

TESTING THE INSTRUMENTAL AND REACTIVE MOTIVATIONS OF ROMANTIC  
RELATIONAL AGGRESSION

by

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B.S., Brigham Young University, 2011  
M.S., Brigham Young University, 2013

AN ABSTRACT OF A DISSERTATION

submitted in partial fulfillment of the requirements for the degree

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School of Family Studies and Human Services  
College of Human Ecology

KANSAS STATE UNIVERSITY  
Manhattan, Kansas

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## **Abstract**

The literature suggests that aggressive behaviors occur in response to provocation (i.e., reactive aggression) or to achieve a goal (i.e., instrumental aggression). Relational aggression – when an individual harms another’s interpersonal relationships – has been studied from the reactive and instrumental framework in peer-directed contexts, usually with children. However, relational aggression in romantic relationships is yet to be studied from this framework. This dissertation includes a series of studies investigating whether two specific relationally aggressive behaviors found in romantic relationships (i.e., social sabotage and love withdrawal) are 1) motivated by instrumental and reactive aggression, 2) associated with differential characteristics, and 3) predictive of negative outcomes. The Romantic Relational Aggression Motivation (RRAM) scale, which included social sabotage and love withdrawal items with both instrumental and reactive motivations, was created to explore the above research questions. During Study 1a, an exploratory factor analysis using a sample of 170 emerging adults tested the factor structure of the RRAM. This resulted in love withdrawal, but not social sabotage, factoring into instrumental and reactive subscales. Using the same sample at a later wave, Study 1b refined the RRAM from Study 1a; the findings confirmed the results of Study 1a. In Study 2, using a sample of 118 emerging adults, the factor structure found in Study 1b was corroborated using a confirmatory factor analysis. Study 2 found that social sabotage was more closely related to instrumental than reactive love withdrawal. Reactive and instrumental love withdrawal were clearly differentiated based on their associations with constructs that were emotionally driven (e.g. neuroticism and hostile attribution bias) but not by their associations with constructs that dealt with power (e.g. self-relationship power and trait dominance). None of the romantic relational aggression scales were predictive of the negative outcomes in the study, possibly due

to the small sample size (85 emerging adults) in the longitudinal portion of Study 2. As instrumental and reactive love withdrawal were associated with different constructs and combining the two together may cause substantial differences to be lost, the RRAM may be a useful tool for researchers of romantic relational aggression.

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to the small sample size (85 emerging adults) in the longitudinal portion of Study 2. As instrumental and reactive love withdrawal were associated with different constructs and combining the two together may cause substantial differences to be lost, the RRAM may be a useful tool for researchers of romantic relational aggression.

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## **Dedication**

To my mother, who inspired me with her passion for learning and her love for her children.

## **Chapter 1 - Introduction**

Romantic relational aggression occurs when one partner in a romantic relationship harms their romantic partner's interpersonal relationships or feelings of acceptance, friendship, and group inclusion within those relationships (Crick & Grotpeter, 1995). Relationally aggressive acts are committed by individuals in order to manipulate and coerce their partners (Archer & Coyne, 2005; Carroll et al., 2010), often to receive a specific goal or reward. Relational aggression in romantic relationships is predictive of depression (Ellis, Crooks, & Wolfe, 2009), relationship instability, and poor relationship quality (Carroll et al., 2010). It is also associated with feelings of frustration, distrust, and jealousy within the romantic relationship (Linder, Crick, & Collins, 2002). Furthermore, romantic relational aggression is positively associated with alcohol and drug use (Bagner, Storch, & Preston, 2007) and physical aggression (Oka, Sandberg, Bradford, & Brown, 2014).

Relational aggression research has traditionally focused on the platonic relationships of school-age children and adolescents (Madsen, 2012), but research on relational aggression between romantic partners has been gaining momentum. Current definitions of romantic relational aggression focus on individuals' motivations to manipulate their partners' relationships in order to obtain some goal (e.g. Archer & Coyne, 2005; Carroll et al., 2010) while ignoring the possibility that individuals may commit romantic relational aggression as a defensive or retaliatory response. Researchers studying aggressive behavior in general have found support for distinguishing between motivators of aggression (Bandura, 1973; Dodge & Coie, 1987; Dollard, Doob, Miller, Mowrer, & Sears, 1939; Little, Jones, Henrich, & Hawley, 2003), finding that individuals committing aggressive acts for instrumental (goal-driven) versus reactive reasons



distinctly differ in regards to personality traits and social behavior (Little et al., 2003; Raine et al., 2006).

Accordingly, it may also be that reactive and instrumental romantic relational aggression have distinct predictors and outcomes. It is not currently possible to test this hypothesis, however, as the current measure of romantic relational aggression proposed by Nelson and Carroll (2006) does not differentiate the motivations that may underlie relationally aggressive behaviors, potentially resulting in inaccurate findings. For example, instrumental romantic relational aggression, which is not driven by anger, may not predict situational couple violence even though reactive romantic relational aggression, which is often driven by anger and impulsivity, is likely to be strongly predictive (Hubbard et al., 2002; Raine et al, 2006). Thus, a goal of this study is to create a measure of romantic relational aggression that distinguishes between the instrumental and reactive motivations that may prompt relationally aggressive behaviors. By creating distinct subscales, this measure will enable researchers to better understand the etiologies of instrumental and reactive romantic relational aggressions which will increase our ability as a field to offer interventions aimed at reducing romantic relational aggression and its associated detrimental outcomes.

### **Reactive and Instrumental Aggression**

We know from research on aggression with children and adolescents that aggression can serve both defensive and offensive functions (Pitkanen, 1969). Reactive aggression is “defensive, retaliatory, and in response to real or perceived provocation” (Hubbard, McAuliffe, Morrow, & Romano, 2010, p.96). It is an act meant to harm another person (Berkowitz, 1989; Little et al., 2003). Reactive aggression is commonly understood from frustration-aggression theory (Dollard et al., 1939). Frustration-aggression theory holds that “the occurrence of aggressive behavior

always presupposes the existence of frustration” and that “the existence of frustration always leads to some form of aggression” (Dollard et al., 1939, p.1). While the assumptions that aggression is *always* a consequence of frustration and that frustration *always* leads to some form of aggression have since been disproven, the basic idea that aggression is often a hostile reaction to a perceived frustration has continued to receive support (Berkowitz, 1989; Dodge & Coie, 1987).

Instrumental aggression represents the offensive function of aggression and is often conceptualized by social learning theory (Bandura, 1973). Social learning theory holds that a “great deal of aggression is prompted by its anticipated benefits. Here, the instigator is the pull of expected success, rather than the push of aversive treatment” (Bandura, 1973 as cited in Dodge & Coie, 1987, p. 1147). Stemming from this view of aggression, instrumental aggression is defined as a goal-directed behavior controlled by external reinforcements that occur in anticipation of self-serving outcomes (Little et al., 2003). Thus, instrumental aggression is unprovoked, premeditated behavior aimed at achieving a specific goal through the use of aggression.

Hubbard et al. (2010) give the following vignette to demonstrate the difference between instrumental and reactive physical aggression in childhood:

Johnny and Marcus are on the playground at recess. Johnny is shooting baskets, but Marcus really wants Johnny’s basketball so that he can start a game with his friends. Marcus comes up behind Johnny, pushes and trips him, and grabs the ball from his hands when he falls. Johnny gets up, sputtering and red-faced, and lunges at Marcus. Johnny pins Marcus to the ground and hits him hard, completely forgetting about the basketball that rolls away. (p. 95).

In this vignette, Marcus' aggression is goal-oriented and can be considered instrumental. Johnny's aggression was provoked and retaliatory; his aggression can be considered reactive.

Reactive and instrumental aggressions are associated with different characteristics that may suggest that individuals who favor reactive aggression differ from individuals who favor instrumental aggression in social behavior and personality traits. In regards to social behavior, reactive aggression is positively associated with a person's experience of peer rejection, lack of close friends, and social anxiety whereas instrumental aggression is positively associated with a person's leadership skills, frequent displays of assertive social behavior, and increased social competence (Little et al., 2003; Raine et al., 2006). In regards to personality traits, reactive aggression is associated with the tendency to attribute hostile intent from neutral situations, hostility, anger, low self-control and impulsivity whereas instrumental aggression is associated with psychopathic personality, low empathy, low remorse, blunted affect, and positive outcome expectations for aggression (Little et al., 2003; Murray-Close, Ostrov, Nelson, Crick, & Coccaro, 2010; Raine et al., 2006).

### **Love Withdrawal and Social Sabotage**

Although the motivations of romantic relational aggression have not been studied, the behaviors included within the definition of relational aggression have been divided into two types: love withdrawal and social sabotage (Carroll et al., 2010). In love withdrawal, one partner withdraws attention or affection from the other partner. Examples include withholding sex, threatening to leave, and using "the silent treatment." Social sabotage involves social pressure to control one's partner. It includes gossip, spreading rumors, and sharing personal information with those outside the relationship or recruiting others to take sides in an ongoing dispute. In a non-clinical population, 96% of wives and 88% of husbands were reported by their partners as

engaging in love withdrawal to some degree (Carroll et al., 2010). In the same study, 52% of husbands and 64% of wives were reported by their partners as engaging in social sabotage to some degree (Carroll et al., 2010). Love withdrawal and social sabotage are useful behavioral categories of romantic relational aggression as they aid in describing what relational aggression looks like in an intimate partner relationship, but they are insufficient categories for understanding the motivations of individuals who use relational aggression.

Social sabotage and love withdrawal can, theoretically, both be used reactively and instrumentally. When using social sabotage, individuals may spread rumors about their partners to retaliate after their partner hurts their feelings which would be an example of reactive aggression. They also may spread rumors about their partners as a way to pressure their partners to stop going out with friends late at night, an example of instrumental aggression. When using love withdrawal, individuals may withdraw attention from their partners as a way of retaliating after their partners forgot their anniversary, which would be an example of reactive aggression. Individuals may also withhold attention from their partners as a way to coerce their partners to do what they want. A measure that distinguishes between reactive versus instrumental relational aggression is necessary for understanding whether love withdrawal and social sabotage will be used more for reactive or instrumental purposes.

### **The Current Measure of Relational Aggression in Romantic Relationships**

The Couples Relational Aggression and Victimization Scale (CRAViS; Nelson & Carroll, 2006) is currently the only measure of romantic relational aggression and measures social sabotage and love withdrawal within intimate partner relationships. Although this scale was not designed to measure the motivational reasons for committing romantic relational aggression, nine of the eleven items include motivational language. Unfortunately, there are only

two items that include instrumental motivations (e.g. “my partner has intentionally ignored me until I give in to his/her way about something”), which is insufficient for creating a reliable instrumental subscale since at least three items are needed for sufficient internal consistency (Cook, Hepworth, Wall, & Warr, 1981). Although the remaining scale items of the CRAViS seem theoretically close to reactive aggression, only one of these items is clearly reactive in nature (e.g. “my partner gives me the silent treatment when I hurt his/her feelings in some way”). It is not clear if the other six items are reactive because they all explain the partner’s relational aggression as occurring because the partner is angry or mad (e.g. “my partner ignores or gives me the ‘cold shoulder’ when she/he is angry with me”). Although anger is certainly a characteristic associated with reactive aggression, it is not sufficient for defining an individual’s motivation as reactive. For example, a person can be angry because you did not do what they asked you to do (instrumental) or because you hurt their feelings (reactive). While CRAViS is excellent at measuring the specific relational aggression behaviors that occur in romantic relationships, it is limited in its ability to measure the functional aspects of romantic relational aggression.

Accounting for the motivation behind relationally aggressive acts may add insight to previous findings on the predictors and outcomes of relational aggression. For example, a study using the CRAViS was interested in how power in relationships influenced partners’ use of relational aggression. The author of this study hypothesized that relational aggression would be used by those who had less power in the relationship as a way to level the field (Madsen, 2012). The results of the study, however, revealed the opposite occurrence: those with higher power used more relational aggression in their intimate partner relationship. While the author struggled to explain her findings, research on instrumental aggression could explain this finding as those

who use aggression instrumentally are more likely to do so to maintain social dominance (Cillessen & Mayeux, 2004). If the researchers had used a measure which differentiated between reactive and instrumental relational aggression, they may have found different patterns based on the function of relational aggression with reactive relational aggression being used by those without power and instrumental relational aggression used by those with the most power. Of course, it is impossible to know if those patterns would have been found without actually creating a measure and testing it in the literature.

The main purpose of this study is to test whether instrumental and reactive motivations are distinct from each other in romantic relational aggression and whether they are associated with different characteristics. If they are, a secondary purpose of this study is to create a measure that enables researchers to ask more specific research questions when the participant's motivation for romantic relational aggression may affect research findings.

### **Emerging Adults**

Romantic relationships in emerging adulthood undergo significant transitions—it is during this time that relationships mature from adolescent love into long term committed relationship. By age 25, about half of emerging adults in the United States have cohabited with a romantic partner, one-third have had a child, one-quarter have married, and about 5% have divorced (Payne, 2011). It is also during emerging adulthood that men are just as likely to use relational aggression as women (Linder et al., 2002), whereas in childhood, girls were much more likely than boys to use relational aggression (Crick & Grotpeter, 1995). Thus, emerging adulthood is a suitable demographic for the study of romantic relational aggression for both genders.

Emerging adulthood is also a time when relational patterns and habits are still forming which makes it an important time for intervention (Dornbusch, 1989). Fincham and Cui (2011) argue for a greater focus on emerging adulthood as this is the time that relationships begin to exhibit warning signs for future relationship conflict, including physical aggression. Rhoades, Stanley, and Markman (2009) recommend interventions for individuals in order to lower risk-factors for distress before individuals transition into further relationship stages where risk factors have already accrued, making change more difficult. Intervention with emerging adults does not just benefit the individual. If emerging adults have the skills necessary to increase their chances of success, the future families they form will be benefitted (Hawkins & Ooms, 2010). Thus, better understanding of the etiology of relational aggression during emerging adulthood will allow for improved intervention to reduce concurrent and long-term negative consequences.

### **The Present Studies**

The goal of the following set of studies is to explore the extent to which: 1) the instrumental and reactive motivations behind social sabotage and love withdrawal can be distinguished and 2) instrumental versus reactive motivations differentially associate with theoretically driven personality and relationship characteristics. If they are, a secondary goal of this study is to create the Romantic Relational Aggression Motivation (RRAM) scale to allow for further research to examine the differences between the two motivations of romantic relational aggression. These goals were accomplished through a series of studies. During Study 1, items were created to measure the instrumental and reactive motivations behind the use of love withdrawal and social sabotage in intimate relationships. Study 2 used a second sample to confirm the factor structure of the items identified in Study 1. Once a factor structure was

confirmed, convergent, discriminant, and predictive validity were tested. More specific hypotheses will be listed under each study.



## **Chapter 2 - Study 1a**

The objective of Study 1a is to develop items to assess instrumental and reactive love withdrawal and social sabotage and create an initial factor structure. I hypothesized that the items would load into four factors representing instrumental and reactive love withdrawal and instrumental and reactive social sabotage.

