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# Romantic Relational Aggression Among College Students: A Moderated Mediation Study of Attachment Style, Romantic Jealousy, Mate Value, and Relationship Investment

Skylar Hicks

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ROMANTIC RELATIONAL AGGRESSION AMONG COLLEGE STUDENTS: A  
MODERATED MEDIATION STUDY OF ATTACHMENT STYLE, ROMANTIC  
JEALOUSY, MATE VALUE, AND RELATIONSHIP INVESTMENT

by

Skylar Simone Hicks

A Dissertation  
Submitted to the Graduate School,  
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and the School of Psychology  
at The University of Southern Mississippi  
in Partial Fulfillment of the Requirements  
for the Degree of Doctor of Philosophy

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## ABSTRACT

Most of the research on intimate partner violence has concentrated on overt physical and verbal aggression, and less is known about relational aggression in the framework of romantic relationships. Relational aggression is more prevalent in college students' romantic relationships compared to physical aggression and may be a risk factor for intimate partner violence. Additionally, a number of adverse correlates have been associated with romantic relational aggression, suggesting that it is worthy of study independent of its association with intimate partner violence. The present study explored the relationships among adult attachment, romantic jealousy, mate value, relationship investment, and romantic relational aggression in a college student sample ( $N = 366$ ). Participants completed self-report questionnaires assessing these variables online, and a moderated mediation model was tested using Hayes' (2018) PROCESS macro for SPSS. As predicted, romantic jealousy mediated the relationship between attachment styles (both anxious and avoidant) and romantic relational aggression. Higher levels of mate value were predicted to weaken the relationship between attachment style (anxious and avoidant), romantic jealousy, and romantic relational aggression. Mate value did not moderate these mediated relationships as expected. In fact, the present findings showed that the effect of anxious attachment on romantic relational aggression through romantic jealousy was stronger for individuals with higher levels of mate value, and the effect of avoidant attachment on romantic relational aggression through romantic jealousy was stronger for individuals with average levels of mate value. Contrary to what was predicted, relationship investment did not moderate the mediated relationships at any level.

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## DEDICATION

This document is dedicated to the students at The University of Southern Mississippi who participated in or contributed to this project and my family and friends who have always been a steadfast source of love, support, and encouragement.

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## CHAPTER I - INTRODUCTION

Intimate partner violence (IPV) is a global health concern that impacts people in every culture, class, region, and country, having massive emotional, physical, and psychological impacts on individuals, families, communities, and the greater society (Desmarais, Reeves, Nicholls, Telford, & Fiebert, 2012; Duvvury, Callan, Carney, & Raghavendra, 2013; Eng, Li, Mulsow, & Fischer, 2010). IPV has been defined as “physical violence, sexual violence, stalking and psychological aggression (including coercive acts) by a current or former intimate partner (i.e., spouse, boyfriend/girlfriend, dating partner, or ongoing sexual partner)” (Breiding, Basile, Smith, Black, & Mahendra, 2015, p.11). Most of the research on IPV has focused on overt physical and verbal aggression, and this has meant that less is known about relational aggression in the context of romantic relationships (Babcock, Miller & Siard, 2003; Joe, Baser, Neighbors, Caldwell & Jackson, 2009; Hamberger, & Guse, 2002). With growing evidence that romantic relational aggression (RRA) has adverse correlates among college students (e.g., Linder, Crick, & Collins, 2002; Prather, Dahlen, Nicholson, & Bullock-Yowell, 2012; Werner & Crick, 1999) and may be a risk factor for IPV (Wright & Benson, 2010), it is important to improve our understanding of relationally aggressive behaviors which occur in the context of intimate partnerships.

In this study, we examined the role of adult attachment styles, romantic jealousy, mate value, and relationship investment in romantic relational aggression among college students. By improving our understanding of romantic relational aggression, variables that may predict it, and the mechanisms through which such variables may operate, we

hoped to inform efforts to reduce its occurrence and learn more about how to assist college students affected by it.

### Romantic Relational Aggression

Romantic relational aggression (RRA) refers to a variety of relationally aggressive behaviors that occur between romantic partners, which are nonphysical, malicious, and intentional. It includes behaviors such as flirting with another person to incite jealousy in a partner, withholding physical affection, threatening to end the relationship if the partner does not fulfil one's wishes, or infidelity (Linder, Crick, & Collins, 2002; Prather, Dahlen, Nicholson, & Bullock-Yowell, 2012). Researchers have found that relational aggression can be even more detrimental to a romantic relationship and the partners involved than physical aggression (Paquette & Underwood, 1999; Weiss, 2006). Additionally, RRA is more prevalent in college students' romantic relationships than physical aggression, so examining such a dynamic in this population makes sense given that it has been associated with later overt aggression and reductions in overall functioning and well-being (Straus, 2008; White, Smith, Koss, & Figueredo, 2000). Further RRA has been associated with lower levels of relationship quality, anger, violence, problem behaviors, psychosocial maladjustment, impulsivity, hostile attribution biases, loneliness, emotional sensitivity to relational incitements, and history of abuse (Murray-Close, Ostrov, Nelson, Crick, & Coccaro, 2010; Prather et. al., 2012).

### Adult Attachment

Experiences in child-caregiver interactions are adopted early in life and shape the child's expectations of the degree of trust, intimacy, safety, and independence to be found in close relationships, which have been described as attachment style (Bowlby, 1969;

Fonagy, Steele, Steele, & Moran, 1991). Ainsworth et al. (1978) identified three distinct attachment styles: secure, anxious-ambivalent, and avoidant. Individuals with secure attachment styles see their caregivers as dependable sources of relief and security. They describe being well-liked, observing others as mostly accepting and well-meaning, and understanding that love is something that can be fluid across the progression of a relationship. Anxious-ambivalent attachment develops when caregivers are undependably accessible and not reactive (Cassidy & Berlin, 1994). Anxious individuals can often seem clingy, intrusive, angry, and controlling when an attachment figure is considered unavailable. Additionally, they display low self-confidence and have an inclination to base their self-worth on the support of others. Avoidant attachment develops from many different interactions and experiences with caregivers who are inaccessible and unresponsive, which typically leads to these individuals to view others as unreliable (Griffin & Bartholomew, 1994; Hazan & Shaver, 1987). Consequently, they tend to be self-reliant and emotionally disconnect themselves from others (Hazan & Shaver, 1987).

