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Interpersonal Trauma, Posttraumatic Stress and Depression

Brennan J. Young
University of Denver

INTERPERSONAL TRAUMA, POSTTRAUMATIC STRESS AND DEPRESSION

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Brennan J. Young

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Advisor: Wyndol Furman, Ph.D.

Author: Brennan J. Young
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Advisor: Wyndol Furman, Ph.D.
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Abstract

Dating aggression is common among emerging adults, and women who experience aggression from a dating partner are at risk for elevated depression and posttraumatic stress (Dutton et al., 2006). Although some women end their relationships as a result of aggression, other women remain committed to their partner, and aggression tends to escalate over time. The current study explored the role that depression and posttraumatic stress play in ending aggressive dating relationships as well as changes in these symptoms after ending such a relationship. The current study also sought to identify factors predictive of individual differences in emerging adults' commitment to their aggressive dating relationships. A sample of 148 emerging adult women currently in an aggressive dating relationship completed questionnaires about themselves and their relationship; measures of rejection sensitivity, self-worth, and romantic relational style were included as predictors of the Investment Model variables (e.g., investment, satisfaction, quality of alternatives, and commitment; Rusbult, 1980). Two assessments were completed six months apart. Neither depression nor posttraumatic stress predicted ending an aggressive relationship. However, ending an aggressive relationship was associated with experiencing less physical aggression, which mediated reductions in posttraumatic stress. A more avoidant romantic style indirectly predicted commitment through relationship satisfaction and investment. Both commitment and rejection sensitivity significantly predicted continuing an aggressive relationship six months later.

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Chapter One: Introduction

Study 1: Changes in Depression and Posttraumatic Stress after ending Physically, Sexually or Psychologically Aggressive Dating Relationships

Violence and aggression within romantic relationships continue to be a significant social problem in the United States. Lifetime estimates indicate that 41% of women in the United States have experienced physical or sexual aggression by a romantic partner (Walker, Logan, Jordan & Campbell, 2004). Many of these women are traumatized physically and emotionally by their experience of violence. Nearly half of women who are physically or sexually assaulted by a romantic partner require hospital services for physical injuries (Tjaden & Thoennes, 2000), and victims are three to five times more likely to suffer depression and posttraumatic stress than nonvictims (Dutton, et al., 2006; Walker et al., 2004). Further, physical and sexual aggression are nearly always accompanied by psychological aggression (White & Koss, 1991), which has been shown to contribute uniquely to symptoms of depression (Jordan, Campbell & Follingstad, 2010; Lawrence, Yoon, Langer & Ro, 2009), posttraumatic stress (Street & Arias, 2001; Tjaden & Thoennes, 1998), and physical health problems (Marshall, 1996).

Though the majority of research on relationship aggression has been conducted with married women, there is increasing recognition that aggression is also present in the dating relationships of emerging adults. Estimates of physical aggression (e.g., hitting, kicking, etc. with the intent to hurt) among college-aged dating couples vary widely but

range as high as nearly 50% (Murray & Kardatzke, 2007). Further, one-in-three college women report sexual aggression (e.g., unwanted sexual activity that may have been forced or otherwise coerced) from a dating partner (Humphrey & White, 2000). Psychological aggression usually precedes these forms of aggression, often beginning in the dating stage of relationships (O'Leary, 1999). Over one-third of adolescent girls report experiencing psychological dating aggression (Gagne, Lavoie & Hebert, 2005), and this estimate dramatically increases to nearly 80% of college women (Murray & Kardatzke, 2007).

These forms of aggression do not always lead to the dissolution of dating relationships; the majority (50-77%) of young women continues dating an aggressive partner (Lo & Sporakowski, 1989). In fact, 30% of women who experienced physical aggression during courtship eventually married the perpetrator (Roscoe & Benaske, 1985). Unfortunately, psychological aggression among newlywed couples tends to remain stable across at least the first several years of marriage (Fritz & O'Leary, 2004). Similarly, physical aggression in ongoing relationships tends to escalate in frequency and intensity (Stets & Pirog-Good, 1987) with worsening effects on mental health (Hedtke et al., 2008; Jones, Hughes, & Unterstaller, 2001). Thus, emerging adulthood is a critical period for disrupting the development of aggressive relationships before they become more committed and long-lasting.