### **Item Creation**

The CRAViS (see Appendix C for the original CRAViS items) items were adapted to be self-report, past tense, and include items reflecting both a reactive and instrumental motivation for each behavior. The CRAViS used partner report and while partner perceptions of romantic relationship processes may be a more accurate measure of actual behavior (Matthews, Wickrama, & Conger, 1996), research has shown that attributions (the explanations that individuals give to their partner's behaviors) are not objective truths but are subjective perspectives that can color the way an individual interprets the motivations of their partner's behavior (Fincham & Bradbury, 1992), thus items were re-worded to reflect self-report. Second, all items were phrased as past tense for consistency as previously CRAViS had items in both future and past tense. Lastly, each item was transformed into two items in order to reflect both instrumental and reactive motivations for that behavior. Items of the CRAViS that already contained motivations were kept. For example, one item was originally "My partner gives me the silent treatment when I hurt his/her feelings in some way," which reflected reactive motivation for the behavior and was simply changed to be self-report and past tense: "I have given my partner the silent treatment when he/she has hurt my feelings in some way." An additional instrumental version was also created: "When I want something, I have given my partner the

silent treatment until he/she gave me what I want.” The Likert options of the items ranged from *not at all true* (1) to *very true* (7).

## **Method**

### **Procedures**

Approval from the institutional review board (IRB) was obtained prior to any data collection. Undergraduate students attending courses in sociology and family studies at a large university in the central United States were given several options for class credit, including participation in the larger study on young adult romantic relationships that contained the items used for this study. Students choosing the survey were emailed links to a secure online system during the second week (Wave 1; W1), 8<sup>th</sup> week (Wave 2; W2), and 14<sup>th</sup> week (Wave 3; W3) of the semester. Data used in Study 1a was drawn from W1 of the 2015 fall semester. As a way to protect the quality of the data, several steps were implemented. If students completed the survey in less than 20 minutes or missed two or more control questions (e.g., “How many legs does a cow have?”) their results were not used. Additionally, to receive credit, students needed to complete at least 2/3 of the survey or their results were not used.

### **Sample**

The initial sample included 455 undergraduate participants (113 men and 342 women). To be included in this study, participants needed to indicate they were in an exclusive adult romantic relationship and that they were between 18 and 29 years old (the age range of emerging adulthood; Arnett, 2000). First, 5 participants were removed because they were not emerging adults, then 279 participants were removed because they were not in an exclusive relationship. One participant was also removed for missing data. This resulted in a final sample of 170 (34 men and 136 women) emerging adults in exclusive romantic relationships. The mean age of

participants was 19.43 years ( $SD = 1.74$ ). The sample was mostly White (92.9%), with some Latino (6.5%) and Asian (3.5%) participants. The remainder of participants indicated they were African American, Native American, or other race/ethnicity. See Table 1 for sample characteristics.

## **Results**

### **Examination of love withdrawal items.**

Prior to implementing data-reduction techniques, I examined the normality of the data using SPSS 22 (IBM Corp, 2013). Kline (2011) suggests absolute values of skewness greater than 3 and kurtosis greater than 10 are problematic in regards to normality. I found all of the items were normally distributed except for item 12 which had a skew of 3.5 and kurtosis of 12.8. Principal Axis Factoring (PAF) was used to deal with non-normal data (Fabrigar, Wegener, MacCallum, & Strahan, 1999). I then examined the correlations between the love withdrawal items (see Table 2). All items were positively and significantly correlated. Of concern, four correlations were candidates for extreme multicollinearity ( $r \geq .8$ ; Kim, Egan, & Tolson, 2015), which was re-examined after the initial factor analysis.

An exploratory factor analysis (EFA) with oblique rotation initially revealed three factors with eigenvalues greater than 1.0 that together accounted for 73.1% of the variance. Two of the twelve items (items 7 and 9) were highly cross-loaded (less than .2 difference between the values of the two factor loadings) and two items had extraction values lower than or equal to .4 (items 11 and 13). These items were sequentially removed and the model re-examined, resulting in an eight item scale composed of two factors with eigenvalues greater than 1.0 that together accounted for 76.9% of the variance. Appendix D shows which items from the love withdrawal and social sabotage scale were removed during this process. After these modifications, all the

extraction values were greater than .70 with large differences ( $\geq .5$ ) between cross-loading values. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy was .87 and Bartlett's Test of Sphericity was significant, indicating adequate model fit for the EFA. Five items loaded on Factor 1 (Instrumental Love Withdrawal,  $\alpha = .94$ ) and three items loaded on the Factor 2 (Reactive Love Withdrawal,  $\alpha = .90$ ).

Once those factors were determined, I examined whether multicollinearity still existed. I found that item 4 was highly correlated with item 2 ( $r = .84$ ) and with item 6 ( $r = .86$ ). Since multicollinearity suggests that one item should be dropped as it is redundant, I dropped item 4 that was highly correlated with two other items. This did not have much of an effect on the EFA as there were still two factors with eigenvalues greater than 1.0 that together accounted for 75.75% of the variance and the same items still loaded on the same factors. After item 4 was dropped, alpha coefficient for Instrumental Love Withdrawal became .92 and the highest correlation between items on Factor 1 was .78. Table 4 shows the factor loadings for the final items for the two Love Withdrawal subscales.

The mean of the instrumental love withdrawal subscale was 1.93 ( $SD = 1.26$ ). The mean of the reactive love withdrawal subscale was 3.37 ( $SD = 1.63$ ). An independent samples t-test found there was not a significant difference in the instrumental love withdrawal scores for men and women. An independent samples t-test was then conducted to compare the reactive love withdrawal scores for men and women. There was a significant difference between men ( $M = 2.86$ ,  $SD = 1.74$ ) and women ( $M = 3.49$ ,  $SD = 1.58$ ;  $t(168) = -2.03$ ,  $p = .04$ ) with women reporting engaging in more reactive love withdrawal behaviors. Table 3 shows the descriptive statistics based on gender.

### **Examination of social sabotage items.**

All of the social sabotage items were non-normally distributed (kurtosis values ranging from 16.8-24.05) except for items 3 and 4. Principal Axis Factoring (PAF) was used to deal with non-normal data (Fabrigar et al., 1999). When examining multicollinearity, except for items 3 and 4, the remaining items correlated with each other extremely highly (with  $r$  ranging from .80 - .94; see Table 2). An EFA with oblique rotation conducted with the social sabotage items found only one factor with an eigenvalue greater than 1.0. Neither item 3 nor 4 loaded with the other factors. First, item 3 was dropped as it had an extraction of .42 and then item 4 was dropped as it had an extraction of .35. This left a 10 item measure with an alpha coefficient of .99 that had a single factor which accounted for 90% of the variance. The high alpha coefficient and correlations suggested redundancy in the items. To address this issue, I determined which items suffered from the highest multicollinearity using the variance inflation factor (VIF), which measures the severity of multicollinearity in an ordinary least squares regression analysis. A VIF greater than 10 indicates harmful collinearity (Kennedy, 1992). All items, except item 7, exhibited a VIF greater than 10 with VIF scores ranging from 7.62-27.58. Examining VIFs, correlation tables, and item-total statistics, I removed the item with the highest multicollinearity. This process was repeated until no items had VIFs greater than 10. The remaining 4 item scale ( $\alpha = .95$ ) includes items 1, 7, 8, and 12. The mean of the reputation damage subscale was 1.25 ( $SD = .81$ ). The mean of the social pressure subscale was 1.57 ( $SD = 1.12$ ). An independent samples t-test found there was not a significant mean difference in the either social sabotage subscale for men and women.

## Implications

As expected, preliminary factor analysis resulted in two distinct factors reflecting instrumental versus reactive motivations for withdrawing love. Unfortunately, the final reactive love withdrawal scale contained only 3 items. Although at least three items are needed for sufficient internal consistency, more are recommended (Cook et al., 1981). With this in mind, the reactive factor within the love withdrawal items is currently adequate but could be improved with more items.

Contrary to expectations, the social sabotage EFA only produced one factor, suggesting there may not be evidence to distinguish between reactive and instrumental reasons for social sabotage. Additionally, items 3 and 4 about having “other people ‘take sides’ with me and against my partner” seemed to be studying a markedly different process as they did not load on the same factor as the other items. On the other hand, all of the other items represent behaviors of reputation destruction or embarrassment (e.g., “I have tried to damage my partner’s reputation by gossiping about my partner or by sharing negative information about him/her”, “I have spread rumors or negative information about my partner” and “I have tried to embarrass my partner or make him/her look stupid in front of others.”). Social sabotage in the context of relational aggression is a term coined by Carroll et al. (2010), which they defined as:

...behaviors wherein a spouse harms his or her partner in an indirect, circuitous manner.

This is a form of indirect relational aggression as the perpetrator may go behind the partner’s back to share private information with third parties or to recruit others to take their side in a dispute. In these background conversations, rumors and gossip could also be employed. Rather than deal with problems more directly within the confines of the

marital relationship, the spouse engaging in social sabotage chooses to expose and defame the spouse, bringing third parties into ongoing marital dynamics. (p. 318).

It seems the defining characteristics of social sabotage is that it is done indirectly and involves bringing third parties into the relationship. Based on my preliminary analysis and examination of Carroll's ideas, perhaps there are two distinct ways in which to indirectly socially sabotage a partner: 1) drawing people in so they can take sides (referred to from this point on as social pressure), and 2) efforts to damage a partners' reputation by gossiping, spreading rumors and sharing negative information. When Carroll et al. (2010) measured social sabotage using the CRAViS, they found it was less prevalent than love withdrawal. Their results make intuitive sense as gossiping, spreading rumors, and enlisting a third-party to intervene would require more effort than withdrawing love and may negatively reflect on not only one's partner, but also one's self. Although the CRAViS has five items that measure reputation destruction, it only has one that measures social pressure, so it is unclear the extent to which partners use reputation destruction versus social pressure to socially sabotage one's partner. My preliminary results indicated that the reputation destruction dimension of social sabotage may be less prevalent than love withdrawal and the social pressure form of social sabotage (see Table 3). It is possible that if there were equal numbers of items representing the reputation damaging form of social sabotage and the social pressure form of social sabotage, a separate factor containing items 3 and 4 may have emerged.

Kerr and Bowen (1988) provide additional explanation of the ways couples may involve third parties in their conflict. According to Kerr and Bowen, a dyad is inherently unstable and vulnerable to stress (Kerr & Bowen, 1988). For this reason, when one partner experiences anxiety within the dyad they will enlist a third person to diffuse the tension, thereby forming a

triangle. Triangulation can take the form of multiple behaviors, including engaging in conflict in the presence of a third person or a third person inviting themselves into the center of a couple's conflict (Kerr & Bowen, 1988). Of interest in this study, triangulation can also take the form of enlisting a third person by complaining about the partner and/or the relationship (Kerr & Bowen, 1988).

Although Bowen's triangulation is focused more on reducing anxiety within the intimate relationship, triangulation could also be used as a form of social sabotage. For example, an individual may engage a third-party with the prime motivation of controlling and manipulating their partner (i.e., instrumental social sabotage) or their efforts at enlisting a third-party could be reactive and done out of anger and the desire to injure or retaliate against their partner. In this study, I will be using the term social pressure to refer to triangulation being used for aggressive or manipulative purposes.

Another finding was that women used significantly more reactive love withdrawal than men. This result should be taken tentatively as there were only 34 men in the sample. It is possible that this difference came from the wording of the items. As women are more likely than men in the United States to express negative feelings, including sadness, the scale may be biased in favor of how women commonly express their emotions (Simon & Nath, 2004). As women and men in the United States are equally likely to express anger, the inclusion of anger in each item should help the scale not be biased towards either gender (Simon & Nath, 2004).



## Chapter 3 - Study 1b

The goal of Study 1b was to refine the RRAM scale developed in Study 1a. Specifically, I tested additional items measuring the social pressure form of social sabotage and reactive love withdrawal. I again expected love withdrawal to factor into instrumental and reactive subscales. Based on the factor analysis results of the social sabotage items used in Study 1a, I expected the social sabotage items to factor into subscales based on both type (reputation damage versus social pressure) and motivation (instrumental versus reactive).

### Item Creation

As the reactive love withdrawal scale only included 3 items, more items were created to expand the scale. Since the 3 items had an alpha of .90 and all were theoretically similar in that they all dealt with giving the silent treatment, I added 16 more items to the original 12 used in Study 1a to capture additional types of love withdrawal. For example, one of the items I added was “I have canceled a date with my partner when they have hurt me or made me angry.” See Appendix E for the items used in Study 1b.

Integrating ideas from Kerr and Bowen’s (1988) concept of triangulation, I also added 10 items reflecting social pressure to the original 12 social sabotage items used in Study 1a. For example, two new items included “To hurt my partner after he/she had made me mad or sad, I have asked a friend/family member to pressure my partner to agree with me about something” and “I have told a friend/family member about something upsetting in my relationship in hopes that this person would help me get what I want from my partner.”

Another modification that occurred to the scale was that all the reactive items in the love withdrawal and social sabotage scale were changed to include feelings of sadness/hurt and anger in an attempt to not be biased towards sadness and how women commonly express their

emotions (Simon & Nath, 2004). As an example of what this change looks like, in Study 1a an item was “I have given my partner the silent treatment when he/she hurt my feelings in some way.” This changed to “I have given my partner the silent treatment when he/she has made me mad or hurt my feelings in some way.” This modification should help the reactive scale capture the negative feelings that both genders are likely to report.

## **Method**

### **Procedure and sample**

The same procedure for data collection was used for Study 1b as in Study 1a, but data was collected during W3 of the fall 2015 semester. The initial sample included 412 undergraduate participants (102 men and 310 women). Using the same exclusion criteria as in Study 1a, 243 participants were removed because they were not in an exclusive relationship. An additional three participants were removed because they were not emerging adults. This resulted in a final sample of 166 participants (29 men and 137 women). As Study 1b’s participants are nearly the same as Study 1a’s, the sample characteristics are nearly identical and not reported again.

## **Results**

### **Examination of love withdrawal item**

All of the items were normally distributed except for item 12, which had a skew of 3.01 and kurtosis of 10.29. Principal Axis Factoring (PAF) was used to deal with nonnormal data (Fabrigar et al., 1999). An EFA with oblique rotation initially revealed four factors with eigenvalues greater than 1.0 that together accounted for 54.70% of the variance. Five of the 28 items were highly cross-loaded (less than .2 difference between the values of the two factor

loadings). Items were sequentially removed and the model re-examined using low extraction values and high cross-loadings as criteria for removal.

This resulted in a 15 item scale composed of two factors with eigenvalues greater than 1.0 that together accounted for 74.36% of the variance. All the extraction values for these 15 items were greater than .59 with large differences ( $\geq .45$ ) between cross-loading values. Factor 1 (Instrumental Love Withdrawal) had an alpha of .96 with 8 items and Factor 2 (Reactive Love Withdrawal) had an alpha of .94 with 7 items. While a VIF of 10 indicates harmful collinearity (Kennedy, 1992), a VIF above 4 is still reason for concern (Pan & Jackson, 2008). Examining VIFs, correlation tables, and item-total statistics, I sequentially removed items with the highest multicollinearity until VIF values were all below 4.