Childhood attachment to one's primary caregiver is thought to be relatively stable, setting the tone for adult attachment in a variety of relationship contexts (Ainsworth et al., 1978; Bowlby, 198; Fonagy, Steele, Steele, & Moran, 1991; Griffin & Bartholomew, 1994; Hazan & Shaver, 1987; Kuncze & Shaver, 1994). Attachment styles in adulthood align with the same patterns seen during childhood (e.g., secure attachment suggests that an individual will have reliable relationships that are due to such factors such as psychological and physical protection; Bretherton, 1992; Crowell & Feldman, 1988). Thus, securely attached adults tend to be more confident in their attempts to gain closeness to others, without excess worry or anxiety regarding intimacy. Their romantic

relationships are healthier and more trusting (Brennan & Shaver, 1995; Dewitte, 2012), and they tend to be more independent, more comfortable with intimacy, better equipped to deal with negative affect, and better adjusted (Mattanah, Hancock, & Brand, 2004). In contrast, adults with anxious-ambivalent attachment styles often seem clingy, intrusive, and controlling when they experience dissatisfaction or neglect in a romantic relationship. They utilize negative strategies to gain attention and may view themselves as inferior to others (Ainsworth et al., 1978; Kuncze & Shaver, 1994). Adults with higher levels of avoidant attachment have a tendency to report indirect communication, utilizing disabling strategies to cope with relationship intimidations, avoidance of disagreements, defensive distancing, and withdrawal from conflicts. Further, they are also more likely to participate in strategies to deactivate their negative emotions (Mikulincer & Shaver, 2007).

#### Adult Attachment, Romantic Jealousy, and Romantic Relational Aggression

Romantic jealousy is a multilayered response that is activated by perceiving a threat. According to Pfeiffer and Wong (1989), romantic jealousy involves a complex emotional reaction that is not a solitary emotion, but a mixture of undesirable emotions triggered by a condition that is supposed by the individual as threatening to their cherished romantic relationship. Although romantic jealousy can be separated into cognitive, emotional, and behavioral reactions, we focused on cognitive jealousy because it is most relevant to romantic relational aggression and most closely reflects the core experience of jealousy. Individuals who experience romantic jealousy-inducing situations engage in thoughts regarding whether or not there is a possibility for a competing

relationship to occur, whether a rival relationship actually does exist, and the degree of threat that a rival pose (Pfeiffer and Wong, 1989).

Assumed that attachment styles are connected with different internal working models of the self and others, it makes sense that they are relevant to the manner in which individuals experience romantic jealousy (Mikulincer & Shaver, 2012; Simpson & Rholes, 1994). When individuals feel stress or other negative emotions, these mental models affect and help guide their behavior (Mikulincer & Shaver 2012; Simpson & Rholes, 1994). Insecure attachment seems to create negative expectations for one's partner, absence of trust, and increased jealousy (Bowlby, 1997; White & Mullen, 1989). Anxiously attached individuals reported having the highest levels of romantic jealousy, followed by those with avoidant attachment, and securely- attached individuals reporting the least jealousy (Buunk, 1997). Individuals with avoidant attachment styles have a tendency to be considered emotionally detached, self-reliant, have a fear of intimacy, high stages of control, and low levels of faith and satisfaction (Hazan & Shaver, 1987; Mikuliner & Florian, 1999; Sharpsteen, 1995), and this may help explain why they are less susceptible to romantic jealousy but more likely to aim responsibility and anger toward the real or imagined rival in their partners' life (Sharpsteen, 1995).

Consistent with previous research showing that insecure attachment can lead to feelings of jealousy, anger, poor coping strategies, and a variety of negative interpersonal behaviors (Harris & Christenfeld, 1996; Hazan & Shaver, 1987; Mikuliner & Florian, 1999; Sharpsteen, 1995) and that insecure attachment is associated with increased romantic jealousy, we expected that insecure attachment and romantic jealousy would predict romantic relational aggression. Supporting this assumption that jealousy and

romantic relational aggression are associated is a study based on Wright's (2017) finding that jealousy mediated the relationship between anxious attachment and IPV, we also expected that romantic jealousy would mediate the relationships of anxious and avoidant attachment to romantic relational aggression.

### Mate Value and Relationship Investment

Although we expect adult attachment to be linked to both jealousy and romantic relational aggression, jealousy to be related to romantic relational aggression, and jealousy to mediate the relationships between anxious and avoidant attachment and romantic relational aggression, we recognize that not everyone with an insecure attachment style is excessively jealous or relationally aggressive. Similarly, not everyone who is jealous will engage in relationally aggressive behaviors in their relationships to cope with their jealousy. Gaining further understanding into how individuals perceive themselves in a romantic relationship and how invested they are in their romantic relationships may offer insight into the interplay of attachment style, romantic jealousy, and romantic relational aggression. We investigated mate value and relationship investment as potential moderators of the predicted relationships of adult attachment and romantic jealousy to romantic relational aggression. Admittedly, minute research has been conducted with either of these variables in the context of romantic relational aggression. In part, this is likely because both mate value and relationship investment tend to be conceptualized from differing psychology frameworks (i.e., evolutionary and social) that have not typically been concerned with relational aggression or attachment styles.



Mate value, coined by Fisher (2008), is “the value of an individual to the opposite sex as a potential mate” (p. 157). Although mate value has been examined primarily from an evolutionary standpoint, it is not exclusively linked to reproductive success and can include aspects regarding the mate value of self as only a potential sexual partner (Buss & Schmitt, 1993; Kenrick, Groth, Trost, & Sadalla, 1993; Gangestad & Simpson, 2000). Keeping this in mind, we investigated how participants perceive their own mate value (i.e., “I think I am an ‘8’”). Focusing on perceived mate value as assessed with the Mate Value Inventory (Kirsner et al., 2003) provided insight into participants’ self-esteem and view of their worthiness relative to their partner.

It is easy to understand why perceived mate value is likely relevant to romantic relationships. Because individuals are more likely to feel self-assured in the faithfulness and endurance of their relationships when they perceive themselves as being equally as desirable as their partners, individuals having low perceived mate value may perceive more problems in their relationships (Buston & Emlen, 2003; Walster, Aronson, Abrahams, & Rottman, 1966). Some of these problems may lead partners to feel as if they are not worthy of their partner or that their partner is more likely to be unfaithful. Conversely, when individuals have secure attachment styles and high mate value, fewer instances should be hypothetically threatening, and the experience of jealousy and aggression should be lower (Afifi & Reichert, 1996; Knobloch, Miller, Bond, & Mannone, 2007). While considering how such individuals may react (i.e., relational aggression) to preserve such relationships, we predicted that individuals with higher mate value may weaken the relationship between attachment, jealousy, and romantic relational

aggression. In contrast, we predicted lower mate value would strengthen this relationship, which would lead to higher levels of jealousy and romantic relational aggression.