The responsibility for aggression lies solely with the perpetrator, making it essential to continue developing interventions to reduce perpetration. Nevertheless, intervention efforts may also benefit from understanding the responses of victims that protect against future aggression. One such potential response is to undertake the process

of ending an aggressive relationship (Okun, 1986). To the extent that ending a relationship serves to deter future aggression, it may also serve to reduce symptoms of depression and posttraumatic stress. However, the process by which emerging adults end aggressive dating relationships is not well-understood, and empirical support for the link between ending a relationship and experiencing less aggression has been mixed (Anderson & Saunders, 2003). Thus, the current study examined factors influencing the ending of emerging adult women's aggressive dating relationships as well changes in subsequent aggression and symptoms of psychopathology after ending the relationship.

Ending an aggressive relationship. The process of ending an aggressive relationship can be difficult. The type and severity of aggression is not consistently related to actually ending the relationship (see Follingstad, 2009), and many women who attempt to leave their partner have difficulty doing so. Approximately two-thirds of adult women seeking shelter from physical aggression make at least one unsuccessful attempt to end the relationship, some making as many as five attempts or more (Griffing et. al., 2002). In a follow-up study of women seeking shelter, Bybee and Sullivan (2005) reported that nearly 20% of women were still romantically involved with their aggressive partner three years later. The extent to which emerging adult women who experience relationship aggression also make unsuccessful attempts to end their relationship is unknown; however, given the fairly high proportion that ultimately remain with their partner (Roscoe & Benaske, 1985), the process of ending aggressive dating relationships seems to be difficult for emerging adults as well.

Depression is one of the most common effects of relationship aggression (Walker et al., 2004) and may interfere with a woman's ability to end the relationship. Aggression

can be unpredictable, uncontrollable, and highly stressful. Consistent with Seligman's (1975) theory of depression, the ensuing sense of helplessness after experiencing aggression may leave an individual with diminished belief in her ability to control the course of the relationship. Feelings of helplessness and depression may erode her motivation and belief in her ability to escape the source of aggression. Depression also is associated with diminished ability to concentrate, problem-solve and make decisions (APA, 1994; Jones, Hughes & Unterstaller, 2001). Thus, depression may impair a woman's ability to develop a plan of action for ending a relationship and to effectively overcome barriers to enacting the plan. Finally, symptoms of depression may contribute to social isolation (Russell, 1982; Vandervoort, 1999), inhibiting women's ability to seek help from outside the relationship (Sullivan & Bybee, 1999).

Symptoms of posttraumatic stress may also affect women's ability to cope with relationship aggression. Women who experience relationship aggression are prone to develop symptoms of posttraumatic stress (Dutton, et al., 2006; Street & Arias, 2001) and may exhibit hypervigilance to cues or intrusive thoughts and sensations related to the aggression (Callahan, Tolman, & Saunders, 2003; Jones, Hughes, & Unterstaller, 2001). Like depression, these symptoms of posttraumatic stress may interfere with active problem-solving that is necessary to end an aggressive relationship (Foa, 2000). Further, Van der Kolk (1989) has suggested that coping with posttraumatic stress through affective avoidance (e.g., dissociation, numbing & constriction of affect) may serve to lessen women's emotional reactions to aggression; unfortunately, diminished emotional reactivity may also diminish motivation to end the relationship.