This resulted in a 10 item scale composed of two factors with eigenvalues greater than 1.0 that together accounted for 69.90 % of the variance. All the extraction values for the modified scale were greater than .60 with large differences ( $\geq .39$ ) between cross-loading values. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy was .90 and Bartlett's Test of Sphericity was significant, indicating adequate model fit for the EFA. Five items loaded on Factor 1 (Instrumental Love Withdrawal,  $\alpha = .93$ ) and five items loaded on the Factor 2 (Reactive Love Withdrawal,  $\alpha = .90$ ). Table 5 shows the final items for the two subscales and their factor-loading scores.

The mean of the instrumental love withdrawal subscale was 1.47 ( $SD = .92$ ). The mean of the reactive love withdrawal subscale was 2.50 ( $SD = 1.36$ ). An independent samples t-test found a significant difference in instrumental love withdrawal scores for men ( $M = 1.99$ ,  $SD = 1.50$ ) and women ( $M = 1.36$ ,  $SD = .72$ ;  $t(30.75) = 2.22$ ,  $p = .03$ ), with men reporting engaging in more instrumental love withdrawal behaviors. There was not a significant mean difference

between the scores of reactive love withdrawal for men and women. Table 6 shows the descriptive statistics based on gender.

### **Examination of social sabotage items**

All of the 10 reputation damage items were non-normally distributed, as were almost half of the 12 social pressure items. The mean for the reputation damage items ( $M = 1.23$ ,  $SD = .70$ ) and social pressure items ( $M = 1.32$ ,  $SD = .74$ ) was very close, suggesting neither social sabotage behavior is significantly more prevalent.

An EFA with oblique rotation using Principal Axis Factoring (PAF) to deal with non-normal data (Fabrigar et al., 1999) revealed two factors with eigenvalues greater than 1.0 that accounted for 80.55% of the variance. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy was .93 and Bartlett's Test of Sphericity was significant, indicating adequate model fit for the EFA. It was unclear what differentiated the two factors from one another: both included a mixture of instrumental and reactive aggression items and a mixture of social pressure and reputation destruction items. This initial solution had one item highly cross-loaded ( $\leq .2$  difference between the values of the two factor loadings) and two items with low extraction values ( $\leq .6$ ). Items were sequentially removed and the model re-examined using low extraction values and high cross-loadings as criteria for item removal.

This resulted in a 17-item scale composed of two factors with eigenvalues greater than 1.0 that together accounted for 85.01% of the variance. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy was .94 and Bartlett's Test of Sphericity was significant, indicating adequate model fit for the EFA. All the extraction values for the modified scale were greater than .66 with large differences ( $\geq .44$ ) between cross-loading values. Factor 1 had an alpha of .99 with 12 items and Factor 2 had an alpha of .95 with 5 items. The two-factor solution include a mixture

of instrumental and reactive aggression items and was roughly divided by the type of social sabotage: Factor 1 (had 8 reputation damage items and 4 social pressure items) and Factor 2 (had 4 social pressure items and 1 reputation damage item).

This factor solution had extremely high VIF scores (above 30 for multiple items). Examining VIFs, correlation tables, and item-total statistics, I sequentially removed the items from factor 1 and factor 2 with the highest multicollinearity. The nine items which were removed had a VIF of at least 5.50 with the largest item having a VIF of 32.57. This resulted in an 8-item scale which had VIFs ranging from 2.45 - 6.8 (see Appendix E). While some of these VIFs were above the optimal cutoff score of 4, they were below the harmful level cutoff score of 10. When these items were put in the EFA, they resulted in a one factor solution ( $\alpha = .95$ ) that included a mixture of social pressure and reputation damage items that had both instrumental and reactive motivations. The mean of the social sabotage subscale was 1.30 ( $SD = .72$ ). An independent samples t-test found a significant difference in social sabotage scores for men ( $M = 1.82, SD = 1.20$ ) and women ( $M = 1.19, SD = .51; t(30.15) = 2.79, p = .01$ ), with men reporting engaging in more social sabotage behaviors

## **Implications**

The Reactive Love Withdrawal subscale has been expanded to 5 items. Whereas before all of the reactive love withdrawal items had dealt with withdrawing attention, the scale now also includes an item that deals with withdrawing physical affection. The Instrumental Love Withdrawal subscale was also expanded to 5 items that describe diverse love withdrawal behaviors such as withdrawing attention, withdrawing physical affection, and threatening to leave one's partner (which can be seen as threatening to withdraw from the relationship completely). These results provide further evidence that individuals' motivations to engage in

love withdrawal behaviors in their romantic relationships may be distinct, resulting in a reactive and instrumental aggression factor. This is consistent with theories of general aggression that postulate that aggressive acts are committed both reactively and instrumentally (e.g. Dodge & Coie, 1987). This also agrees with previous research using 1,723 adolescents in Germany that found relational aggression had both an instrumental and reactive dimension (Little et al., 2003). Further research is needed to replicate the reactive and instrumental factor structure for the Love Withdrawal Scale.

Conversely, the social sabotage items did not load into distinct factors either by type of social sabotage (social pressure or reputation damage) nor by the motivation driving the social sabotage (instrumental or reactive). These results suggest that social sabotage does not need to be measured using a reactive and instrumental framework which is not consistent with general theories of aggression and previous research that suggests relational aggression should be distinguishable by the underlying motivation (e.g. Murray-Close et al., 2010). While Little et al. (2003) did not study whether social sabotage alone is distinguishable by instrumental and reactive motivations, the six items they used to measure relational aggression (2 representing love withdrawal and 4 representing social sabotage) factored into both an instrumental and reactive dimension. It is possible that the two love withdrawal items were enough to influence their total scale to break into the two factors, or that social sabotage in adolescent peer relationships in Germany operates differently than in emerging adult intimate relationships in the United States.

If social sabotage is not distinguishable by underlying motivations, is it equally reactive and instrumental, or more one type than the other? As social sabotage specifically has not been theorized or researched with this question in mind, there is little in the literature to answer this

question. If it is more one type than the other, which one might it be? Do social sabotage behaviors (e.g., spreading rumors, recruiting others to take sides in a conflict) seem more like something that would occur as an angry, impulsive decision in response of someone's provocation (i.e., reactive) or something that is colder, more calculated and prompted by its anticipated benefits (i.e. instrumental)? My initial thought is that since social sabotage may take greater time and planning than love withdrawal, it may not require greater intentionality based on expecting a positive outcome, which suggest instrumental motivations. Further research is needed to determine whether the social sabotage scale is more associated with instrumental or reactive aggression and to replicate that social sabotage is not divided into reactive and instrumental factors.

## **Chapter 4 - Study 2**

The goals of Study 2 were to 1) replicate the factor structure of the final love withdrawal and social sabotage subscales from Study 1b using a confirmatory factor analysis (CFA) with a new sample, 2) test convergent and discriminant validity, and 3) test predictive validity.

### **Constructs Associated with Relational Aggression**

Based on previous studies (Carroll et al., 2010), I expected that all three subscales of romantic relational aggression at W1 will be negatively associated with relationship quality and stability concurrently (at W1) and 13 weeks later (W3). Past research has also demonstrated that relational aggression is predictive of physical violence (Oka, Sandberg, Bradford, & Brown, 2014), thus I expect that romantic relational aggression will be positively related to intimate relationship violence 13 weeks later (W3).

I also hypothesize that participant's tendency to claim behaviors that are socially desirable, which in this study is termed as social desirability (Crowne & Marlowe, 1960), will be negatively associated with relationally aggressive behaviors because relationally aggressive behaviors may not typically be viewed as socially desirable. In regards to concurrent discriminant validity, I expected religious saliency (i.e., how important religion or spirituality is to a person's day to day life) to not be related to any of the relational aggression scales. Religious saliency was chosen to measure discriminant validity because an experimental study found that religious practices, in particular reading the Bible and meditating/prayer, did not significantly influence aggression (Leach, Berman, & Eubanks, 2008).

### **Instrumental love withdrawal**

In general, instrumental aggression has been considered the more callous form of aggression to the extent that past researchers have called it "cold-blooded" – a term that suggests



it occurs without emotion or pity (Raine et al., 2006, p. 2). Findings in the peer relational aggression literature support this assertion as instrumental aggression has been found to be positively associated with psychopathic personality, callousness, and blunted affect and negatively associated with empathy and remorse (Little et al., 2003; Marsee & Frick, 2007; Murray-Close et al., 2010; Raine et al., 2006). For these reasons, I expect instrumental love withdrawal aggression to be negatively related to empathy, which is specifically measured in this study as empathetic concern toward one's partner.

Other studies have shown that children who exhibit instrumental aggression are more likely to have increased social competence, higher peer status, and are perceived as greater leaders (Dodge & Coie, 1987; Little et al., 2003; Price & Dodge, 1989). Those with instrumentally aggressive tendencies also display frequent assertive social behavior (Coie et al., 1999). Theoretically, instrumental aggression is used when an individual wants to reach a goal or get something from someone (Bandura, 1973; Little et al., 2003). In this way, instrumental aggression can be seen as a way to exert control or one's will over someone else. It is likely that individuals who feel more confident in their social skills will have greater confidence in their ability to produce the change they want in their relationship. This suggest that not only are instrumentally aggressive individuals more skilled socially but they are also more likely to work to achieve their goals in social situations than their reactive counterparts, which may increase their chances of producing change in their relationship and feeling efficacious. For these reasons, I expect instrumental love withdrawal will be positively associated with trait dominance (i.e., trait level of control and dominance, or use of intimidation and coercion, to attain social status; Cheng, Tracy, & Henrich, 2010) and relationship efficacy (i.e., the self-perceived capacity for beneficial change in one's relationship; Fincham, Harold, & Gano-Phillips, 2000).

Relationship power is a similar construct to dominance. The main difference is that dominance is individually focused while relationship power examines the idea of power/dominance in making decisions the relationship context. Thus, like dominance, I expect that the greater use of instrumental aggression will be associated with greater relationship power.

### **Reactive love withdrawal**

A distinguishing difference between instrumental and reactive aggression is that reactive aggression is considered emotionally driven (Dollard et al., 1939). Whereas instrumental aggression is associated with blunted affect and autonomic arousal (Raine et al., 2006; Scarpa, Haden, & Tanaka, 2010), reactive aggression is considered “hot-tempered” – a term used to describe intense negative emotion (Scarpa et al., 2010, p.488). In fact, one study found that reactive aggression, but not instrumental aggression, was positively related to children’s angry nonverbal behaviors and skin conductance reactivity, a physiological reaction that indicates emotional arousal (Hubbard et al., 2002). In both teens and adults, reactive aggression has been found to be positively associated with anger, hostility, and impulsivity (Murray-Close et al., 2010; Raine et al., 2006). Another study found that reactive relational aggression, when compared to instrumental relational aggression, was more strongly associated with anger when individuals felt provoked (Marsee & Frick, 2007). For these reasons, I expect that impulsivity (i.e., participants’ ability to refrain from impulsive behavior when experiencing negative emotions; Gratz & Roemer, 2004) and trait anger (i.e., participants’ tendency to become angry at provocation) will be more strongly positively related to reactive versus instrumental love withdrawal.

Anger is not the only emotion that reactive and instrumental aggression may differ on. When it comes to anxiety, reactively aggressive children are more likely to have emotional

regulation problems and higher levels of anxiety (Dodge et al., 1997; Vitaro, Brendgen, & Tremblay, 2002), whereas instrumentally aggressive children have fewer internalizing symptoms and less emotional reactivity (Hubbard et al., 2002). In adolescence, reactive relational aggression is a significant predictor of anxiety controlling for other types of aggression, but instrumental relational aggression is not (Marsee, Weems, & Taylor, 2008). Additionally, children who find it difficult to regulate anger and anxiety endorse revenge at higher levels (McDonald & Lochman, 2012). Revenge endorsement, which are beliefs favoring the reciprocation of unfavorable treatment, is positively related to the belief that people are generally malevolent (Eisenberger, Lynch, Aselage, & Rohdieck, 2004). Accordingly, reactive aggression, but not instrumental, has been found to be positively related to hostile attribution bias (HAB), which are hostile attributions of potentially provocative but ambiguous relational situations, in children (e.g. Orobio de Castro, Merk, Koops, Veerman, & Bosch, 2005), emerging adults (Bailey & Ostrov, 2008), and adults (e.g., Lobbestael, Cima, & Arntz, 2013). For these reasons, I expect reactive love withdrawal, but not instrumental love withdrawal, will be positively related to neuroticism (i.e., emotional instability), HAB, anger from HAB, and revenge endorsement.

While previous research has not studied the relationship between relational aggression and relationship efficacy, previous research has demonstrated that reactive aggression, but not instrumental aggression, is related to peer rejection (Dodge et al., 1997; Pellegrini, Bartini, & Brooks, 1999; Poulin & Boivin, 2000; Raine et al., 2006), peer victimization (Poulin & Boivin, 2000; Schwartz et al., 1998) and social withdrawal (Poulin & Boivin, 2000). Additionally, the more a boy engages in reactive aggressive behavior, the less he is perceived by his peers as a leader (Poulin & Boivin, 2000). On the other hand, the more instrumentally aggressive a boy acts, the more he is perceived as a leader by his peers (Poulin & Boivin, 2000). For these

reasons, I expect that relationship efficacy will be negatively associated with reactive love withdrawal. Additionally, since those who are reactively aggressive may be less socially skilled (Little et al., 2003), reactive aggression may be positively associated with having less influence in relationships. Thus, I hypothesize that reactive love withdrawal will be negatively associated with relationship power.

### **Social sabotage**

Since social sabotage is a concept that only recently was labeled (see Carroll et al., 2011), there is little literature about it. Since no study has examined the associations of social sabotage with the constructs in this study (e.g. anger, neuroticism, and HAB) the aim of this study is to explore what social sabotage may be associated with. Because it may take time to decide on a strategy to recruit others into an argument or spread rumors, social sabotage may not be an impulsive decision to hurt the other (i.e., a reactive behavior; e.g., Raine et al., 2006), but a more intentional decision based on positive outcome expectations for aggression (i.e., an instrumental behavior; e.g., Dodge, Lochman, Harnish, Bates, & Pettit, 1997). Accordingly, I expect that social sabotage will be more highly associated with instrumental love withdrawal than reactive love withdrawal. However, as instrumental love withdrawal and social sabotage are two different behaviors, I do not expect social sabotage will be associated with everything instrumental love withdrawal is and seek to further explore its associations with the constructs in this study.

### **The Present Study**

The first goal of this study is to confirm the factor structure identified in Study 1 containing Reactive Love Withdrawal, Instrumental Love Withdrawal, and Social Sabotage factors. The second goal of this study is to examine concurrent convergent and discriminant validity as well as the predictive validity of the subscales.

Specifically, I expect that instrumental love withdrawal will be positively associated with dominance, self-power, and relationship efficacy while being negatively associated with empathy, social desirability, relationship quality, and relationship stability. Instrumental love withdrawal will be positively associated with trait anger, but at a lower level than reactive love withdrawal. Instrumental love withdrawal will not be associated with impulsivity, neuroticism, HAB, anger from anger from HAB, or religious saliency.

Reactive love withdrawal will be positively associated with HAB, trait anger, anger from HAB, impulsivity, neuroticism, and revenge endorsement while being negatively associated with relationship power, relationship efficacy, social desirability, relationship quality, and relationship stability. Reactive love withdrawal will not be related to and religious saliency.