The relationship investment model, grounded in interdependence theory (Thibaut & Kelley, 1959), summarizes a framework for conceptualizing relationship commitment (i.e., how much a person feels connected to his or her partner and wishes to persist in the relationship). People are more likely to continue a relationship in which they have invested significant resources, as a means of avoiding loss of such resources and utilizing positive or negative behaviors (e.g., relational aggression) to avoid this loss (Lund, 1985; Rusbult, 1983; Rusbult et al., 1991; Simpson, 1987). Additionally, research suggests that secure attachment is associated with increased commitment and satisfaction due to these individuals being more prone to noticing the rewards, maintaining their investments, minimizing perceived alternatives, and accepting costs (Levy & Davis, 1988; Pistole, 1989; Simpson, 1990), while individuals with insecure attachment styles may have a need for their partner to be closer or more distant, which could increase relationship dissatisfaction, leading to romantic jealousy and romantic relational aggression (Baldwin, Fehr, Keedian, Seidel, & Thomson, 1993; Collins & Read, 1990; Mikulincer & Horesh, 1999; Rowe & Carnelley, 2003). Additionally, insecurely attached individuals may fail to attend to rewards and become overly sensitive to the costs (Baldwin, Fehr, Keedian, Seidel, & Thomson, 1993; Collins & Read, 1990; Mikulincer & Horesh, 1999; Rowe & Carnelley, 2003). Therefore, we expected that higher levels of relationship investment would strengthen the relationship between attachment, romantic jealousy, and romantic relational aggression due to the fear of losing resources (i.e., the successful relationship) and utilizing positive or negative methods to avoid this loss (Baldwin, et. al., 1993;

Collins & Read, 1990; Lund, 1985; Mikulincer & Horesh, 1999; Rowe & Carnelley, 2003; Rusbult, 1983; Rusbult et al., 1991; Simpson, 1987).

### The Present Study

Relatively few studies have examined romantic relational aggression among college students. Addressing this gap in the literature is important due to the potential benefits from better understanding how romantic relationships function in college student populations and some of the potentially harmful aspects of aggression in these relationships (Breiding et. al, 2015; World Health Organization, 2013). Individuals with insecure attachment styles are more prone to distress, anxiety, feelings of vulnerability, and romantic jealousy (Bowlby, 1997; Dozier & Kobak, 1992; White & Mullen, 1989). Thus, we expected that anxious and avoidant attachment to a romantic partner would be positively related to romantic jealousy and to romantic relational aggression.

Additionally, we expected that romantic jealousy would be positively related to romantic relational aggression and that romantic jealousy would partially mediate the relationship between anxious and avoidant attachment styles and romantic relational aggression (Mikulincer & Shaver, 2003; Wright, 2017). Finally, we expected that perceived mate value and relationship investment would moderate the relationships between attachment style and romantic relational aggression and between romantic jealousy and romantic relational aggression.

Study hypotheses were as follows:

*Hypothesis 1:* Romantic jealousy will partially mediate the relationship between anxious attachment style and romantic relational aggression, such that an anxious

attachment style will be associated with romantic jealousy which in turn will be associated with romantic relational aggression.

*Hypothesis 2:* Romantic jealousy will partially mediate the relationship between avoidant attachment style and romantic relational aggression, such that an avoidant attachment style will be associated with romantic jealousy which in turn will be associated with romantic relational aggression.

*Hypothesis 3:* The mediated relationship between attachment style (anxious and avoidant), romantic jealousy, and romantic relational aggression will be moderated by mate value, such that the relationship will be weaker at higher levels of mate value.

*Hypothesis 4:* The mediated relationship between attachment style (anxious and avoidant), romantic jealousy, and romantic relational aggression will be moderated by relationship investment, such that the relationship will be stronger at higher levels of relationship investment.

## CHAPTER II – METHODS

### Participants and Procedures

The present study consisted of 366 college student participants from The University of Southern Mississippi aged 18 through 25. Participants were in some form of heterosexual romantic intimate relationship (i.e., married, boyfriends or girlfriends, or dating partners) currently or within the last 6 months. While the restriction to heterosexual students was not ideal, it is necessary because all the items on the Mate Value Inventory reference “the opposite sex.” Participants learned about the study through the web-based system used by the School of Psychology, Sona Systems Ltd, where they saw a brief description of the study and the eligibility requirements. They were provided with a URL directing them to a consent form (see Appendix A), which was hosted through Qualtrics. Participants provided consent to participate then completed the study measures online through Qualtrics, beginning with the demographic questionnaire followed by the rest of the measures in random order. Participants received 0.5 research credits in exchange for their participation consistent with school policy. The procedure was approved by the university’s Institutional Review Board (see Appendix B).

### Instruments

#### *Demographic Questionnaire*

A demographic questionnaire was included to assess participant gender, age, race, and information regarding their romantic relationships.

*Experiences in Close Relationships-Relationship Structures scale (ECR-RS)*

The Experiences in Close Relationships-Relationship Structures (ECR-RS; Fraley, Heffernan, Vicary, & Brumbaugh, 2011) is a set of 9-item self-report questionnaires intended to measure two fundamental attachment dimensions (i.e., avoidance; items 1–6 and anxiety; items 7–9) with respect to the any of the following domains: mother, father, romantic partner, and best friend, with the romantic partner scale producing a Cronbach’s alpha of .80. For the present study, the romantic partner questionnaire is our primary interest; however, the measures of the other domains were administered used to inform other projects. Respondents rated items on a Likert scale ranging from 1 (“strongly disagree”) to 7 (“strongly agree”) to produce separate scores for avoidant attachment to one’s partner and anxious attachment to one’s partner. Higher scores reflected greater levels of insecure attachment. Convergent and discriminant validity of the ECR-RS revealed that the ECR-RS measures of romantic attachment are associated with basic aspects of relationship functioning (e.g., satisfaction, commitment, investment) and the subscales of the ECR-RS are just as reliable as those based on longer inventories (e.g., the ECR-R).

*The Multidimensional Jealousy Scale- MJS*

The MJS was created by Pfeiffer and Wong (1989). It consists of 24 items, each with a 7-point Likert-scale response format, and yields three 8-item subscales assessing cognitive, emotional, and behavioral jealousy. Participants were asked to respond with their current partner in mind. For the cognitive subscale, participants indicated how often certain thoughts about their partner occurred from 1 (“never”) to 7 (“all the time”). The emotional subscale asked participants to consider their emotional reactions to various

situations, such as “\_\_ hugs and kisses someone of the opposite sex.” The response format ranged from 1 (“very pleased”) to 7 (“very upset”). For the behavioral subscale, participants were asked to rate how often they engaged in particular behaviors such as “I question \_\_ about his or her telephone calls” from 1 (“never”) to 7 (“all the time”). Items for each subscale were summed (mean alpha = .91). The MJS has been shown to be a reliable measure of normal to pathological jealousy, showing concurrent validity with widely used measures of jealousy such as the White’s Relationship Jealousy Scale, as well as discriminant validity (Pfeiffer and Wong, 1989). Evidence of significant correlations with other jealousy scales support convergent validity as well as the facets of jealousy are differentially related to love, liking and happiness, demonstrating discriminant validity of the measure. Although the present study administered the entire scale, the primary subscale of interest was the cognitive subscale (Cronbach’s alpha = .92).

#### *Self-Report of Aggression and Social Behavior Measure- SRASBM*

The SRASBM is a 56-item measure of aggression that was created by Morales and Crick (1998). It has been used mainly on college students to measure peer and romantic relational aggression. For the purpose of this study, our primary interest was the romantic relational aggression subscale, consisting of 5 questions that assess romantic relational aggression, although the entire scale will be administered. In a study conducted by Linder, Crick, and Collins (2002) the subscales concerning romantic relational aggression and victimization had acceptable Cronbach’s alphas (i.e., Cronbach’s alpha = .83), as well as construct validity with other reliable constructs (Murray-Close et al., 2010). It measures the frequency with which the respondent tries to harm their partner

through behaviors such as shunning, purposeful ignoring, and making them jealous (e.g., “I have cheated on my romantic partner because I was angry at him/her”). Respondents rated each item on the degree to which they are descriptive of them from 1 (“not at all true”) to 7 (“very true”), and higher scores on each subscale reflect higher levels of the construct assessed (Morales and Crick, 1998).