Although it seems likely that symptoms of depression and posttraumatic stress would influence women's ability to end an aggressive relationship, the role that these symptoms may play remains theoretical at this point in the literature (e.g., Barnett, 2001; Foa, 2000; Foa, Cascardi, Zoellner, & Feeny, 2000; van der Kolk, 1989). Recently, college women who had previously experienced a sexual assault (not necessarily by their current dating partner) were asked to read a vignette about a physically and psychologically aggressive dating relationship and to make hypothetical ratings of factors that would influence their commitment to that relationship (e.g., satisfaction, emotional investment, perceived quality of alternative dating partners). Women's self-reported symptoms of posttraumatic stress and depression were found to indirectly predict level of relationship commitment (Rhatigan, Shorey & Nathanson, 2011). Nevertheless, the associations reported in that study were hypothetical, and it remains unclear whether symptoms of psychological distress actually prolong the process of leaving. Thus, empirical validation of the influence of depression and posttraumatic stress on ending a relationship is necessary.

In addition to psychological symptoms, relationship commitment has been theorized to be an important predictor of ending romantic relationships (Duemmler & Kobak, 2001; Le & Agnew, 2003; Rusbult, Martz, & Agnew, 1998). However, among relationships in which aggression is present, the link between commitment and ending the relationship has been mixed. Several studies have found that physical and psychological aggression significantly predict lower commitment (e.g., Rhatigan & Street, 2005; Shortt, Capaldi, Kim, & Owen, 2006) which in turn predicts leaving an aggressive partner (Rusbult & Martz, 1995). Yet other studies have failed to find this link. In particular,

among adult women residing in domestic violence shelters, physical aggression was not related to measures of commitment (Rhatigan & Axsom, 2006); neither was psychological or sexual aggression related to women's attempts to leave an aggressive partner (Dutton, Goodman & Bennett, 1999). Further, most of these studies have focused on married, adult women residing in domestic violence shelters, and less is known about the links among aggression, commitment, and relationship outcome in the dating relationships of emerging adults. However, in one study of college-aged women experiencing relationship aggression, commitment was found unrelated to ending the aggressive relationship (Truman-Schramm, Cann, Calhoun & Vanwallendael, 2000).

Changes in aggression and psychological functioning after ending a relationship. The importance of understanding factors that influence the ending of a relationship is predicated upon the assumption that ending an aggressive relationship will stop the aggression and improve psychological adjustment. This is particularly important as the effects of aggression on mental health appear to be cumulative (Arata, 2002). Specifically in regard to depression, women who continued to experience aggression over several years were more depressed and had less ability to care for themselves than women who were no longer experiencing aggression (Campbell & Soeken, 1999).

Logically, ending a relationship would seem to be an effective means to prevent continued aggression, but it is important to empirically evaluate this assumption. As pointed out by Anderson and Saunders (2003), relationship termination cannot necessarily be equated with cessation of violence. In fact, among adult women, separating from an abusive husband is often followed by an *increase* in stalking behavior and violence (Bachman & Saltzman, 1995; Fleury, Sullivan & Bybee, 2000). Further,

continued interaction with an aggressive partner (even a former partner) places women at risk for experiencing continued aggression. Continuing interaction is particularly likely among college students, who share social networks with their partner, may attend the same classes, and generally live in a common campus area (e.g., dormitories, cafeterias, and classrooms). To our knowledge, the effectiveness of ending a relationship as a means to stop relationship aggression has not been examined among dating couples.

Further, it is not clear that ending an aggressive relationship is associated with improvements in psychological functioning. Given that the psychological effects of relationship aggression appear to be cumulative, it seems likely that symptoms of depression and posttraumatic stress would not continue to worsen if aggression is no longer being experienced. Indeed, adult women who successfully ended their physically aggressive relationships subsequently reported lower depression and higher quality of life than women who had more difficulty ending their relationships (Sullivan & Bybee, 1999), suggesting that symptoms may actually improve if aggression is no longer being experienced. Nevertheless, among a sample of women participating in the National Survey of Families and Households, ending an aggressive relationship was not significantly related to decreases in depression, functional impairment, or improvement in life satisfaction five years later (Zlotnick, Johnson & Kohn, 2006). Further, many women who have experienced relationship aggression continue to experience symptoms of posttraumatic stress at least one year later (Mertin & Mohr, 2001).