I also expect that social sabotage will be more closely related to instrumental than reactive love withdrawal. Social sabotage will be negatively related to social desirability, relationship quality, and relationship stability. Social sabotage will not be related to religious saliency. I will also explore what other constructs social sabotage is associated with concurrently.

In exploring predictive validity, I expect that higher levels of instrumental love withdrawal, reactive love withdrawal, and social sabotage will predict lower relationship quality and stability and higher relationship violence 13 weeks later.

## **Methods**

### **Sample and procedures**

Data for Study 2 was collected during the Spring 2016 semester as part of the previously mentioned larger study on young adult romantic relationships using the same procedures explained in Study 1. The initial sample at W1 included 321 undergraduate participants (112

men and 209 women). Using the same exclusion criteria as in Study 1, 196 participants were removed because they were not in an exclusive relationship and seven participants were removed because they were not emerging adults. This resulted in a final W1 sample of 118 participants (28 men and 90 women). The mean age of participants was 19.42 years ( $SD = 1.34$ ). The sample was mostly White (88.98%), with some Latino (11.02%) and Native American (4.24%) participants. The remainder of participants indicated they were African American, Asian, or other race/ethnicity. See Table 7 for sample characteristics.

The sample was further reduced to 85 participants (20 men and 65 women) to perform the longitudinal portion of the analysis. Five participants were removed for not being in the same relationship at W3, three were removed due to missing data on all exogenous variables, and 25 were removed for not completing the survey at W3.

### **Analysis plan**

In order to confirm the factor structure of the RRAM arrived at by the end of Study 1b, I conducted a CFA with the 118 participants from W1 using *Mplus 7.0* (Muthén & Muthén, 1998-2012). As recommended by Kline (2011), when assessing model fit indices I used the model chi-square statistic, Bentler Comparative Fit Index (CFI), Steiger-Lind Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Square Residual (SRMR). If the chi-square value is non-significant, the CFI and TFI are greater than .95, the RMSEA is less than .05, and the SRMR is less than .08, this indicates acceptable model fit between the observed data and the hypothesized model (Hu & Bentler, 1999; McDonald & Ho, 2002). Missing data was handled using full information maximum likelihood. Since responses to the social sabotage items were not normally distributed, the maximum likelihood robust (MLR) with Satorra-Bentler (S-B) scaling (Satorra & Bentler, 2001) estimation method was used because it adjusts the model chi-

square, fit indices, and standard errors of the parameter estimates by a factor based on the amount of non-normality in the data.

In order to test convergent and discriminant validity, SPSS (Statistical Package for Social Sciences) software Version 22.0 was run to test the correlations between the variables (IBM Corp, 2013). Due to the small sample size ( $n = 85$ ) at W3, I was unable to test predictive validity using path analyses using *Mplus* 7.0. Instead I used SPSS Version 22.0 to run multiple regressions to predict each dependent variable separately. First, a multiple regression was run wherein W1 instrumental love withdrawal, W1 reactive love withdrawal, and W1 social sabotage were used to predict W3 relationship quality, with W1 relationship stability used as a control. Then, using the same process and the same predictor variables, a multiple regression was run to predict W3 relationship stability, but with W1 relationship quality used as a control. Third, a logistic regression was run wherein W1 instrumental love withdrawal, W1 reactive love withdrawal, and W1 social sabotage were used to predict physical aggression.

## **Measures**

**Relationship Quality.** Relationship quality was measured using the Quality Marriage Index (QMI; Norton, 1983). Since the original measure focused exclusively on married couples, I expanded this to include all couples in an exclusive relationship by changing the word “marriage” to “relationship” in two items. For example, the item “We have a good marriage” was changed to “We have a good relationship.” Participants responded to 5 items on a scale from very strongly disagree (1) to very strongly agree (7). Items were scored and averaged such that higher scores indicated greater relationship quality.

It is important to note that the QMI was originally created with a 6<sup>th</sup> item that had a 10-point scale (“Circle the number that best describes the degree of happiness, everything

considered, in your marriage or relationship”). Unfortunately, due to a technical error that resulted in only 4 participants answering this 6<sup>th</sup> question, this item was dropped. Norton, the creator of the QMI said that “Each item in the QMI probably could be used in its own right for a single-item predictor. Together, however, the six items provide a more reliable measure than any single item (Norton, 1983, p. 148). Previous studies have found an alpha of .97 for the 6-item scale, (Heyman, Sayers, & Bellack, 1994) and the 5-item scale used in this study had an alpha of .96. Thus, the 5-item scale used in this study demonstrated excellent reliability similar to the original 6-item scale.

**Relationship Stability.** The Marital Instability Index measures instability among intact couples using five items (Booth, Johnson, & Edwards, 1983). The original measure had to be adapted to include all exclusive relationships, which was an expansion from the measure’s original focus on married couples. For example, the first question was “Have you or your husband/wife ever seriously suggested the idea of divorce within the last three years?” In this study, this question was changed to “Have you or your partner seriously suggested the idea of ending your relationship?” Another question was “Have you discussed divorce or separation with a close friend?” which was adapted to “Have you discussed separation from your partner with a close friend?” One item required a drastic change as the original content only made sense in the context of married relationships. This item was “did you talk about consulting an attorney?” As only married couples would need to consult an attorney on separation, this item was removed. I replaced it with “Have you broken up or separated and then gotten back together?” This new question measures a specific type of relationship instability termed “cycling” which is defined as the process of ending and renewing a romantic relationship. Cycling within a relationship increases the risk of further cycling (Vennum, Lindstrom, Monk, &



Adams, 2014) and is fairly common in this study's population as 30-50% of emerging adult dating partners have experienced cycling in their current relationship (Dailey, Pfiester, Jin, Beck, & Clark, 2009; Halpern-Meekin, Manning, Giordano, & Longmore, 2013).

I also changed the Likert-scale response options. The original measure used the following Likert responses: *never* (0), *ever* (1), *within the last three years* (2), and *now* (3). Since this sample of emerging adults will have much shorter relationships than married couples, I changed the response to the following: "Yes, within the last three months" (1), "Yes, within the last six months" (2), "Yes, within the last year" (3), and "Not in the last year" (4). Items were scored and averaged such that higher scores indicate greater relationship stability. The alpha coefficient for the original measure was .93 (Booth et al., 1983). In this study, the alpha was .87. Since the original scale was modified, an EFA with oblique rotation was run, which revealed one factor.

**Relationship Violence.** The physical assault subscale of the Revised Conflict Tactics Scale-Short Version (CTS-2S) is a 20-item scale that measures intimate partner violence (Straus & Douglas, 2004). The physical assault items included: "I pushed, shoved, or slapped my partner" and "I punched or kicked or beat-up my partner." The original measure's response options were adapted to capture a shorter time-frame for this study in order to capture changes in relationship violence throughout the semester. The original measure asked how often certain behaviors occurred in the past year. The response options used in this study assessed violence that occurred over the past month: *once in the past month* (1), *twice in the past month* (2), *3-5 times in the past month* (3), *6-10 times in the past month* (4), *11-20 times in the past month* (5), *More than 20 times in the past month* (6), *Not in the past month, but it did happen before* (7), and *This has never happened* (8). Due to the skewed nature of this subscale, the prevalent scoring

method was used (Straus, 2007) in which a 1 was assigned if any instances of the behavior were reported and a score of 0 was assigned when no instances of the behavior were reported (Straus & Douglas, 2004).

**Social Desirability Scale.** The Marlowe-Crowne Social Desirability Scale uses 33 True or False items to measure participant's affinity for claiming social desirable behaviors and denying socially undesirable behaviors (Crowne & Marlowe, 1960). The scale was created by choosing items that describe culturally approved behaviors that rarely happen and that are not implicative of pathology (Crowne & Marlowe, 1960). The Reynold's Form C scale used in this study is a shortened version of the Marlowe-Crowne scale that includes 13 items (Reynolds, 1982). Past research has shown that it has adequate psychometric properties with an alpha of .66 (Loo & Loewen, 2004). Examples items include: "It is sometimes hard for me to go on with my work if I am not encouraged" and "I am always courteous, even to people who are disagreeable." Items were coded so that a social desirable response was given a score of 1 and a non-socially desirable response was given a score of 0. Afterwards, these items were summed so that higher scores indicated a greater level of social desirability. In this study, the alpha was .65.

**Religious Salience.** Religious salience was assessed by the question: "In general, how important are religious or spiritual beliefs in your day to day life?" (Cline & Ferraro, 2006). Responses ranged from *not at all important* (1) to *very important* (4).

**Empathy.** The Dyadic Empathetic Concern scale of the Interpersonal Reactivity Index for Couples (IRIC) was used to measure empathetic concern (Péloquin & Lafontaine, 2010). The seven items were rated on a 5-point scale ranging from *does not describe me well* (0) to *describes me very well* (4). Example items included: "Sometimes I don't feel very sorry for my partner when he/she is having problems" and "When I see my partner being taken advantage of, I

feel kind of protective towards him/her.” Three of the items were reverse coded in order to score and average items so that higher scores indicate greater trait dominance ( $\alpha = .71$ ).

**Trait Dominance.** The Dominance Scale measured participants’ trait level of control and dominance, or use of intimidation and coercion, to attain social status (Cheng et al., 2010). Participants were asked to respond to 8 items such as “I enjoy having control over others,” “I often try to get my own way regardless of what others may want” and “I try to control others rather than permit them to control me” on a scale from *not at all* (1) to *very much* (7). Two items were reverse coded and items were averaged so that higher scores indicate greater trait dominance ( $\alpha = .84$ ).

**Relationship Efficacy.** Relationship efficacy, or the self-perceived capacity for beneficial change in one’s relationship, was measured using the Relationship Efficacy Scale (Fincham et al., 2000). Participants responded to 7 items on a scale from *strongly disagree* (1) to *strongly agree* (7). Examples of the items include: “I have little control over the conflicts that occur between my partner and I” and “There is no way I can solve some of the problems in my relationship.” Five items were reverse coded and items were averaged so that a higher score indicated greater relationship efficacy ( $\alpha = .86$ ).

**Relationship Power.** The Relationship Power Inventory: Overall Version is a self-report measure of power for romantic partners when making decisions (Farrell, Simpson, & Rothman, 2015) that includes items about participants own power and perceptions of their partners power. The scale measures process power (i.e., control over the process of decision-making) and outcome power (i.e., control over the decision that is made by the couple; Farrell et al., 2015). Participants were asked to respond to 20 items on a scale ranging from *never* (1) to *always* (7). Examples items include: “I have more say than my partner does when we make decisions in our

relationship” and “My partner has more control over decision making than I do in our relationship.” Participants’ perception of their own power when making decisions in their relationship was assessed by averaging together the self-process and self-outcome items, with higher scores indicating greater self-power in the relationship ( $\alpha = .90$ ). We also created a partner relationship power scale by averaging together the partner-process and partner-outcome items, with higher scores indicating greater partner power when making decisions in the relationship ( $\alpha = .91$ ).

**Impulsivity.** The Difficulties in Emotion Regulation Scale (DERS) Impulse Control Difficulties (IMPULSE) subscale was used to measure participants’ ability to refrain from impulsive behavior when experiencing negative emotions (Gratz & Roemer, 2004). Example items included: “When I’m upset, I lose control over my behaviors” and “I experience my emotions as overwhelming and out of control.” Participants responded to six items on a scale from *almost never* (0–10%), *sometimes* (11–35%), *about half the time* (36–65%), *most of the time* (66–90%), and *almost always* (91–100%). These items were coded as a 5-point Likert scale, with *almost never* (0–10%) = 1 and *almost always* (91–100%) = 5. Items were coded and averaged so that higher scores indicated greater impulsivity ( $\alpha = .82$ ).

**Trait anger.** The Buss-Perry Aggression Questionnaire’s Anger Subscale was used to measure trait anger (Buss & Perry, 1992). Example items included: “I flare up quickly but get over it quickly” and “I sometimes feel like a powder keg ready to explode.” Participant’s responded to seven items on a scale from *extremely uncharacteristic of me* (1) to *extremely characteristic of me* (7). Items were coded and averaged so that higher scores indicated greater trait anger ( $\alpha = .85$ ).

**Neuroticism.** The neuroticism portion of the abbreviated form of the Eysenck Personality Questionnaire (EPQR-S) was used to measure neuroticism (Eysenck, Eysenck, & Barrett, 1985). Example items included: “Are you a worrier?” and “Does your mood often go up and down?”. Participants responded to 12 items on a scale from *not at all* (1) to *extremely* (5). Items were coded and averaged so that higher scores indicated greater neuroticism ( $\alpha = .88$ ).

**HAB.** HAB was measured using the Social Information Processing-Attribution and Emotion Response Questionnaire (SIP-AERQ; Coccaro, Noblett, & McCloskey, 2009). The SIP-AERQ contains eight vignettes where the participant is asked to imagine that an adverse action occurred to them in an ambiguous situation. I choose to only include the four vignette’s that measured relational provocation. For example, in one situation the participant joins a club and says “hi” to another member who does not respond. The participant is then asked to rate how likely, on a scale ranging from *not at all likely* (0) to *very likely* (3), the club member did this with direct hostile intent (e.g. “The club members wanted me to feel unimportant”), indirect hostile intent (e.g. “The club members wanted to ignore me”), instrumental non-hostile intent (e.g. “The club members were more interested in talking among themselves”), and neutral or benign intent (e.g. “The club members didn’t hear me say ‘hi’”). Scores for the hostile intent items were averaged across vignettes to create a HAB score.

Participants were also asked “How likely is it that you would be angry if this happened to you?” and “How likely is it that you would be upset with yourself if this happened to you?” These six items are followed by the same Likert ratings as the four attribution items and were averaged across vignettes to create an anger from HAB score, which measures anger felt from potentially provocative ambiguous situations score. In this study, the HAB scale had an alpha coefficient of .75 whereas anger from HAB scale had an alpha of .68.

**Revenge Endorsement.** The Negative Reciprocity Norm scale will be used to measure beliefs favoring the reciprocation of unfavorable treatment (Eisenberger et al., 2004). Example items included: “If someone dislikes you, you should dislike them,” “If someone important to you does something negative to you, you should do something even more negative to them,” and “A person who has contempt for you deserves your contempt.” Participants responded to 14 items on a scale from *strongly disagree* (1) to *strongly agree* (7). Items were coded and averaged so that higher scores indicated greater endorsement of revenge ( $\alpha = .91$ ).

## Results

### Confirmatory Factor Analyses

The love withdrawal and social sabotage subscales were first run separately in order to make modifications within each subscale. After a final factor structure was confirmed for each subscale, the subscales were combined in a full scale CFA to ensure the subscales were measuring distinct constructs.