#### *Mate Value Inventory -MVI*

The 22-item Mate Value Inventory was developed by Kirsner et al. (2003) to assesses participants’ self-perceived mate value utilizing 17 different traits. Respondents rated the degree to which a number of relationship qualities (e.g., “emotionally stable,” “loyal,” “attractive face”) are characteristic of them in comparison to their peers on a 7-point scale ranging from -3 (“extremely low on this characteristic”) to +3 (“extremely high on this characteristic”). Mate value is the summed score of these items, yielding one total score. The Cronbach’s alpha is .86 (Kirsner, Figueredo, & Jacobs, 2003). In a study conducted on adults assessing perceived mate value, the measure showed convergent validity with previously demonstrated components of mate value (Fisher, et. al., 2008).

#### *Investment Model Scale- IMS*

The 37-item (22 global items and 15 facet items) IMS was developed by Rusbult, Martz, and Agnew (1998) to measure 4 constructs: commitment level and 3 bases of dependence: satisfaction level, quality of alternatives, and investment size. Commitment level is assessed through seven global items (e.g., “I want our relationship to last for a very long time”) with reliabilities of .91 to .95. Satisfaction level is measured with 10 items (e.g., “My partner fulfills my needs for intimacy”) with reliabilities ranging from .79 to .93. Quality of alternatives is measured by 10 items (e.g., “My needs for intimacy



[sharing personal thoughts, secrets, etc.] could be fulfilled in alternative relationships”) with reliabilities of .88 to .93). Similarly, investment size is measured with 10 items (e.g., “I have invested a great deal of time in our relationship”) with reliabilities of .73 to .84). Additionally, the measure exhibited moderate associations with other variables reflecting superior couple functioning, and the four constructs were moderately associated with the subscale of the Relationship Closeness Inventory. Further, the predictive validity of the Investment Model Scale outperformed other measures regarding relationship predictive validity (i.e., the Dyadic Adjustment Scale) For the present study, the Commitment subscale was the primary interest, although the entire measure was administered for exploratory reasons. Because the 3 levels of dependence make up commitment, the psychological construct that influences everyday behavior in relationships, a higher score on this subscale represents overall couple adjustment and functioning. This single commitment subscale outperformed the Dyadic Adjustment Scale, which is considered a widely and well-known measure of quality of couple functioning (Rusbult et al., 1998).

#### Data Analytic Approach

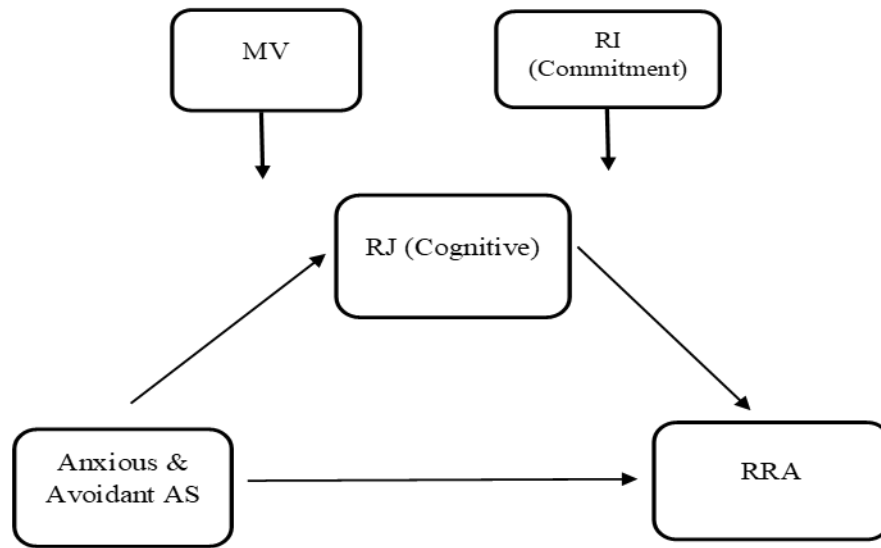
Prior to running analyses, the initial data file contained at least partial responses from 747 undergraduate students who were at least 18 years of age. The data from 6 participants were removed because more than 75% of their data was missing. Next, the inclusion criteria were examined (i.e., age and relationship status). Eighty-six cases were removed for not being in some form of heterosexual romantic relationship (i.e., married, boyfriends or girlfriends, or dating partners) currently or within the last 6 months, and 18 cases were removed for falling outside the 18-25 age range specified. Finally, the quality assurance checks were examined (i.e., directed response items and survey completion

time). Two hundred and nineteen participants were removed for failing one or more of the directed response items, and 52 participants were removed due to completing the study too quickly or too slowly due to possible inattentiveness or careless, random responding. Thus, data from 366 participants were included in the analyses.

Bootstrap confidence intervals were generated for conditional indirect effects based on 5,000 bootstrap samples, as this method has been suggested for examining moderated mediation models (Hayes, 2013; Preacher & Hayes, 2008). Descriptive statistics and Cronbach's alphas were calculated for all measures as well as bivariate correlations to assess relationship among all measures.

#### *Primary Analyses*

This study examined a moderated mediation model utilizing PROCESS, version 3, (models 4 & 59) via SPSS which allows for the analysis of many types of models such as a moderated mediation with multiple moderators using one dependent variable, as well as it permits the direct and indirect effects of an independent variable on a dependent variable through one or more mediators to be moderated (Hayes, 2018). Further, this model explored the mediating role of romantic jealousy on the relationship between attachment styles, anxious and avoidant, and romantic relational aggression. The moderating role of mate value and relationship investment was also explored. Specifically, it investigated the role mate value and relationship investment play in the relationship between anxious and avoidant attachment styles and romantic jealousy; romantic jealousy and relational aggression; and anxious and avoidant attachment styles and romantic relational aggression. See Figure 1 for predicted moderated mediation model.



*Figure 1.* Predicted moderated mediation model.

Predicted moderated mediation model with mate value and relationship investment as the moderators and anxious and avoidant attachment styles. Note: AS: Attachment style. RJ: Romantic jealousy; RRA: Romantic relational aggression; MV: Mate value; RI: Relationship investment.

## CHAPTER III - RESULTS

Means, standard deviations, and intercorrelations among all measures used in the current study are provided in Table 1. The average age of the sample was 19 years of age (SD = 1.42). The sample consisted of 55.7% freshman, (19.9% sophomores, 13.9% juniors, and 10.4% seniors. Regarding gender, 40.7% identified as male and 58.7% as female. Additionally, the sample consisted of 65.8% White (28.1% African Americans, 3% Hispanic/Latino, .3% Native Hawaiian/Pacific Islander, .3% American Indian/Alaskan Native, 1.6% Asian, and .8% Other participants.

