, Standard Deviations, and Bivariate Correlations Among Study Variables*

<table>
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<th>Variable</th>
<th>$\alpha$</th>
<th>$M$</th>
<th>$SD$</th>
<th>1</th>
<th>2</th>
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<td>6.60</td>
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<td>-</td>
</tr>
</tbody>
</table>

*Note.* All coefficients are significant at $p < .01.$
Figure 1. Difficulties in emotion regulation mediates the relationship between vulnerable narcissism and relational aggression. * $p < .01$

$\text{Vulnerable Narcissism} \rightarrow \text{Difficulties in Emotion Regulation}$

$a = 17.61^*; SE = 1.09$

$\text{Difficulties in Emotion Regulation} \rightarrow \text{Relational Aggression}$

$b = .07^*; SE = .02$

$c' = .94; SE = .55$

$c = 1.29^*; SE = .52$
Appendix

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: 18082801
PROJECT TITLE: The Factors that Influence the Relationship Between Vulnerable Narcissism and Relational Aggression
PROJECT TYPE: Honor's Thesis Project
RESEARCHER(S): Shelby Caffarel
COLLEGE/DIVISION: College of Education and Human Sciences
DEPARTMENT: Psychology
FUNDING AGENCY/SPONSOR: N/A
IRB COMMITTEE ACTION: Exempt Review Approval
PERIOD OF APPROVAL: 09/07/2018 to 09/07/2019

Edward L. Goshorn, Ph.D.
Institutional Review Board