**Love Withdrawal Subscales.** A one-factor model was run using the 10 items from the Love Withdrawal scale. This one-factor model exhibited poor model fit ( $\chi^2 [35] = 332.62, p < .001$ ;  $CFI = .53$ ;  $RMSEA = .27$ ;  $SRMR = .17$ ). A two-factor model was then run, which demonstrated improved model fit ( $\chi^2 [34] = 121.72, p < .001$ ;  $CFI = .86$ ;  $RMSEA = .15$ ;  $SRMR = .06$ ). Although a chi-square difference test demonstrated the two-factor model was a better fit to the data than the one factor solution ( $\chi^2 [1] = 35.36$ ), the two-factor model still did not meet the criteria for good model fit (Hu & Bentler, 1999; McDonald & Ho, 2002). In examining the model for further changes, LW12 (“I have threatened to leave my partner to get my partner to do what I want”) cross-loaded highly and the modification indexes highly suggested that LW12’s error term should be correlated with LW14’s error term (“I have stopped talking to my partner

until my partner has given in to my demands.”). Since there was no theoretical rationale for correlating these two error terms and LW14 had a stronger factor loading than LW12, LW12 was removed from the scale resulting in an adequate model fit:  $\chi^2(26) = 59.21$   $p < .001$ ;  $CFI = .94$ ;  $RMSEA = .10$ ;  $SRMR = .05$ . After this, modification indexes suggested two sets of variables should be correlated, as did theoretical justifications. The first pair, LW1 (“I have given my partner the silent treatment when he/she has made me mad or hurt my feelings in some way”) and LW15 (“I have acted cold and aloof towards my partner when he/she has hurt my feelings or made me mad” both were measuring the silent treatment in a reactive manner. The second pair, LW18 (“I have withheld physical affection from my partner to manipulate him/her into doing something”) and LW26 (“I have deliberately hesitated in giving a kiss or hug to my partner in order to get him/her to do something I want”), both measured withdrawing physical affection from one’s partner in an instrumental manner; therefore, it makes theoretical sense to correlate their error terms as well. These changes resulted in a two-factor model with acceptable model fit:  $\chi^2(24) = 35.53$ ,  $p = .06$ ;  $CFI = .98$ ;  $RMSEA = .04$ ;  $SRMR = .06$  (see Figure 1). Coefficient alpha was .81 for Factor 1 (Instrumental Love Withdrawal; 4 items) and .90 for Factor 2 (Reactive Love Withdrawal; 5 items).

**Social Sabotage Subscale.** A one-factor model was run using the eight items from the Social Sabotage scale. However, item 12 and 2 correlated highly ( $r = .95$ ) resulting in the model failing to converge. As SS2 had a stronger factor loading than SS12, item 12 was dropped. The model was then run with seven items. This one-factor model still exhibited poor model fit ( $\chi^2[14] = 37.81$ ,  $p < .01$ ;  $CFI = .81$ ;  $RMSEA = .12$ ;  $SRMR = .09$ ). A two-factor model based on theory was tested with 3 items in the first factor (Instrumental) and 4 items in the second factor (Reactive). As expected from Study 1, this demonstrated worse model fit than the single factor

model:  $\chi^2 (13) = 38.11, p < .01; CFI = .80; RMSEA = .13; SRMR = .09$ . A chi-square difference test confirmed that the two-factor model was not a better fit to the data than the one-factor model ( $\chi^2 [1] = .90$ ). To improve the 1-factor model, items 3, 19, and 17 were sequentially removed due to low factor loadings (.38, .40, and .48, respectively). This resulted in the final four item model that fit well to the data:  $\chi^2 (2) = 2.11, p = .35; CFI = 1.00; RMSEA = 0.02; SRMR = 0.02$  (see Figure 2).

**The RRAM Scale.** In order to test whether the love withdrawal subscales and social sabotage scale were distinct, I ran a CFA with all three subscales. This model exhibited adequate model fit:  $CFI = .94; RMSEA = .09; SRMR = .07$ , although the chi-square statistic was significant ( $\chi^2 [60] = 117.36, p < .001$ ). Two things stood out from this model. First, the social sabotage latent variable was highly correlated with the instrumental love withdrawal latent variable ( $r = .88$ ), which suggests multicollinearity. Second, the modification indices highly suggested that LW28, which had been loading onto instrumental love withdrawal (.44), cross-loaded onto the social sabotage latent variable (.58). Since this suggested LW28 measured more than one construct, LW28 was removed (see Figure 3). This resulted in an improved model fit ( $\chi^2 [49] = 59.95, p = .14; CFI = .99; RMSEA = .04; SRMR = .04$ ). After LW28 was removed, the social sabotage latent variable and the instrumental love withdrawal latent variable were still strongly correlated but not strong enough to suggest multicollinearity ( $r = .66$ ). Coefficient alpha was .88 for Instrumental Love Withdrawal (3 items), .90 for Reactive Love Withdrawal (5 items), and .87 for Social Sabotage (4 items).

The mean was 1.38 ( $SD = .70$ ) for instrumental love withdrawal and 3.42 ( $SD = 1.59$ ) for reactive love withdrawal. An independent samples t-test found a significant difference in reactive love withdrawal scores for men ( $M = 2.64, SD = 1.07$ ) and women ( $M = 3.67, SD = 1.65; t$



(70.28) = .00,  $p < .01$ ), with women reporting engaging in more reactive love withdrawal behaviors. There was not a significant mean difference between the scores of instrumental love withdrawal for men and women. Table 8 shows the descriptive statistics based on gender.

The mean of the social sabotage subscale was 1.14 ( $SD = .42$ ). There was not a significant mean difference between the scores of social sabotage for men and women. However, the alpha coefficient of the 4-items in the social sabotage scale was much smaller in the sample of men (.39) compared to the sample of women (.91). This was surprising considering that in Study 1a and 1b the male sample's social sabotage scales had high alphas (Study 1a: reputation damage  $\alpha = .98$ , social pressure  $\alpha = .83$ ; Study 1b social sabotage  $\alpha = .98$ ). In order to test whether this lower alpha was because of changes in the final scale or the new sample, I tested the alpha of all 8 items used in Study 1b's social sabotage scale, which resulted in an alpha of .34. This suggests that the lower alpha is a result of the new sample, and not because of the removal of items from Study 1b to Study 2.

**Convergent and Discriminant Validity.** As expected, instrumental love withdrawal was positively associated with dominance and was negatively associated with empathy and relationship stability (see Table 9 for correlation coefficients). Also as expected, instrumental love withdrawal was positively associated with trait anger, but at a lower level than reactive love withdrawal. According to expectations, instrumental love withdrawal was not associated with impulsivity, neuroticism, HAB, anger from potentially provocative ambiguous situations, or religious saliency. Against expectations, instrumental love withdrawal was not associated with relationship power, social desirability, or relationship quality. I had hypothesized that instrumental love withdrawal would be positively associated with relationship efficacy, but the opposite was actually found—it was negatively associated with relationship efficacy.

As expected, reactive love withdrawal was positively associated with HAB, trait anger, anger from potentially provocative ambiguous situations, impulsivity, and neuroticism while being negatively associated with social desirability and relationship stability. Also according to expectations, reactive love withdrawal was not associated with religious saliency. I had hypothesized that reactive love withdrawal would be negatively associated with relationship power, but the opposite was actually found—it was positively associated with relationship power. Also against expectations, reactive love withdrawal was not associated with relationship quality.

As expected, the social sabotage scale was more closely related to instrumental than reactive love withdrawal. Also as expected, social sabotage was negatively related to relationship quality and relationship stability and was not related to religious saliency. Against expectation, social sabotage was not related to social desirability. I had not made any other hypothesis about social sabotage and instead meant to explore what constructs social sabotage was associated with. In this exploration, I found that social sabotage was negatively associated with empathy and relationship efficacy and positively associated with impulsivity.

**Predictive Validity.** A multiple regression was conducted to determine whether relational aggression predicts later relationship quality, while controlling for earlier relationship quality. Neither W1 instrumental love withdrawal ( $\beta = -.03, p = .78$ ), W1 reactive love withdrawal ( $\beta = .03, p = .97$ ), nor W1 social sabotage ( $\beta = .11, p = .33$ ) significantly predicted W3 relationship quality while controlling for W1 relationship quality ( $\beta = .66, p < .001$ ).

A second multiple regression was conducted to determine whether relational aggression predicted later relationship stability, controlling for earlier relationship stability. Again, neither W1 instrumental love withdrawal ( $\beta = .19, p = .16$ ), W1 reactive love withdrawal ( $\beta = -.01, p =$

.92), nor W1 social sabotage ( $\beta = -.07, p = .58$ ) significantly predicted W3 relationship stability, controlling for W1 relationship stability ( $\beta = .52, p < .001$ ).

Logistic regression was then conducted to assess whether the three types of romantic relational aggression (instrumental love withdrawal, reactive love withdrawal, and social sabotage) significantly predicted whether or not physical assault happened in the relationship during the last month. Contrary to expectations, neither W1 instrumental love withdrawal ( $\beta = .04, p = .95, S.E. = .67, \text{odds ratio} = 1.04$ ), W1 reactive love withdrawal ( $\beta = .19, p = .50, S.E. = .28, \text{odds ratio} = 1.21$ ), nor W1 social sabotage ( $\beta = .11, p = .33, S.E. = 1.76, \text{odds ratio} = .37$ ) significantly predicted W3 relationship violence.

## **Implications**

These results confirm what has already been found in Study 1: love withdrawal was distinguishable by instrumental and reactive motivations, but social sabotage was not. Theories and research on aggression distinguish between aggressive acts that are committed to achieve a goal (i.e., instrumentally) or as a retaliatory response (i.e., reactively; e.g. Dodge & Coie, 1987). Accordingly, it is an interesting finding that social sabotage in romantic relationships did not divide into these two categories. This led to the question of whether social sabotage was more strongly driven by instrumental or reactive motivations. The correlations in Study 2 found that social sabotage was more strongly related to instrumental love withdrawal than reactive love withdrawal, which suggests social sabotage may be fueled more by the desire to achieve a goal than in response to provocation.

### **Social sabotage**

Perhaps most interesting is to see which constructs social sabotage is related too. I had wondered if it would be more likely to be 1) angry and impulsive (i.e., reactive) or 2) colder,

more calculating, and more prompted by anticipated benefits (i.e., instrumental). The associations suggest neither is quite right. Social sabotage had a stronger negative association with empathy than instrumental love withdrawal and was not associated with trait anger or neuroticism. On the other hand, it is positively associated with impulsivity, suggesting it is not necessarily calculating. The findings that social sabotage only has one factor, is associated with instrumental love withdrawal and instrumental traits, yet is associated with a reactive trait (i.e. impulsivity) suggest further studies are needed in this area. For example, a qualitative study focusing on the motivations of social sabotage in romantic relational aggression may help create a theory that better explains these results.

Another surprising finding was that social sabotage was not related to social desirability. I had thought that since social sabotage was likely a socially undesirable behavior, the greater a person's level of social desirability, the less likely they would report engaging in social sabotage. As an explanation for this lack of association, maybe those who engage in greater social sabotage do not see social sabotage as undesirable behavior or maybe they believe their behavior is justified. Considering greater social sabotage is associated with the perception of greater partner power, maybe those who engage in greater social sabotage consider it a justified way to fight back against their partner's greater power. Also, since greater social sabotage is associated with lower trait empathy, maybe those who engage in greater social sabotage are less likely to consider or care how social sabotage may make their partner feel and therefore do not see consider social sabotage as an undesirable behavior.

### **Love Withdrawal**

Reactive and instrumental love withdrawal were able to be differentiated based on their associations with the constructs that are emotionally driven in the study: reactive love

withdrawal was positively associated with anger from provocation, neuroticism, HAB, and impulsivity, while instrumental love withdrawal was not related to any of these things.

Considering that a distinguishing difference between reactive and instrumental aggression is that reactive aggression is considered emotionally driven and “hot-tempered” (Dollard et al., 1939; Scarpa et al., 2010, p.488) while instrumental aggression is considered callous, blunted in affect, and “cold-blooded” (Raine et al., 2006, p. 2) this difference suggests that the two scales are distinct from each other and have adequate discriminant validity from each other in regards to constructs that measure emotions. These results also suggest the scales are similar to scales in previous research that have found these associations.

### **Influencing romantic partners**

Another major distinguishing characteristic between instrumental and reactive aggression has to do with the desire and ability to influence others. Theory suggests that instrumental aggression is used when an individual wants to reach a goal or get something from someone (Bandura, 1973). Not surprisingly, children who use instrumental aggression are more likely to believe that aggressive behavior will result in positive outcomes, while this belief does not exist for children who are more likely to use aggression reactively (e.g. Dodge et al., 1997; Smithmyer, Hubbard, & Simons, 2000). Instrumental aggression in children is associated with higher social competence and peer status, and being perceived as a better leader (Dodge & Coie, 1987; Little et al., 2003; Poulin & Boivin, 2000; Price & Dodge, 1989). On the other hand, reactive aggression is associated with being perceived as a worse leader, being frequently victimized by peers, and being more likely to experience peer rejection (Little et al., 2003; Price & Dodge, 1989; Raine et al., 2006; Schwartz et al., 1998).

Given this perspective, I had hypothesized that trait dominance, or the trait of using intimidation and coercion to attain social status, would be positively associated with instrumental love withdrawal because instrumental aggression is done to gain something (e.g. social status) even if it hurts someone else (e.g. they need to be intimidated). While this was supported, reactive love withdrawal was also associated with trait dominance; in fact, the strength of its relationship to trait dominance was comparable to the strength of the relationship between instrumental love withdrawal and trait dominance. This suggests that trait dominance is not uniquely associated with instrumental love withdrawal. One possibility for reactive love withdrawal's association with trait dominance is that the trait dominance scale may measure a person's perception or desire for dominance more than his or her actual dominance. If so, this could mean that people with greater reactive love withdrawal may want to be more socially dominant, even though they are likely to experience social rejection (e.g., Raine et al., 2006). If these individuals want to be dominant and then perceive their partner as provoking them or disrespecting their dominance, they may be likely to defend themselves by acting reactively aggressive.

I had also theorized that since individuals with high instrumental aggression have high social skills, they will feel more confident in their ability to produce the change they want in their relationship. On the other hand, I theorized that since reactive aggression is associated with peer rejection, use of reactive relational aggression would be negatively associated with relational efficacy. However, reactive love withdrawal was not related to relationship efficacy while instrumental love withdrawal was negatively related. Relationship efficacy is the perception that individuals have about whether or not they are able to produce the change they want in their romantic relationship. Just because instrumental aggression is associated with

believing that aggressive behavior will result in positive outcomes and instrumental children are more likely to have increased social competence does not mean that adults with greater instrumental aggression necessarily feel efficacious or powerful in their romantic context. In fact, it may be that intentional use of relational aggression is used to compensate for feelings of low efficacy and the better able an individual feels they can make a change in their relationship, the less they feel the need to use coercive techniques like instrumental love withdrawal to get their way.

Interestingly, instrumental love withdrawal was not associated with relationship power. In assessing associations with instrumental love withdrawal, it may make more sense to test whether people believe in positive outcomes for aggression than measures of dominance or relationship power. Reactive love withdrawal, on the other hand, was positively related to self power. The use of reactive love withdrawal is not a planned behavior and thus, may not feel like a skill people employ to create change in their relationships (i.e., relational efficacy), but the effectiveness of reactively withdrawing love in order to influence one's partner may increase feelings of power in the relationship. Further studies are needed to further explore how relational aggression is associated with perceptions of partners' abilities to influence each other.