As seen in Table 1, anxious and avoidant attachment, jealousy, and mate value were positively related to romantic relational aggression. Relationship investment was unrelated to romantic relational aggression. Attachment styles (anxious and avoidant) were positively related to jealousy. Additionally, jealousy was negatively correlated with relationship investment but unrelated to mate value. Lastly, anxious and avoidant attachment styles were not correlated with mate value but both attachment styles were negatively correlated with relationship investment.

Table 1 *Means, Standard Deviations, and Intercorrelations of Measures*

<b>Measure</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b><math>\alpha</math></b>
<b>1. RAR</b>	---						.79
<b>2. ECR-Avoid</b>	.18*	---					.88
<b>3. ECR-Anx</b>	.27*	.39*	---				.89
<b>4. MJS-Cog</b>	.28*	.25*	.41*	---			.93
<b>5. MVI</b>	.18*	-.08	.02	.02	---		.86
<b>6. IMS-Com</b>	-.11	-.55*	-.27*	-.23*	-.03	---	.90
<b><i>M</i></b>	10.66	2.14	3.03	14.68	97.86	50.58	
<b><i>SD</i></b>	5.63	1.11	1.81	7.34	16.92	12.31	

Note: RAR = Relational Aggression-Romantic; ECR-Avoid = Experiences in Close Relationships-Avoidance; ECR-Anx =

Experiences in Close Relationships-Anxious; MJS-Cog = Multidimensional Jealousy Scale-Cognitive; MVI = Mate Value Inventory;

IMS-Com = Investment Model Scale-Commitment; \*Correlation is significant at the .01 level.

## Moderated Mediation Analyses

The first hypothesis examined the mediating role of romantic jealousy on the relationship between anxious attachment and romantic relational aggression. It was predicted that anxious attachment would be associated with romantic jealousy which would then be associated with romantic relational aggression. The mediation model was conducted (see Table 2), and paths are shown in Figure 3. The model indicates that the *a* path of anxious attachment (X) to romantic jealousy (M) was significant,  $\beta = .40$ ,  $t(364) = 8.44$ ,  $p < .001$ . That is, anxious attachment was associated with romantic jealousy. Further, the *b* path from romantic jealousy (M) to romantic relational aggression (Y) was significant,  $\beta = .20$ ,  $t(363) = 3.73$ ,  $p < .001$ , indicating jealousy is associated with RRA. This model also indicated that the *c* path of anxious attachment (X) to romantic relational aggression (Y), without romantic jealousy (M) in the equation, was significant,  $\beta = .27$ ,  $t(364) = 5.44$ ,  $p < .001$ . Additionally, in path *c'* anxious attachment (X) was significantly related to romantic relational aggression (Y), when controlling for romantic jealousy (M),  $\beta = .19$ ,  $t(363) = 3.55$ ,  $p < .001$ . The indirect effect was .25, 95% CI [.099, .438]. Since the confidence interval does not include zero, along with the relationship remaining significant in the *c'* pathway, the hypothesis that romantic jealousy would partially mediate the effects of anxious attachment on romantic relational aggression was supported. Romantic jealousy partially mediated anxious attachment on romantic relational aggression by 29%. See Figure 2 for visual diagram of the mediated relationship.

Table 2 *Mediation Model Results; Anxious Attachment Style*

Paths	$\beta$	SE	t	p
a	0.40	.19	8.44	.0000
b	0.20	.04	3.73	.0002
c'	0.19	.17	3.55	.0004
c	0.27	.16	5.44	.0000
Indirect Effects	Effect	BootSE	BootLLCI	BootULCI
X on Y	0.25	.085	.099	.438

Note: Bootstrap CI's: do not cross zero which implies a difference between c and c'.

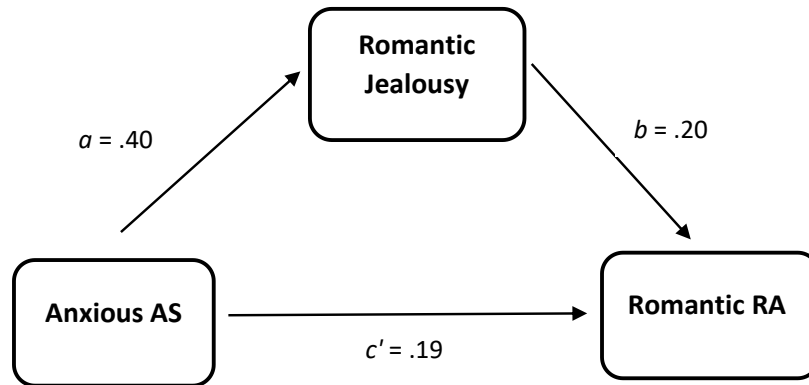


Figure 2: Observed sequential mediation model.

Observed sequential mediation model with anxious attachment style relationship provided.

In examining the second hypothesis, whether romantic jealousy mediated the relationship between avoidant attachment style and romantic relational aggression, the mediation was significant (see Table 3). It was predicted that avoidant attachment would be associated with romantic jealousy which would then be associated with romantic relational aggression. The model indicates that the *a* path of avoidant attachment (X) to romantic jealousy (M) was significant,  $\beta = .25$ ,  $t(364) = 4.88$ ,  $p < .001$ . Avoidant attachment was associated with romantic jealousy. Further, the *b* path from romantic

jealousy (M) to romantic relational aggression (Y) was significant,  $\beta = .25$ ,  $t(363) = 4.84$ ,  $p < .001$ , indicating that jealousy was associated with romantic relational aggression..

Additionally, in path  $c'$  we see that avoidant attachment (X) was significantly related to romantic relational aggression (Y), when controlling for romantic jealousy (M),  $\beta = .12$ ,  $t(363) = 2.33$ ,  $p < .05$ . This model also indicated that the  $c$  path of avoidant attachment (X) to romantic relational aggression (Y), without romantic jealousy (M) in the equation, was significant,  $\beta = .18$ ,  $t(364) = 3.56$ ,  $p = < .001$ . The indirect effect was .31, 95% CI [.144, .517]. Since the confidence interval does not include zero, along with the relationship remaining significant in the  $c'$  pathway, the hypothesis that romantic jealousy would partially mediate the effects of avoidant attachment on romantic relational aggression was supported. Romantic jealousy partially mediated avoidant attachment on romantic relational aggression by 34%. See Figure 3 for visual diagram of the mediated relationship.

Table 3 *Mediation Model Results; Avoidant Attachment Style*

Paths	$\beta$	SE	t	p
a	0.25	.34	4.88	.0000
b	0.25	.04	4.84	.0000
$c'$	0.12	.26	2.33	.0203
c	0.18	.26	3.54	.0005
Indirect Effects	Effect	BootSE	BootLLCI	BootULCI
X on Y	0.31	.097	.144	.517

Note: Bootstrap CI's: do not cross zero which implies a difference between c and  $c'$ .