Hypotheses. Ending an aggressive relationship may be an effective means for women to avoid future aggression and to reduce psychological distress. However, factors that influence the process by which emerging adults end aggressive dating relationships

are not well-understood. Further, it is not clear from the extant literature whether ending an aggressive relationship would actually serve to reduce aggression or psychological symptoms among emerging adults in dating relationships. Thus, the current study examined the role that depression and posttraumatic stress play in ending aggressive dating relationships and assessed for change in aggression, depression, and posttraumatic stress after ending such a relationship.

In addressing these gaps in the literature, the current study examined two primary hypotheses. First, we hypothesized that symptoms of depression and posttraumatic stress would significantly influence whether emerging adult women ended an aggressive dating relationship. Specifically, we expected that more frequent relationship aggression (physical, sexual, and psychological) would be concurrently related to higher levels of depression and posttraumatic stress. We then theorized that the cognitive and emotional features of these symptoms (e.g., lack of energy, social isolation, reduced problem-solving, affective avoidance, etc.) would make it difficult for women to end their aggressive relationship. Thus, higher depression and posttraumatic stress were expected to predict a higher likelihood of remaining in the relationship six months later—relative to the likelihood of other emerging adult women in a college setting who also experienced relationship aggression but reported lower psychological symptoms.

Second, we hypothesized that women who ended an aggressive dating relationship would subsequently experience less aggression as well as fewer symptoms of depression and posttraumatic stress. It was expected that women who ended their relationship would have less contact with their aggressive partner and subsequently

experience aggression less often. In turn, we expected that experiencing less aggression would be associated with reductions in symptoms of depression and posttraumatic stress.

Study 2: Predicting Commitment in Emerging Adults' Physically, Sexually and Psychologically Aggressive Dating Relationships

Physical, sexual, and psychological aggression within romantic relationships is a significant social problem, affecting an estimated 1.5 million adult women in the United States each year (Tjaden & Thoennes, 2000). Patterns of aggression emerge early in relationships, often during courtship. Several estimates indicate that over two-thirds of college women experience physical or sexual aggression from a dating partner (Hall-Smith, White & Holland, 2003; Humphrey & White, 2000); in these relationships, psychological aggression is nearly always present (White & Koss, 1991). Despite these negative aspects, many of these relationships continue to develop into more committed, long-term relationships (Roscoe & Benaske, 1985).

Alarmingly, aggression tends to escalate in frequency and intensity as relationships become more committed (Stets & Pirog-Good, 1987), affecting women's physical and mental health. Nearly half of women who are physically or sexually assaulted by a romantic partner require hospital services for physical injuries (Tjaden & Thoennes, 2000), and victims are 3 to 5 times more likely to suffer depression and posttraumatic stress than nonvictims (Dutton et al., 2006; Walker et al., 2004). Psychological aggression contributes uniquely to depression and posttraumatic stress (Jordan, Campbell & Follingstad, 2010; Street & Arias, 2001) and has been linked to physical health problems (Marshall, 1996). What is more, the effects of ongoing aggression on women's mental health worsen the longer aggression continues (Arata,

2002; Campbell & Soeken, 1999). This makes emerging adulthood a critical period during which early patterns of relationship aggression can be disrupted before they are carried forward into more committed relationships in adulthood.

It is commonly held that ending an aggressive relationship is an effective means to stop aggression from a romantic partner (Anderson & Saunders, 2003). Logically, it follows that as aggression ceases or diminishes, women's psychological functioning will improve. Indeed, adult women who remained with their aggressive partner six months after seeking services at a shelter reported more depression than women who left their partner (Campbell, Sullivan, & Davidson, 1995). More recently, among a sample of emerging adult women who reported physical or sexual aggression from a current dating partner, ending the relationship was associated with experiencing less physical aggression. Further, less physical aggression was associated with reductions in posttraumatic stress over six months (Young & Furman, under review).