### **Revenge Endorsement**

I had hypothesized that reactive love withdrawal would be positively associated with revenge endorsement. However, this was not found. As reactive aggression conceptually is considered a form of retaliation and often out of a desire for revenge, this result is surprising. It is possible that the retaliation done through reactive love withdrawal in emerging adult romantic relationships is done more impulsively and through anger, regardless of whether someone

endorses revenge as an acceptable practice. Further research is needed to explore to what extent people regret the use of reactive love withdrawal in their romantic relationships.

I had not hypothesized about the association between instrumental love withdrawal and the endorsement of revenge beliefs as there was not enough in the literature to make a research-based hypothesis. Interestingly, instrumental love withdrawal was positively associated with revenge endorsement. One study did find that aggressive children that believed that aggression helped them gain additional rewards had greater revenge goals than children who did not believe aggression helped them gain additional rewards (McDonald & Lochman, 2012). This suggests that believing aggression will help you gain an objective may increase your revenge goals, which may explain the link between revenge endorsement and instrumental love withdrawal in emerging adult romantic relationships.

### **Social Desirability**

I had expected that since love withdrawal was likely a socially undesirable behavior, the greater a person's level of social desirability, the less likely they would report engaging in love withdrawal no matter the motivation. Although reactive love withdrawal was negatively associated with social desirability, instrumental love withdrawal was not. Considering greater instrumental love withdrawal is associated with greater revenge endorsement and less empathy, maybe those who engage in higher love withdrawal with instrumental motivations are more likely to believe love withdrawal is justified as a form of revenge or maybe they do not see it as an undesirable behavior due to their lower empathy toward their partner.

### **Relationship Quality and Stability**

I hypothesized that all three of the relational aggression scales would be negatively related to relationship quality and relationship stability. Consistent with previous research



(Carroll et al., 2010), all three types of relational aggression were negatively related to relationship stability. Contrary to previous research, only social sabotage was negatively related to relationship quality, suggesting that the use of social sabotage in a relationship is associated with one's own feelings about the relationship. This is consistent with research that found an individual's own social sabotage behavior was negatively related to their own relationship quality and stability (Carroll et al., 2010). Instrumental and reactive love withdrawal were both negatively related to relationship stability, suggesting that the use of love withdrawal in a relationship is also associated with one's own feelings about the relationship. This is consistent with research by Carroll et al. (2010) found that an individual's own love withdrawal behavior was negatively related to their own relationship stability.

Neither instrumental nor reactive love withdrawal were related to relationship quality in this current study. This was surprising considering Carroll et al. (2010) found that an individual's own love withdrawal behavior was negatively related to their own marital quality. There are a few possibilities for this difference. The first is that the relationship between relationship quality and relational aggression may be different for emerging adults in exclusive relationships than for married couples. The second is that the present study may not have had a large enough sample size for significant effects to have emerged. Third, in Carroll et al.'s (2010) study, the association between an individual's love withdrawal and their partner's marital quality was larger than between an individual's love withdrawal and their own marital quality and the smallest effect size between love withdrawal and marital quality was for women reporting on their own relational aggression and marital quality, suggesting that dyadic data and a sample with more males may produce different results.

I also hypothesized that all three types of romantic relational aggression would predict low relationship quality, low relationship stability, and high relationship violence 13 weeks later. I found none of these effects. First, the interpretation of the multiple regressions that predicted relationship quality and relationship stability may be limited due to the small sample size. Green (1991) suggests that to find a medium sized effect, the sample must be at least  $104 + m$ , where  $m$  is the number of predictor variables. In that case, I would have needed a sample of 108 to detect a medium sized relationship. Past studies have found that a single predictor and a population correlation of .30 needs a sample of 124 to maintain 80% power (Cohen & Cohen, 1975). These same authors found that if 5 predictors were used and everything else remained the same, a sample of 187 would be needed to maintain the same power. As the multiple regression in this study had 4 predictors and 85 participants, it is likely that my power was not sufficient to find a small or even medium effect size.

Second, the interpretation of the logistic regressions which were used to predict relationship violence may be limited due to standard errors being large compared to the estimates in the equation (Leech, Barrett, & Morgan, 2011). The standard errors may be influenced by the small proportion of participants who engaged in physical violence in the last month. Since only seven individuals engaged in physical assault in the last month and 77 did not, the proportion between cases was .09. Peduzzi, Concato, Kemper, Holford, & Feinstein (1996) suggested that the minimum number of cases needed to perform an accurate logistic regression is  $N = 10 k / p$ , where  $k$  is number the independent variables and  $p$  is the proportion of cases. Using this equation, the low  $p$  required a sample of 334 to be accurate.

To understand the third reason, we must look at Carroll et al.'s study again (2010). These researchers found that both men's and women's relational aggression predicted their partner's

perception of relationship quality and stability, but only men's use of relational aggression effected their own marital quality and stability. Given their findings and that this sample is mostly made up of women, it is less surprising that I found that women's relational aggression did not predict their own relationship quality or stability.

### **Discriminant Validity**

According to expectations, none of the relational aggression scales were associated with religious saliency. This suggests that the overall scale is not related to constructs that it theoretically should not be related to.

## Chapter 5 - Overall Discussion

These series of studies were created to answer these two basic questions: 1) whether instrumental and reactive romantic relational aggression were as statistically distinct as theory suggested and 2) whether instrumental and reactive motivations were associated with different characteristics. The results of Study 2 confirm the results of Study 1a and Study 1b: love withdrawal does differentiate into instrumental and reactive aggression, but social sabotage does not. Because social sabotage and love withdrawal differed in their associations with various characteristics and because they differed in their motivations, the results suggest that social sabotage and love withdrawal may follow different processes. This suggests that future research on romantic relational aggression would benefit from separating love withdrawal and social sabotage as combining them may cause important differences to be lost.

The associations between the instrumental and reactive love withdrawal and the other constructs suggest that important differences can easily be lost by failing to differentiate between reactive and instrumental relational aggression. For example, when love withdrawal was calculated as a total scale, and not divided into the two scales, it was highly associated with neuroticism even though only reactive love withdrawal was associated. This is an example of how failing to differentiate between the forms can cause real differences to be lost, which can keep the field from understanding the phenomena of relational aggression in romantic relationships.

These results also suggest that the instrumental and reactive love withdrawal scales demonstrate adequate concurrent and discriminant validity in regards to constructs that measure emotions. However, when it came to constructs that measure influencing one's partner, concurrent and discriminant validity was not adequately demonstrated. This may be due to

limitations of the scale developed for this study or the need for further research on the association between power and relational aggression.

### **Clinical Implications**

Modern psychotherapy is grounded on diagnosing the root cause of an undesirable factor based on measureable symptoms, and then developing and executing the appropriate treatment to reduce or eliminate the undesirable factor (Hamlin, 1958). Without an appropriate measure of the cause of the factor, the proper execution of effective treatments is unlikely. If a measure is unable to differentiate between different types of aggression, efficiently developing and executing the appropriate treatments for each type is less likely. Instrumental and reactive romantic aggressions share measurable behaviors in regards to love withdrawal, but the root causes behind these behaviors are dissimilar, thus, will necessitate differing treatments. For example, a partner that utilizes instrumental love withdrawal will more likely benefit from empathy training whereas a partner that uses reactive love withdrawal may profit more from anger management education or challenging HAB.

These results demonstrate that for emerging adults, romantic relational aggression has a negative association with relationship stability and that social sabotage has a negative association with relationship quality. Considering that emerging adulthood is the time where relationship patterns are still developing (Dornbusch, 1989), emerging adulthood may be a valuable time for intervention before habits are formed. Accordingly, interventions that target the root cause behind the use of relational aggression may be useful in lowering emerging adults' use of romantic relational aggression and benefit their future relationships.

### **Strengths, Limitations, and Suggestions for Further Research**

This study is the first to examine the motivations of romantic relational aggression. This

study provides initial evidence that love withdrawal behaviors can be instrumental and reactive in nature and that social sabotage is perhaps a more strongly instrumental than reactive in nature. This study also began to explore the differences in association between instrumental and reactive love withdrawal, social sabotage, and theoretically related constructs (e.g. trait anger) in a manner that confirmed some past research and suggested the need for further research.

In particular, further research is needed to understand the relationship between power and romantic relational aggression. For example, it is unclear why reactive love withdrawal is related to greater relationship power but not greater relationship efficacy. Further research is needed to understand these results and to understand what types of relational aggression are done by more powerful partners in an attempt to maintain power and what types are done by less powerful partners in an attempt to gain more power. Further research is also needed to test whether the instrumental love withdrawal scale is related to positive outcome expectations for aggression.

A particular limitation of this study was sample size. When it came to predicting the effects of the different relational aggression scales, the sample was too small to adequately detect small or medium effect sizes. A larger sample would have increased my confidence in the results of the longitudinal analysis. It is also important to acknowledge that this sample was made up of mostly women. As there were not enough men in the sample to test gender differences, it is unclear at this point whether the factor structure of the love withdrawal and social sabotage subscales or the associations between these subscales and other constructs are equally accurate the same for men and women. While I was able to test means differences between men and women, I strongly recommend that those results be viewed tentatively: with such a small sample of men it is unlikely this study's results are representative of the larger population of emerging adult men. Likewise, the sample of men is inadequate to know if the social sabotage measure

has adequate reliability, as evidenced by each sample of men producing a different result. There is debate over whether women use relational aggression more than men, with some studies finding women do engage in more relational aggression (e.g. Carroll et al., 2010) and some studies finding they do not (e.g. Linder et al., 2002). If women do use relational aggression more, it would be interesting to test whether this could be explained by power dynamics. Research suggests that husbands typically have more power in marital relationships (e.g., Ball, Cowan, & Cowan, 1995) and women, who are typically in the lower power position, are more likely to use covert means to influence their partner (Komter, 1989). Thus, a study that included more men would be able to examine how gender moderates the relationship between relationship power and the use of different types of relational aggression.

Another limitation of this is it only included one partner within each relationship. Further studies using dyadic data are needed to examine how an individual's use of relational aggression affects their partner. Also, the participants in these studies were predominantly White emerging adults enrolled social science courses who were in exclusive dating relationships. Thus, these results may not generalize to more diverse populations, emerging adults not in college, or married populations. Consequently, further studies are needed to replicate these results in more diverse populations.

## **Conclusion**

In line with theories of general aggression that propose that aggressive acts are committed both reactively and instrumentally (e.g. Dodge & Coie, 1987) and research that has found that relational aggression can be both reactive and instrumental in peer relationships (e.g., Little et al., 2003; Murray-Close et al., 2010), this study found that love withdrawal in emerging adult romantic relationships can be distinguished by instrumental and reactive motivations.

Surprisingly, social sabotage behaviors were not distinguishable by motivational factors although social sabotage was also more strongly associated with instrumental love withdrawal than reactive love withdrawal suggesting that social sabotage may be driven mainly by instrumental motivations. This study also demonstrated that reactive and instrumental love withdrawal are associated with different constructs and combining the two together may cause substantial differences to be lost. This suggests that future research on romantic relational aggression would benefit from separating love withdrawal according to motivation type in order to better understand the phenomenon of romantic relational aggression.



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## Appendix A - Tables

**Table 1. Study 1a Demographic Characteristics of Participants**

Characteristic	Total ( <i>N</i> = 170)	
	Frequency	Percent
<b>Race</b>		
White	158	92.9%
Latino	11	6.5%
Asian	6	3.5%
African American	5	2.9%
Native American	4	2.4%
Other	2	1.2%
<b>Sex</b>		
Male	34	20%
Female	136	80%
<b>Sexual Partner</b>		
Opposite Sex Partner	167	98.2%
Same Sex Partner	3	1.8%
<b>Mean Years (<i>SD</i>)</b>		
Age	19.43 (1.74)	
Relationship Length	1.80 (1.65)	

*Note.* Percentages in the racial category do not equal 100% due to the ability for participants to select multiple races.

**Table 2. Study 1a Correlations among Study Items ( $N = 170$ ).**

Variables	1	2	3	4	5	6	7	8	9	10	11	12
1. Item 1	-	.95**	.59**	.70**	.92**	.90**	.80**	.85**	.87**	.92**	.89**	.89**
2. Item 2	.53*	-	.57**	.71**	.93**	.94**	.87**	.91**	.91**	.94**	.92**	.86**
3. Item 3	.79**	.50**	-	.76**	.56**	.56**	.56**	.53**	.55**	.54**	.57**	.56**
4. Item 4	.53**	.84**	.57**	-	.71**	.71**	.66**	.66**	.67**	.72**	.74**	.70**
5. Item 5	.71**	.55**	.74**	.62**	-	.95**	.84**	.87**	.88**	.93**	.94**	.90**
6. Item 6	.45**	.78**	.50**	.86**	.62**	-	.91**	.93**	.92**	.96**	.94**	.89**
7. Item 7	.46**	.43**	.49**	.50**	.86**	.62**	-	.90**	.86**	.85**	.85**	.79**
8. Item 8	.31**	.75**	.35**	.73**	.50**	.86**	.54**	-	.90**	.92**	.87**	.81**
9. Item 9	.50**	.49**	.63**	.54**	.73**	.50**	.54**	.54**	-	.94**	.91**	.92**
10. Item 10	.32**	.63**	.37**	.74**	.54**	.73**	.46**	.54**	.54**	-	.96**	.93**
11. Item 11	.28**	.39**	.42**	.45**	.74**	.54**	.43**	.46**	.54**	.54**	-	.95**
12. Item 12	.19*	.41**	.31**	.55**	.45**	.74**	.39**	.43**	.46**	.54**	.75**	-

*Note:* Values below diagonal are for items 1-12 for Love Withdrawal; Values above diagonal are for items 1-12 for social sabotage.

\* $p < .05$ . \*\* $p < .01$  (two-tailed).

**Table 3. Study 1a Descriptive Statistics Based on Gender (N = 170).**

Measure	Mean	SD	Min.	Max.	Skewness	Kurtosis	Alpha (# of items)
Men (n = 34)							
Instrumental Love Withdrawal	1.80	1.16	1	6	1.89	4.09	.91 (4)
Reactive Love Withdrawal	2.86 <sup>a</sup>	1.74	1	7	.93	-.08	.91 (3)
Reputation Destruction Social Sabotage	1.40	1.09	1	5	2.57	5.11	.98 (4)
Social Pressure Social Sabotage	1.62	1.23	1	6	2.21	4.49	.83 (2)
Women (n = 136)							
Instrumental Love Withdrawal	1.97	1.29	1	7	1.58	2.44	.92 (4)
Reactive Love Withdrawal	3.49 <sup>a</sup>	1.59	1	7	.28	-.61	.89 (3)
Reputation Destruction Social Sabotage	1.21	.72	1	7	5.40	34.83	.94 (4)
Social Pressure Social Sabotage	1.56	1.09	1	6	2.38	5.63	.86 (2)

Note. <sup>a</sup> = significant difference between women and men

**Table 4. Study 1a Factor Loadings of the RRAM Love Withdrawal Scale (N = 170).**

Subscales and Items	Subscale factor loadings	
	1	2
Factor 1: Instrumental Motivations		
2. When I want something, I have given my partner the silent treatment until he/she gave me what I want.	<b>.719</b>	.182
6. I have ignored my partner or given him/her the “cold shoulder” to get what I want from him/her.	<b>.845</b>	.111
8. I have withheld affection or sex from my partner in order to get him/her to do something that I want.	<b>.953</b>	-.137
10. To pressure my partner to give in to my demands, I have not paid attention to him/her.	<b>.871</b>	-.057
Factor 2: Reactive Motivations		
1. I have given my partner the silent treatment when he/she hurt my feelings in some way.	-.094	<b>.935</b>
3. When my partner has upset me, I have intentionally ignored my partner.	-.045	<b>.916</b>
5. I have ignored my partner or given him/her the “cold shoulder” as payback for hurting me.	.207	<b>.706</b>

*Note.* Table 4 factors loadings are from the pattern matrix of an EFA in which principal axis factoring with promax rotation was used. Item 7, 9, 11, and 12 did not load on any factor and was dropped. Item 4 was dropped to multicollinearity with other items.