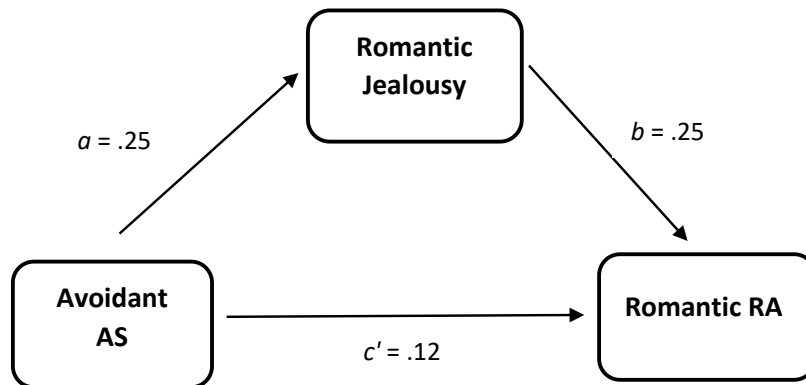


Figure 3: Observed sequential mediation model.

Observed sequential mediation model with avoidant attachment style relationship provided.

#### Moderating Role of Mate Value

Hypothesis 3 predicted that mate value would moderate the relationship of the mediation model, such that the relationship would be less likely to occur among those higher in mate value than those lower in mate value. Specifically, the model tested whether mate value moderated the mediation relationship of anxious attachment, romantic jealousy, and romantic relational aggression. Mate value moderated the relationship between anxious attachment and romantic jealousy (path *a*),  $b = -.02$ ,  $t(362) = -2.02$ ,  $p < .05$ , but did not moderate the relationship between romantic jealousy and romantic relational aggression (path *b*). Contrary to the prediction expecting a weaker relationship at higher levels of mate value, analysis of the moderated mediation showed that there was a significant indirect effect of anxious attachment on romantic relational aggression through romantic jealousy for individuals with average levels of mate value,  $b = .258$ , 95% CI [.095, .433] to high levels of mate value (1 *SD* above the mean),  $b = .250$ ,



95% CI [.082, .472], but not significant for individuals with lower levels of mate value (1 *SD* below the mean),  $b = .239$ , 95% CI [-.073, .529]. The hypothesis that mate value would moderate the mediated relationship of anxious attachment to romantic relational aggression through romantic jealousy so that the relationship would be weaker among those higher in mate value was not supported.

Next, the model tested whether mate value moderated the mediated relationship of avoidant attachment, romantic jealousy, and romantic relational aggression. Mate value moderated the relationship between avoidant attachment and romantic jealousy (path *a*),  $b = -.08$ ,  $t(362) = -4.81$ ,  $p < .001$ , and moderated the relationship between romantic jealousy and romantic relational aggression (path *b*),  $b = -.005$ ,  $t(360) = 2.40$ ,  $p < .05$ . Analysis of the moderated mediation showed that there was a significant indirect effect of avoidant attachment on romantic relational aggression through romantic jealousy for individuals with average levels of mate value,  $b = .239$ , 95% CI [.088, .419] but not significant for individuals with lower levels of mate value (1 *SD* below the mean),  $b = .245$ , 95% CI [-.144, .617] or higher levels of mate value (1 *SD* above the mean),  $b = .03$ , 95% CI [-.188, .275]. See Table 4 for indirect effects. The hypothesis that mate value would moderate the mediated relationship of avoidant attachment to romantic relational aggression through romantic jealousy so that the relationship would be weaker among those higher in mate value was not supported.

Table 4 *Moderated Mediation Indirect Effects; Mate Value*

Indirect Effects	Effect	BootSE	BootLLCI	BootULCI	SD
Anxious AS	.24	.145	-.073	.529	-1 SD
	.26	.085	.095	.433	Average
	.25	.098	.082	.472	+1 SD
Avoidant AS	.25	.190	-.144	.617	-1 SD
	.24	.086	.088	.419	Average
	.03	.120	-.188	.275	+1 SD

Note: AS= Attachment Style; Bootstrap CI's that do not cross zero implies a difference between  $c$  and  $c'$ .

#### Moderating Role of Relationship Investment

Hypothesis 4 predicted that relationship investment would moderate the relationship of the mediation model, such that the relationship would be more likely to occur among those more highly invested in their relationship than those lower in relationship investment. Specifically, the model tested whether relationship investment moderated the mediation relationship of anxious attachment, romantic jealousy, and romantic relational aggression. No significant effects emerged for relationship investment as a moderator between anxious attachment and romantic jealousy or romantic jealousy and romantic relational aggression. Analysis of the moderation indirect effect was not needed due to Edwards and Lambert's (2007) statement suggesting that moderated mediation can only occur when either path  $a$  (from anxious attachment to romantic jealousy) or path  $b$  (from romantic jealousy to romantic relational aggression), or both are moderated. This statement also aligns with Langfred (2004), stating that moderated mediation occurs when the independent variable and mediator or the mediator and

dependent variable are operated on by the moderator. Thus, no indirect effects were analyzed, and no moderated mediation occurred.

Next, the model tested whether relationship investment moderated the mediation relationship of avoidant attachment, romantic jealousy, and romantic relational aggression. Similar to the above analysis, no significant effects emerged for relationship investment as a moderator between avoidant attachment and romantic jealousy (path *a*) or romantic jealousy and romantic relational aggression (path *b*). Thus, no indirect effects were analyzed, and no moderated mediation occurred. See Table 5 for interaction effects.

Table 5 *Interaction Effects; Relationship Investment*

Variables	b	SE	t	p	SD
Avoid x Jealousy	.033	.020	1.64	.103	
Jealousy x RRA	.003	.003	0.94	.346	Average
Avoid x RRA	.043	.016	2.79	.005	-1 SD
Anxious x Jealousy	.004	.014	0.33	.742	
Jealousy x RRA	.003	.003	1.12	.263	-1 SD
Anxious x RRA	-.005	.013	-.401	.689	Average

Note: RRA= Romantic relational aggression

## CHAPTER IV – DISCUSSION

The present study investigated romantic jealousy as a possible mediator of the relationship between attachment styles (anxious and avoidant) and romantic relational aggression among college students. The predicted partial mediation was significant, indicating that (1) anxious and avoidant attachment styles were associated with higher levels of jealousy and romantic relational aggression, and (2) romantic jealousy was associated with increased romantic relational aggression. Although we predicted that mate value and relationship investment would moderate these mediated relationships such that higher levels of each moderator would lead to a weaker relationship, these predictions were not supported by the present findings. In fact, the effect of anxious attachment on romantic relational aggression through romantic jealousy was stronger for individuals with higher levels of mate value, and the effect of avoidant attachment on romantic relational aggression through romantic jealousy was stronger for individuals with average levels of mate value. Moreover, there was no evidence that relationship investment moderated the mediated relationships (i.e., these relationships did not vary based on levels of relationship investment).