Unfortunately, many women who choose to end their aggressive relationship have difficulty doing so. Approximately two-thirds of adult women seeking shelter from physical violence make at least one unsuccessful attempt to end the relationship, some making as many as five attempts or more (Griffing et al., 2002). In a follow-up study of women seeking shelter, Bybee and Sullivan (2005) reported that nearly 20% of women were still romantically involved with their violent partner three years later. The extent to which emerging adult women who experience aggression also have difficulty ending their relationships is unknown; however, given the fairly high proportion who ultimately remain with an aggressive partner (Roscoe & Benaske, 1985), this process seems to be difficult for younger women as well.

Given that patterns of aggression are already present during courtship and tend to persist and escalate as relationships become more committed, early intervention with emerging adult women who experience aggression may promote resilience and help to prevent future violence. Whereas it is important to continue to affect change in society and to reduce men's aggressive behavior, it is also important to empower women to protect themselves from further aggression. Thus, it is critically important to understand the factors that influence the continuation or ending of an aggressive relationship.

Relationship commitment. One factor that has emerged as a significant predictor of ending an aggressive relationship is commitment to that relationship (Duemmler & Kobak, 2001; Le & Agnew, 2003). Not surprisingly, women who report higher commitment are more likely to continue their relationship, even when their partner is aggressive (Rusbult & Martz, 1995;Young & Furman, under review). More surprising, however, is the finding that aggression inconsistently predicts commitment (see Follingstad, 2009). Several studies have found that higher levels of aggression predict lower commitment (e.g., Rhatigan & Street, 2005; Shortt, Capaldi, Kim & Owen, 2006), whereas this finding has been absent from other studies (Dutton, Goodman & Bennett, 1999; Rhatigan & Axsom, 2006; Truman-Schramm, Cann, Calhoun, & Vanwallendael, 2000). Recently, among a sample of emerging adults in a college setting who reported aggression from a current partner, neither physical, sexual, nor psychological aggression significantly predicted relationship commitment (Young & Furman, under review).

The mixed findings in the literature suggest that aggression itself does not reliably predict commitment and that other factors may play an important role. Given that commitment is an important factor in whether women remain in an aggressive

relationship, it is important to identify and understand other factors that influence commitment and that may produce individual differences in leaving an aggressive relationship. One model that has helped to explain commitment in romantic relationships is the Investment Model (Rusbult, 1980).

Based upon Interdependence Theory (Kelley & Thibaut, 1978; Thibaut & Kelley, 1959), the Investment Model suggests that commitment is primarily influenced by three important variables: satisfaction, investment, and quality of alternatives. An individual who perceives more positives than negatives within a relationship remains satisfied and thus more committed to the relationship. Investment refers to the magnitude and importance of psychological and material resources that are attached to the relationship; commitment remains high when investments such as time, money and emotional attachment have been invested into the relationship. Finally, quality of alternatives refers to the extent to which an individual perceives that she has the opportunity to date other partners attractive to her (e.g., available, desirable, and able to fulfill her interpersonal needs) if she were to end her current relationship; commitment remains high when perceived quality of alternatives is low. Together, satisfaction, investments, and alternatives uniquely contribute to relationship commitment and ultimately to the continuation of the relationship. The overall model can be represented by the following equation: commitment = satisfaction + investments – alternatives.

Promising empirical support has been found for the model's ability to explain the continuation of aggressive relationships among emerging adults. Relationship satisfaction, investment, and quality of alternatives have been shown to account for as much as 58% of the variance in commitment (Le & Agnew, 2003; Rhatigan & Axsom,

2006). In turn, relationship commitment has been prospectively related to continuing or ending an aggressive relationship, at least among adult women (Rusbult & Martz, 1995). Although a similar longitudinal link has not yet been established among emerging adults in aggressive dating relationships (Katz, Kuffel & Brown, 2006; Truman-Schram, Cann, Calhoun & VanWallendael, 2000), recent studies by Rhatigan and Street (2005) and Choice and Lamke (1999) utilized cross-sectional samples of college-aged women to demonstrate that Investment Model variables were related to women's intentions to leave their violent partner.