**Table 5. Study 1b Factor Loadings of the RRAM Love Withdrawal Scale (N = 166).**

Subscales and Items	Subscale factor loadings	
	1	2
Factor 1: Instrumental Motivations		
12. I have threatened to leave my partner to get my partner to do what I want.	<b>.876</b>	-.111
14. I have stopped talking to my partner until my partner has given in to my demands.	<b>.801</b>	.113
18. I have withheld physical affection from my partner to manipulate him/her into doing something.	<b>.875</b>	.049
26. I have deliberately hesitated in giving a kiss or hug to my partner in order to get him/her to do something I want.	<b>.769</b>	.145
28. I have canceled a date with my partner in order to get him/her to do something that I want.	<b>.903</b>	-.145
Factor 2: Reactive Motivations		
1. I have given my partner the silent treatment when he/she hurt my feelings in some way.	-.108	<b>.867</b>
9. When my partner has made me sad or mad, I have not paid attention to him/her	.235	<b>.624</b>
15. I have acted cold and aloof towards my partner when he/she has hurt my feelings or made me mad.	.053	<b>.787</b>
23. If my partner has made me mad or sad, I have deliberately taken longer than usual in responding to a message from him/her.	-.060	<b>.885</b>
25. I have deliberately hesitated in giving a kiss or hug to my partner when he/she has done something that has made me sad or angry.	-.031	<b>.830</b>

*Note.* Table 5 factors loadings are from the pattern matrix of an EFA in which principal axis factoring with promax rotation was used.

**Table 6. Study 1b Descriptive Statistics Based on Gender (N = 166).**

Measure	Mean	SD	Min.	Max.	Skewness	Kurtosis	Alpha (# of items)
	Men ( <i>n</i> = 29)						
Instrumental Love Withdrawal	1.99 <sup>a</sup>	1.50	1	6	1.29	.48	.97 (5)
Reactive Love Withdrawal	2.18	1.33	1	5.20	1.03	-.10	.93 (5)
Social Sabotage	1.82 <sup>a</sup>	1.20	1	4.50	1.11	-.28	.98 (8)
	Women ( <i>n</i> = 137)						
Instrumental Love Withdrawal	1.36 <sup>a</sup>	.72	1	4.60	2.51	6.22	.88 (5)
Reactive Love Withdrawal	2.56	1.37	1	7.00	.82	.02	.90 (5)
Social Sabotage	1.19 <sup>a</sup>	.51	1	4.13	3.92	16.74	.91 (8)

Note. <sup>a</sup>= significant difference between women and men

**Table 7. Study 2 W1 Demographic Characteristics of Participants**

Characteristic	Total ( <i>N</i> = 118)	
	Frequency	Percent
Race		
White	105	88.98%
Latino	13	11.02%
Asian	3	2.54%
African American	2	1.69%
Native American	5	4.24%
Other	0	0%
Sex		
Male	28	23.7%
Female	190	76.3%
Sexual Partner		
Opposite Sex Partner	116	98.31%
Same Sex Partner	2	1.70%
<hr/>		
Mean Years ( <i>SD</i> )		
Age	19.42 (1.34)	
Relationship Length	1.66 (1.29)	

*Note.* Percentages in the racial category do not equal 100% due to the ability for participants to select multiple races.

**Table 8. Study 2 Descriptive Statistics Based on Gender (N = 118).**

Measure	Mean	SD	Min.	Max.	Skewness	Kurtosis	Alpha (# of items)
	Men ( <i>n</i> = 28)						
Instrumental Love Withdrawal	1.29	.61	1	3.33	2.57	6.05	.89 (3)
Reactive Love Withdrawal	2.64 <sup>a</sup>	1.07	1	4.60	.13	-1.07	.83 (5)
Social Sabotage	1.14	.26	1	1.75	1.73	1.53	.39 (4)
	Women ( <i>n</i> = 90)						
Instrumental Love Withdrawal	1.41	.73	1	5	2.51	7.49	.88 (3)
Reactive Love Withdrawal	3.67 <sup>a</sup>	1.65	1	7	.27	-.94	.90 (5)
Social Sabotage	1.15	.46	1	4	4.59	23.72	.91 (4)

Note. <sup>a</sup>= significant difference between women and men

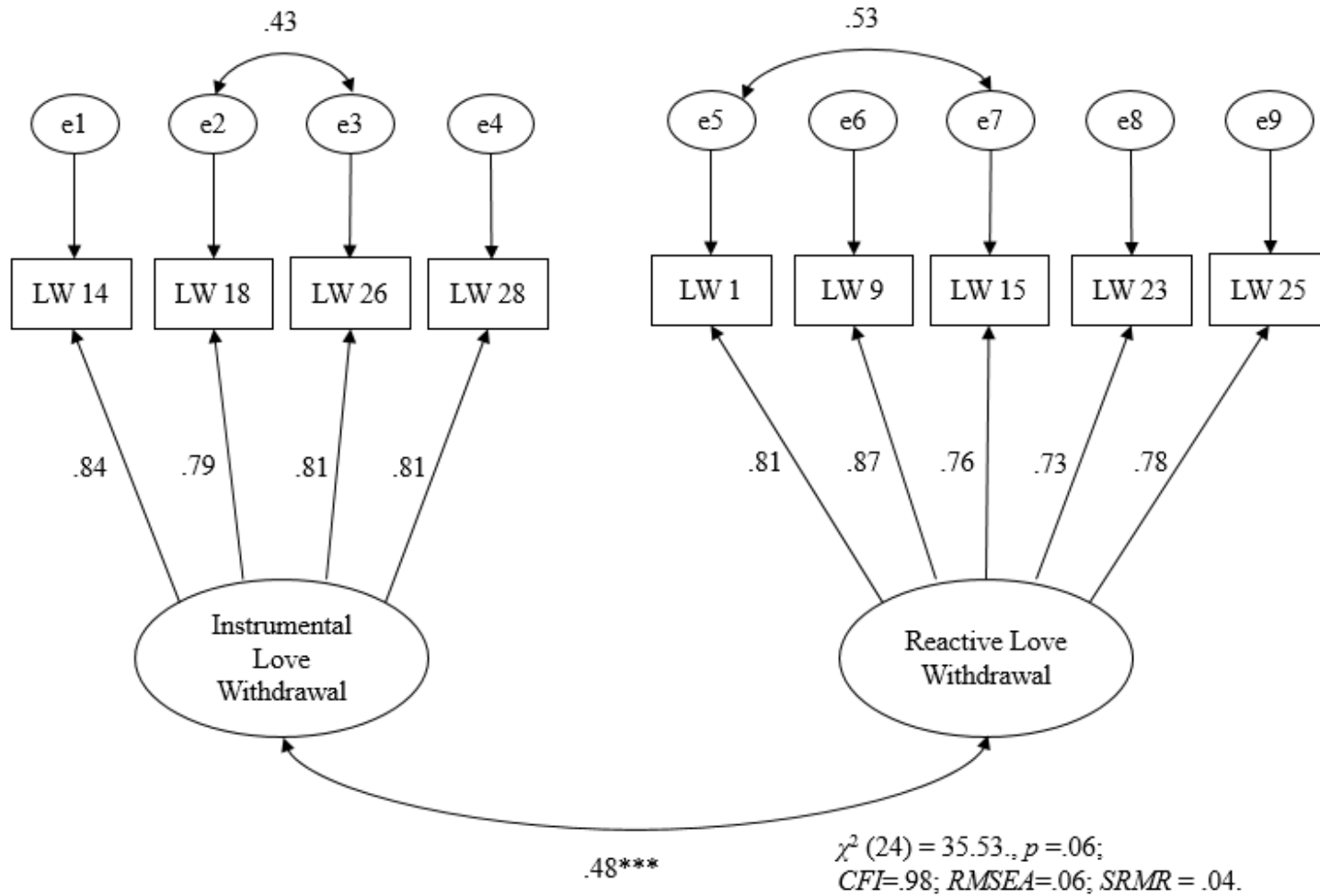
**Table 9. Study 2 Correlations of Relational Aggression Scales and other Scales and Means and Standard Deviations for Items (N = 118).**

Variables	Social Sabotage	Reactive LW	Instrumental LW	Total LW	Mean (SD)
1. Social Sabotage					1.14 (.42)
2. Reactive LW	.14				3.42 (1.59)
3. Instrumental LW	.55**	.40**			1.38 (.70)
4. Relationship Quality	-.27**	-.12	-.13	-.13	6.23 (1.12)
5. Relationship Stability	-.24**	-.32**	-.21**	-.33**	2.93 (.98)
6. Social Desirability	-.11	-.43***	-.16	-.41**	7.31 (2.70)
7. Religious Salience	-.08	-.07	-.06	.04	2.12 (.95)
8. Empathy	-.39**	-.07	-.28**	-.13	3.37 (.58)
9. Trait Dominance	.12	.19*	.20*	.21*	3.00 (1.11)
10. Relationship Efficacy	-.25**	-.15	-.23*	-.19*	5.48 (1.07)
11. Self-Relationship Power	.04	.24**	.13	.24**	3.73 (1.02)
12. Partner Relationship Power	.21*	-.06	.05	-.04	3.19 (1.00)
13. Impulsivity	.18*	.21*	.16	.22*	1.63 (.63)
14. Trait anger	.12	.36**	.20*	.36**	3.12 (1.24)
15. Neuroticism	.00	.33*	.01	.38*	2.43 (.73)
16. HAB	.12	.21*	.14	.22*	.88 (.46)
17. Anger from HAB	-.05	.29**	.04	.27**	1.78 (.50)
18. Revenge Endorsement	.18	.16	.20*	.19*	2.52 (1.05)

Note. LW = Love Withdrawal. \*p<.05, \*\*p<.01, \*\*\*p<.001

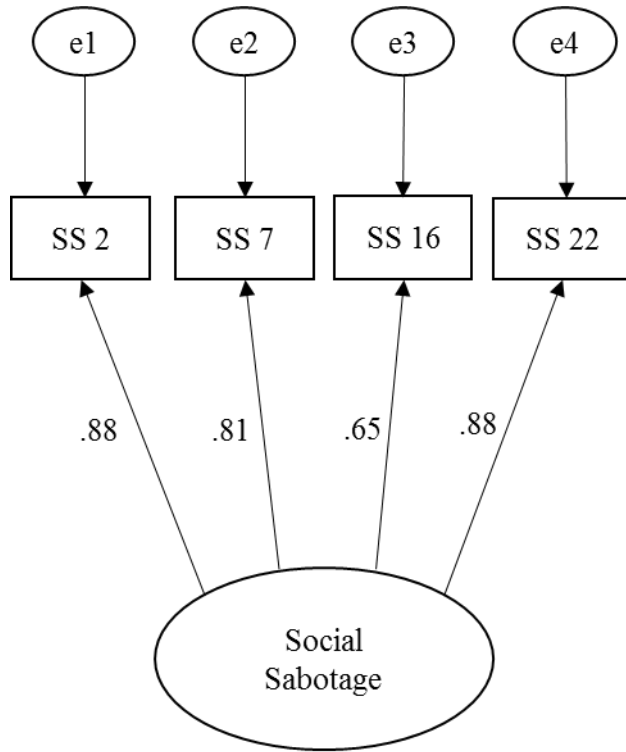
## Appendix B - Figures

Figure 1. Love Withdrawal CFA



\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

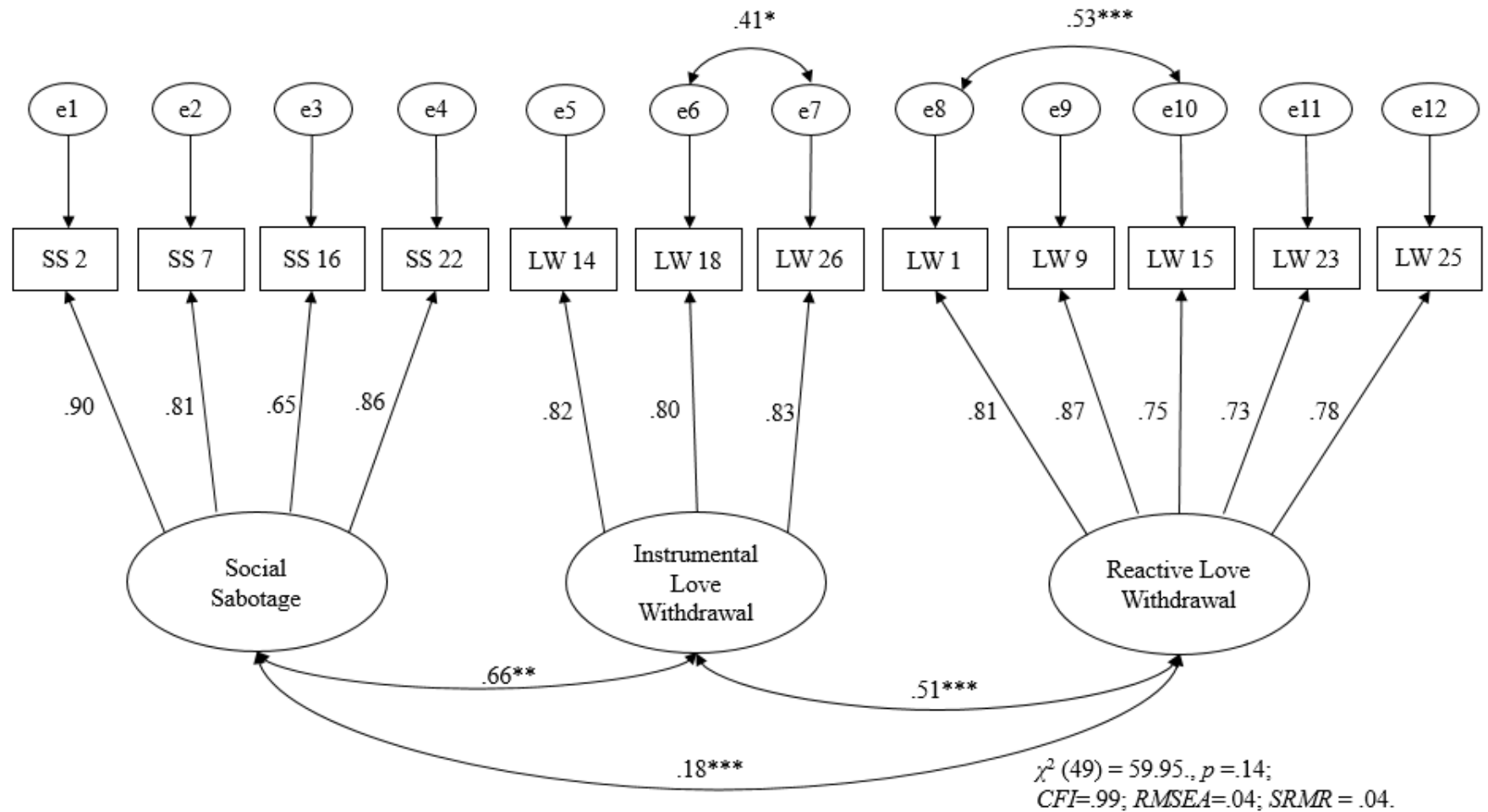
**Figure 2. Social Sabotage CFA**



$\chi^2 (2) = 2.11, p = .35; CFI = 1.00;$   
 $RMSEA = 0.02; SRMR = 0.02.$

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

Figure 3. The RRAM Scale CFA



\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$



## **Appendix C - The Couples Relational Aggression and Victimization**

### **Scale (CRAViS)**

Variable Values:

1, 2 = Not at all true; 3, 4, 5 = Sometimes true; 6, 7 = Very true

Love withdrawal:

1. My partner gives me the silent treatment when I hurt his/her feelings in some way
2. My partner has intentionally ignored me until I give in to his/her way about something
3. My partner ignores or gives me the “cold shoulder” when she/he is angry with me
4. My partner withholds affection or sex from me when he/she is angry with me
5. My partner does not pay attention to me when she/he is mad at me
6. My partner has threatened to leave me to get me to do what she/he wants.