The main effects found in this study were consistent with previous research. First, anxious and avoidant attachment styles predicted romantic jealousy in college students. This is consistent with the link established between insecure attachment styles and increased jealousy (Afifi & Reichert, 1996; Bowlby, 1969, 1973, 1980; Guerrero, Andersen, Jorgensen, Spitzberg, & Eloy, 1995; Mikulincer & Shaver, 2012; Pfeiffer & Wong, 1989; Simpson & Rholes, 1994; Sharpsteen, 1993, 1995). Buunk (1997) found that individuals with anxious and avoidant attachment styles were more jealous compared

to those with a secure attachment style. Further, even when controlling for personality facets, the impact of attachment on jealousy was still significant. Similarly, Hazaan and Shaver (1987) found that individuals with avoidant attachment experience issues with intimacy coupled with jealousy, along with individuals with anxious attachment style experiencing personal insecurity in themselves and their relationship, leading to jealousy. Thus, the present results indicate that insecure attachment styles, both anxious and avoidant, are positively related to the experience of jealousy in college students' romantic relationships.

Second, anxious and avoidant attachment styles predicted romantic relational aggression, which is consistent with previous research examining the relationship of insecure attachment to romantic relational aggression (Harris & Darby, 2010; Hazan & Shaver, 1987; Mikuliner & Florian, 1999; Sharpsteen, 1995). Individuals with insecure attachment styles are more likely to utilize romantic relational aggression in the form of behaviors such as withholding affection, intentionally making a partner jealous, etc. (Carroll et al., 2010; Goldstein, Chesir-Teran, & McFaul, 2008). Further, Linder, Crick, and Collins (2002) found that these forms of romantic relational aggression frequently occur among college students, which stem from such issues with intimacy, trust, and clinginess. Similar, individuals with insecure attachment styles were more likely to engage in the use of relationally aggressive behaviors toward their romantic partner (Goldstein et al., 2008; Mayseless, 1991). Individuals with an avoidant attachment style tend to withhold affection, whereas those with an anxious style may try to make their partner jealous (Collins et al., 2002; Simpson, Rholes, & Phillips, 1996). The present

findings were consistent with previous research showing that insecurely attached individuals are more likely to be relationally aggressive in their romantic relationships.

Third, romantic jealousy predicted romantic relational aggression. Although there has been limited research studying this relationship, the present results are consistent with others in that jealousy was positively associated with romantic relational aggression (Afifi & Reichert, 1996; Chiffriller & Hennessy 2010; Guerrero, Andersen, Jorgensen, Spitzberg, & Eloy, 1995; Sharpsteen, 1993, 1995; Wigman et al., 2008). Pfeiffer and Wong (1989) suggested that romantic jealousy should be conceptualized as a multilayered emotional reaction that is triggered by a combination of events leading to different reactions, such as aggression. Similarly, Chiffriller and Hennessy (2010) found that romantic jealousy can lead to anger, harassment, and aggression. Mikulincer and Shaver (2003) found that individuals who engage in romantic relationally aggressive behaviors tend to do so as a means of regulating their negative emotions as a reaction to romantic jealousy. They may engage in behaviors that distance themselves from the threat (e.g., jealousy) or try to contain these threats (Campbell, Simpson, Boldry, & Kashy, 2005). Thus, it appears that the study of romantic relational aggression may benefit from increased attention to cognitive jealousy.

Beyond the main effects addressed above, the finding that romantic jealousy partially mediated the relationship between anxious and avoidant attachment styles and romantic relational aggression was a noteworthy contribution to the literature on relational aggression. While relatively little is known about the role of jealousy in the relationship between attachment and relational aggression, the present findings were consistent with those of Wright (2017), who found that jealousy mediated the relationship

between anxious attachment and physical aggression between intimate partners. Wright's study focused on overt physical rather than relational aggression; however, these forms of aggression often appear to be related (Babcock, Miller & Siard, 2003; Joe, Baser, Neighbors, Caldwell & Jackson, 2009; Hamberger, & Guse, 2002). Similarly, research has shown that insecurely attached individuals experience high levels of romantic jealousy, leading to higher levels of aggression in romantic relationships (Harris & Darby, 2010; Hazan & Shaver, 1987; Mikuliner & Florian, 1999; Sharpsteen, 1995). Specifically, the results from the present study showed that individuals who were more avoidant or anxiously attached showed an increase in romantic jealousy along with an increase in romantic relational aggression. Although causal relationships cannot be inferred from this study, these findings are consistent with the possibility that insecure attachment may be associated with jealousy which may account for romantic relational aggression. Such a possibility would fit the literature on attachment in that attachment styles are thought to influence the way one sees the world and themselves, coupled with their view on being attached or having a threat to their attachment figure (jealousy). Thus, it makes sense that insecurely attached individuals would engage in negative behaviors, such as romantic relational aggression, as a means of coping (Campbell, Simpson, Boldry, & Kashy, 2005; Marazziti, Consoli, Albanese, Laquidara, Baroni, & Dell'Osso, 2010; Rydell & Bringle, 2007; Sharpsteen, 1995; White & Mullen, 1989).

Mate value was found to moderate the relationship between anxious and avoidant attachment styles, romantic jealousy, and romantic relational aggression. The study showed that the path from anxious attachment to romantic relational aggression through romantic jealousy was stronger for individuals with higher levels of mate value and the

effect of avoidant attachment on romantic relational aggression through romantic jealousy was stronger for individuals with average levels of mate value. This was contrary to what the current study predicted (i.e., the mediated relationship would be weaker at higher levels of mate value).

Perhaps this unexpected result could indicate that individuals with higher levels of mate value feel as though they are a “good catch” and perceive their partner as being easier to replace, so they may engage in relationally aggressive behaviors when they become jealous, despite their attachment style. For example, one of the tactics in romantic relational aggression involves making one’s partner jealous. A person with high or average levels of mate value may feel more confident in acquiring a person to utilize in making their partner jealous. Additionally, a person with lower mate value may not engage in these relationally aggressive behaviors due to the threat of losing their partner, fearing they are not good enough to obtain another partner. In a study conducted by Kirsner, Figueredo, and Jacobs (2009), personal mate value remained stable when negative affect changed. Similarly, Hoyt and Hudson (1981) found that college students were redefining what mate value actually means to them so that it shifted more toward appearance and social aspects (i.e., popularity) compared to homemaking abilities and family protection. With this in mind, these contrary results could be due to the way current college students conceptualize mate value.

Contrary to what was predicted, there was no evidence that relationship investment moderated the mediated relationships among attachment style, romantic jealousy, and romantic relational aggression. In fact, relationship investment was unrelated to RRA. One possible explanation for the lack of moderating effects of



relationship investment might draw upon the same idea relating to how college students understand relationship investment. Research has shown that college students are “hooking up,” minimizing sexual intimacy into a mainly physical act, and overestimating the seriousness of romantic relationships due to brief emotional connections (Hill, 2002; Drouin, Miller, & Dibble, 2015). Due to this, college students’ minimization or conceptualization of what commitment looks like may have impacted the way students thought about the seriousness of their romantic relationships. Therefore, it could be that students who were insecurely attached, romantically jealous, or relationally aggressive may not be fully invested in their romantic relationships in the way the literature typically explains relationship investment. Further, the current findings could suggest that insecure attachment is likely to lead to jealousy which leads to relational aggression regardless of relationship satisfaction. Lastly, it is important to remember that relationship investment was only looked at from one partner’s perspective.

#### Limitations

The present study had a number of limitations, and it is important to interpret the findings in the context of these limitations. First and most importantly, causal conclusions regarding mediation could not be drawn from the current study due to its cross-sectional design and lack of experimental controls. Longitudinal studies accompanied by experimental controls would be necessary to determine the order in which variables may exert an influence on one another. A potentially useful example of such a study might examine fluctuations and changes that occur in romantic relationships over time after assessing attachment styles and jealousy to better understand how young adults perceive romantic relationships. Second, underreporting of results can be a factor in studies

utilizing self-report data such as the current study. Examining personal and sensitive topics such as dissatisfaction and commitment in romantic relationships and stigmatizing behaviors related to violence and aggression, such as romantic relational aggression, may have resulted in some level of social desirability in our sample that was not accounted for. Third, the sample was collected from a predominately White, mid-sized, Southern university which can impact generalizability regarding the way this region views commitment, marriage, and relationships. Additionally, the results regarding romantic relationships, collected from college students, may not be generalizable to other populations in that college student relationships can be uniquely different (Hill, 2002; Drouin, Miller, & Dibble, 2015). Further, this study utilized data from heterosexual male and females only. Therefore, limitations for generalizability exist concerning a person's self-identity regarding sexuality.

#### Implications and Future Directions

The current study contributes to the literature on relational aggression by demonstrating the relevance of insecure attachment and romantic jealousy to romantic relational aggression. The present findings were consistent with the possibility that insecure attachment is associated with romantic jealousy which is associated with relational aggression in the context of college students' intimate relationships. Not only do these findings provide additional evidence that adult attachment styles, both anxious and avoidant, are positive predictors of romantic relational aggression, but they suggest that jealousy may be an important mechanism through which this relationship occurs. Further, the findings supported the relationship between attachment, jealousy, romantic relational aggression, and mate value. Few published studies have investigated the

relationships among these variables. Similarly, more research is needed to better understand the role of relationship investment in this context. Because the design of this study did not permit a comprehensive test of mediation due to the cross-sectional design and lack of experimental controls, future research will be needed to draw direct conclusions. For example, a longitudinal study with individuals with insecure attachment styles that monitors their romantic relationships and their relationship behaviors may advance our understanding. In addition, studies designed to explore these variables in committed adult relationships, non-heterosexual relationships, and among persons with higher levels of investment in their current relationship may be useful. To better understand the unexpected findings regarding mate value, researchers should focus on what and how specific populations view themselves and what they perceive as important qualities to be a good mate. This may vary depending on age and values. However, because the literature is so strong regarding attachment styles, jealousy, and romantic relational aggression, mate value and relationship investment may not play that big of a role in better understanding this relationship.

The current findings may also have clinical implications for prevention, as well as interventions that can impact relationship satisfaction, issues with intimacy, jealousy, and romantic relational aggression. Practitioners working with relationally aggressive college students or those developing programs aimed at preventing relational aggression may find it helpful to assess attachment styles. When individuals with insecure attachment styles are identified, positive coping skills can be implemented to reduce jealousy and replace negative behaviors such as romantic relational aggression.

Overall, this study contributed to the literature on relational aggression by providing evidence that insecure attachment styles, both anxious and avoidant, are positively related to romantic relational aggression among college students and that these relationships are partially mediated by romantic jealousy. While mate value moderated some of these relationships, it did so in unexpected ways. Additionally, the mediated relationships were not moderated by relationship satisfaction.

APPENDIX A – Consent Form

INSTITUTIONAL REVIEW BOARD  
CONSENT FORM

**PROJECT INFORMATION**

Project Title: Personality, Beliefs, and Experiences in Close Relationships Among College Students

Principal Investigator: Skylar Hicks, M.A.

Phone: 337-781-3069

Email: [skylar.hicks@usm.edu](mailto:skylar.hicks@usm.edu)

College: Education and Human Sciences

School: Psychology

**RESEARCH DESCRIPTION**

**Purpose:** This study is being conducted to better understand how aspects of personality and experiences in close relationships inform college students' thoughts and behavior in romantic relationships.

**Description of Study:** Participants will be asked to complete online questionnaires about personality traits, common thoughts and emotions, and various forms of social behavior. The study is fully online, will take no more than 30 minutes to complete, and must be completed within one session (i.e., starting the study and trying to finish it later will not work). Participants who complete the study will receive 0.5 research credits. Quality assurance checks will be used to make sure that participants read each question carefully and answer thoughtfully. Participants who do not pass these checks will NOT receive credit for completing the study.

**Benefits:** Participants who complete the study will earn 0.5 research credits; those who do not complete the study or who do not pass the quality assurance checks will not receive research credit. Participants will receive no other direct benefits from participation; however, the information provided will enable researchers to better understand the relationship of various personality traits and experiences in relationships to college students' thoughts and behavior in intimate relationships.

**Risks:** There are no foreseeable risks to participating in this study. If you feel that completing these questionnaires has resulted in emotional distress, please stop and notify the researcher (Skylar Hicks at [skylar.hicks@usm.edu](mailto:skylar.hicks@usm.edu)). If you should decide at a later date that you would like to discuss your concerns, please contact the research supervisor, Dr. Eric Dahlen ([Eric.Dahlen@usm.edu](mailto:Eric.Dahlen@usm.edu)). Alternatively, you may contact one of several local agencies, such as:

Student Counseling Services  
Clinic

Community Counseling and Assessment  
Clinic

Phone: (601) 266-4829

Phone: (601) 266-4601

Pine Belt Mental Healthcare Resources

Phone: (601) 544-4641

**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.

**Alternate 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.

**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 Institutional Review Board at 601-266-5997. Participation in this study is completely voluntary, and participants may withdraw at any time without penalty, prejudice, or loss of benefits. Questions concerning the research should be directed to Skylar Hicks ([skylar.hicks@usm.edu](mailto:skylar.hicks@usm.edu)).

### **CONSENT TO PARTICIPATE IN RESEARCH**

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. I understand that participation in this project is completely voluntary and that 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 my willingness to continue participation in the project.

Questions concerning the research, at any time during or after the project, should be directed to Skylar Hicks ([skylar.hicks@usm.edu](mailto:skylar.hicks@usm.edu)).

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.

A copy of this form can be printed from your browser window.

I have read and understood the above consent form and desire of my own free will to participate in this study.

Yes

No

## APPENDIX B – 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](http://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: 18100401

PROJECT TITLE: Personality, Beliefs, and Experiences in Close Relationships Among College Students

PROJECT TYPE: Doctoral Dissertation

RESEARCHER(S): Skylar Hicks

COLLEGE/DIVISION: College of Education and Human Sciences

SCHOOL: Psychology

FUNDING AGENCY/SPONSOR: N/A

IRB COMMITTEE ACTION: Exempt Review Approval

PERIOD OF APPROVAL: 10/9/2018 to 10/9/2019

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



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