Social sabotage:

1. My partner has gone “behind my back” and shared private information about me with other people
2. When my partner has been mad at me, he/she recruits other people to “take sides” with him/her and gets them upset with me too
3. When my partner has been angry at or jealous of me, he/she has tried to damage my reputation by gossiping about me or by passing on negative information about me to other people
4. When I do something that makes my partner angry, he/she tries to embarrass me or make me look stupid in front of others
5. My partner has spread rumors or negative information about me to be mean
6. My partner has threatened to disclose negative information about me to others in order to get me to do things he/she wants.

## Appendix D - RRAM Scale used in Study 1a

Prompt: Within your current romantic relationship, please indicate how true each statement is.

Variable Values: 1= Not at all; 4 = Sometimes true; 7 = Very True;

Reactive		Instrumental	
LW 1	I have given my partner the silent treatment when he/she hurt my feelings in some way.	LW 2	When I want something, I have given my partner the silent treatment until he/she gave me what I want.
LW 3	When my partner has upset me, I have intentionally ignored my partner.	<del>LW 4</del>	<del>I have intentionally ignored my partner until he/she gave in to my way about something.</del>
LW 5	I have ignored my partner or given him/her the “cold shoulder” as payback for hurting me.	LW 6	I have ignored my partner or given him/her the “cold shoulder” to get what I want from him/her.
<del>LW 7</del>	<del>I have withheld affection or sex from my partner when I have been angry with him/her.</del>	LW 8	I have withheld affection or sex from my partner in order to get him/her to do something that I want.
<del>LW 9</del>	<del>When I have been mad at my partner, I have not paid attention to him/her.</del>	LW 10	To pressure my partner to give in to my demands, I have not paid attention to him/her.
<del>LW 11</del>	<del>I have threatened to leave my partner as a way of getting back at him/her for hurting me.</del>	<del>LW 12</del>	<del>I have threatened to leave my partner to get my partner to do what I want.</del>
SS 1	I have gone “behind my partner’s back” and shared private information about my partner with other people as a way of getting back at him/her for hurting me.	<del>SS 2</del>	<del>I have gone “behind my partner’s back” and shared private information about my partner with other people to pressure my partner to give in to my demands.</del>
SS 3	When I have been mad at my partner, I had other people “take sides” with me and against my partner.	<del>SS 4</del>	<del>To get my partner to do something that I want, I have had other people “take sides” with me and against my partner.</del>
<del>SS 5</del>	<del>When my partner has made me angry or jealous, I have tried to damage his/her reputation by gossiping about my partner or by sharing negative information about him/her to other people.</del>	<del>SS 6</del>	<del>I have tried to damage my partner’s reputation by gossiping about my partner or by sharing negative information about him/her to other people until he/she gave in to my way about something.</del>
SS 7	When my partner has done something that made me angry or that hurt me, I have tried to embarrass my partner or make him/her look stupid in front of others.	SS 8	When I have wanted something, I have tried to embarrass my partner or make him/her look stupid in front of others, until he/she gives me what I want.
<del>SS 9</del>	<del>If my partner upset me or hurt me, I have spread rumors or negative information about my partner to get back at them.</del>	<del>SS 10</del>	<del>I have spread rumors or negative information about my partner to get what I want from him/her.</del>

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<del>SS 11</del>	<del>I have threatened to disclose negative information about my partner to others when my partner made me mad or upset.</del>	SS 12	I have threatened to disclose negative information about my partner to others in order to get my partner to do things I want.
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*Note.* Higher scores indicate higher relational aggression. These are the items that were examined in the EFA during Study 1a. Crossed out items were removed during Study 1a due to cross-loadings, poor extraction, or high multicollinearity.

## Appendix E - RRAM Scale used in Study 1b

Prompt: Within your current romantic relationship, please indicate how true each statement is.

Variable Values: 1= Not at all; 4 = Sometimes true; 7 = Very True;

LW 1	I have given my partner the silent treatment when he/she has made me mad or hurt my feelings in some way.	LW 2	<del>When I want something, I have given my partner the silent treatment until he/she gave me what I want.</del>
LW 3	<del>When my partner has made me angry or sad, I have intentionally ignored my partner.</del>	LW 4	<del>I have intentionally ignored my partner until he/she gave in to my way about something.</del>
LW 5	<del>I have ignored my partner or given him/her the “cold shoulder” as payback for hurting me or angering me.</del>	LW 6	<del>I have ignored my partner or given him/her the “cold shoulder” to get what I want from him/her.</del>
LW 7	<del>I have withheld affection or sex from my partner when I have been angry with him/her or when he/she has hurt me.</del>	LW 8	<del>I have withheld affection or sex from my partner in order to get him/her to do something that I want.</del>
LW 9	<del>When my partner has made me sad or mad, I have not paid attention to him/her.</del>	LW 10	<del>To pressure my partner to give in to my demands, I have not paid attention to him/her.</del>
LW 11	<del>I have threatened to leave my partner as a way of getting back at him/her for making me sad or angry.</del>	LW 12	<del>I have threatened to leave my partner to get my partner to do what I want.</del>
LW 13	<del>When my partner has made me mad or hurt me, I have stopped talking to my partner.</del>	LW 14	<del>I have stopped talking to my partner until my partner has given in to my demands.</del>
LW 15	<del>I have acted cold and aloof towards my partner when he/she has hurt my feelings or made me mad.</del>	LW 16	<del>I have acted cold and aloof towards my partner as a way to get him/her to do something I want.</del>
LW 17	<del>I have withheld physical affection from my partner when he/she has made me sad or angry.</del>	LW 18	<del>I have withheld physical affection from my partner to manipulate him/her into doing something.</del>
LW 19	<del>I have turned away my partner’s sexual advances in order to get back at my partner for hurting me or making me mad.</del>	LW 20	<del>I have turned away my partner’s sexual advances until he/she gives me what I want.</del>
LW 21	<del>When my partner has hurt my feelings or made me angry, I have made comments about possibly ending the relationship.</del>	LW 22	<del>I have made comments about possibly ending the relationship with my partner in order to get him/her to give in to me.</del>
LW 23	<del>If my partner has made me mad or sad, I have deliberately taken longer than usual in responding to a message from him/her.</del>	LW 24	<del>I have intentionally delayed responding to a message from my partner as a way to get him/her to do something I want.</del>
LW 25	<del>I have deliberately hesitated in giving a kiss or hug to my partner when he/she</del>	LW 26	<del>I have deliberately hesitated in giving a kiss or hug to my partner in order to get him/her to do something I want.</del>

	has done something that has made me sad or angry.		
<del>LW 27</del>	<del>I have canceled a date with my partner when they have hurt me or made me angry.</del>	LW 28	I have canceled a date with my partner in order to get him/her to do something that I want.
<del>SS 1</del>	<del>I have gone “behind my partner’s back” and shared private information about my partner with other people as a way of getting back at him/her for hurting me or making me angry.</del>	SS 2	I have gone “behind my partner’s back” and shared private information about my partner with other people to pressure my partner to give in to my demands.
SS 3	When my partner has made me sad or mad, I have had other people “take sides” with me and against my partner.	<del>SS 4</del>	<del>To get my partner to do something that I want, I have had other people “take sides” with me and against my partner.</del>
<del>SS 5</del>	<del>When my partner has made me angry or sad, I have tried to damage his/her reputation by gossiping about my partner or by sharing negative information about him/her to other people.</del>	SS 6	I have tried to damage my partner’s reputation by gossiping about my partner or by sharing negative information about him/her to other people until he/she gave in to my way about something.
SS 7	When my partner has done something that made me angry or that hurt me, I have tried to embarrass my partner or make him/her look stupid in front of others.	<del>SS 8</del>	<del>When I have wanted something, I have tried to embarrass my partner or make him/her look stupid in front of others, until he/she gives me what I want.</del>
<del>SS 9</del>	<del>If my partner has made me mad or hurt me, I have spread rumors or negative information about my partner to get back at him/her.</del>	SS 10	I have spread rumors or negative information about my partner to get what I want from him/her.
<del>SS 11</del>	<del>I have threatened to disclose negative information about my partner to others when my partner has made me mad or sad.</del>	SS 12	I have threatened to disclose negative information about my partner to others in order to get my partner to do things I want.
<del>SS 13</del>	<del>To hurt my partner after he/she has made me mad or sad, I have asked a friend/family member to pressure my partner to agree with me about something.</del>	SS 14	In order to make my partner feel like he/she needs to give me what I want, I have asked a friend/family member to pressure my partner to agree with me about something.
<del>SS 15</del>	<del>I have involved friends or family in disagreements between me and my partner as payback for hurting me or making me angry.</del>	SS 16	I have involved friends or family in disagreements between me and my partner so they would persuade my partner to give me what I want.
SS 17	When my partner has made me sad or mad, I have told others to give my partner the silent treatment.	<del>SS 18</del>	<del>I have told others to give my partner the silent treatment until he/she does something I want him/her to do.</del>

SS 19	When my partner has hurt me or made me angry, I have told other people about what he/she did and asked them to take my side to get back at my partner for hurting me.	SS 20	<del>I have told a friend/family member about something upsetting in my relationship in hopes that this person would help me get what I want from my partner.</del>
SS 21	<del>When my partner has angered or saddened me, I have tried to get others to choose my side of the fight.</del>	SS 22	During a fight with my partner, I have tried to get others to “take my side” to get what I want from my partner.

*Note.* Higher scores indicate higher relational aggression. These are the items that were examined in the EFA during Study 1b. Crossed out items were removed during Study 1b due to cross-loadings, poor extraction, or high multicollinearity.

## Appendix F - RRAM Scale used in Study 2

Prompt: Within your current romantic relationship, please indicate how true each statement is.

Variable Values: 1= Not at all; 4 = Sometimes true; 7 = Very True;

LW 1	I have given my partner the silent treatment when he/she has made me mad or hurt my feelings in some way.	<del>LW 12</del>	<del>I have threatened to leave my partner to get my partner to do what I want.</del>
LW 9	When my partner has made me sad or mad, I have not paid attention to him/her.	LW 14	I have stopped talking to my partner until my partner has given in to my demands.
LW 15	I have acted cold and aloof towards my partner when he/she has hurt my feelings or made me mad.	LW 18	I have withheld physical affection from my partner to manipulate him/her into doing something.
LW 23	If my partner has made me mad or sad, I have deliberately taken longer than usual in responding to a message from him/her.	LW 26	I have deliberately hesitated in giving a kiss or hug to my partner in order to get him/her to do something I want.
LW 25	I have deliberately hesitated in giving a kiss or hug to my partner when he/she has done something that has made me sad or angry.	<del>LW 28</del>	<del>I have canceled a date with my partner in order to get him/her to do something that I want.</del>
<del>SS 3</del>	<del>When my partner has made me sad or mad, I have had other people “take sides” with me and against my partner.</del>	SS 2	I have gone “behind my partner’s back” and shared private information about my partner with other people to pressure my partner to give in to my demands.
SS 7	When my partner has done something that made me angry or that hurt me, I have tried to embarrass my partner or make him/her look stupid in front of others.	<del>SS 12</del>	<del>I have threatened to disclose negative information about my partner to others in order to get my partner to do things I want.</del>
<del>SS 17</del>	<del>When my partner has made me sad or mad, I have told others to give my partner the silent treatment.</del>	SS 16	I have involved friends or family in disagreements between me and my partner so they would persuade my partner to give me what I want.
<del>SS 19</del>	<del>When my partner has hurt me or made me angry, I have told other people about what he/she did and asked them to take my side to get back at my partner for hurting me.</del>	SS 22	During a fight with my partner, I have tried to get others to “take my side” to get what I want from my partner.

*Note.* Higher scores indicate higher relational aggression. These are the items that were determined in the EFA of Study 1b and then examined using a new sample with a CFA during Study 2. Crossed out items were removed during Study 2 due to cross-loadings or high multicollinearity.

## Appendix G - Final Version of the RRAM Scale

Prompt: Within your current romantic relationship, please indicate how true each statement is.

Variable Values: 1= Not at all; 4 = Sometimes true; 7 = Very True.

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### Instrumental Love Withdrawal Subscale

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LW 14: I have stopped talking to my partner until my partner has given in to my demands.

---

LW 18: I have withheld physical affection from my partner to manipulate him/her into doing something.

---

LW 26: I have deliberately hesitated in giving a kiss or hug to my partner in order to get him/her to do something I want.

---

### Reactive Love Withdrawal Subscale

---

LW 1: I have given my partner the silent treatment when he/she has made me mad or hurt my feelings in some way.

---

LW 9: When my partner has made me sad or mad, I have not paid attention to him/her.

---

LW 15: I have acted cold and aloof towards my partner when he/she has hurt my feelings or made me mad.

---

LW 23: If my partner has made me mad or sad, I have deliberately taken longer than usual in responding to a message from him/her.

---

LW 25: I have deliberately hesitated in giving a kiss or hug to my partner when he/she has done something that has made me sad or angry.

---

### Social Sabotage Subscale

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SS 2: I have gone “behind my partner’s back” and shared private information about my partner with other people to pressure my partner to give in to my demands.

---

SS 7: When my partner has done something that made me angry or that hurt me, I have tried to embarrass my partner or make him/her look stupid in front of others.

---

SS 16: I have involved friends or family in disagreements between me and my partner so they would persuade my partner to give me what I want.

---

SS 22: During a fight with my partner, I have tried to get others to “take my side” to get what I want from my partner.

---