Although it is clear that satisfaction, investment and quality of alternatives are important in determining commitment to a relationship, several questions remain unanswered when the Investment Model is applied to aggressive dating relationships. For example, in several studies, women who continued to date their aggressive partner reported higher levels of satisfaction than women who ended their relationship (Shortt et al, 2006; Truman-Schramm et al., 2000). But why would satisfaction remain high for some women (but not others) in the presence of aggressive behavior? Likewise, what are factors that would lead a woman to perceive that she has few dating alternatives outside of her current, aggressive partner—particularly among emerging adults who generally have considerable opportunity for social networking? And, given that emerging adults typically have lower external constraints that make leaving a relationship difficult (e.g., shared finances, shared housing, mutual children, etc.), why might feelings of investment in the relationship remain high for some women? In short, the Investment Model fails to fully explain why individual differences in commitment may exist, particularly as it is applied to the aggressive dating relationships of emerging adults. Yet these individual

differences are critically important in understanding factors that make the process of leaving difficult and in identifying points of intervention that may help women end their aggressive dating relationship.

Recently, Rhatigan, Shorey and Nathanson (2011) demonstrated that intrapersonal characteristics also play an important role in the Investment Model and commitment to an aggressive dating relationship. In this study, college women who had previously experienced sexual victimization were asked to read a vignette about a hypothetical, aggressive dating relationship and to make attributions about their own satisfaction, investment, quality of alternatives, and commitment as though they had been in the relationship. Women's symptoms of depression and posttraumatic stress, feelings of self-efficacy and feelings of shame indirectly predicted hypothetical relationship commitment through their influence on satisfaction, investment, and perceived quality of alternatives.

This study had several important limitations. First and foremost, the study examined attributions toward a hypothetical relationship and did not examine actual commitment. Such a method may not access true ratings of the Investment Model constructs that are based on actual experiences. In addition, it is not clear that participants in the study had actually experienced dating aggression themselves; undergraduate women were included if they endorsed some form of sexual assault since the age of 14, but the context and perpetrator of the assault were not described. It is possible that women who were assaulted by a perpetrator who they were not dating at the time (e.g., a stranger, a family member, an acquaintance, etc.) may respond differently than someone who had experienced aggression from a dating partner. In fact, only 61% of the sample was currently in a dating relationship at the time of the study. Despite these critiques, the

study provided interesting findings suggesting that continuing to examine intrapersonal factors may shed light on individual differences in commitment to aggressive relationships.

Intrapersonal factors in relationship commitment. The questions above suggest that the conceptualization of the process of forming commitment may be incomplete and that additional factors may be at play. Identifying these factors may improve our understanding of individual differences in commitment and ultimately in the continuation or ending of aggressive relationships. Thus, the current study examined the ability of four intrapersonal factors to predict the Investment Model variables and their contribution to commitment and relationship outcome in emerging adult women (see Figure 2). The four intrapersonal factors examined in this study have each been shown to incur risk for experiencing relationship aggression and were chosen for that reason. In addition, each of the intrapersonal factors is thought to influence the way in which women understand and approach romantic relationships and the way in which they interpret their interactions with a romantic partner, thereby influencing their experience of satisfaction and investment and their perception of available alternatives. It is this common theoretical underpinning that led to the selection of these particular intrapersonal factors.

Self-worth. Low perceived self-worth has been identified as a risk factor for experiencing relationship aggression (Vezina & Hebert, 2007), and it is expected to play a role in commitment and ending an aggressive relationship. In fact, among adult women seeking shelter, low self-worth has been associated with intentions to forgive aggressive partner behavior and with intentions to return to an aggressive relationship (Katz, Street

& Arias, 1997; Schutte, Bouleige, Fix & Malouf, 1986). Recently, when asked to make hypothetical ratings of commitment to a dating violence vignette, college women's feelings of low self-efficacy directly predicted lower perceived quality of alternatives, which mediated the association with higher commitment (Rhatigan et al. 2011). Thus, it is expected in the current study that women who report lower self-worth also will report lower perceived quality of alternatives. These women may perceive themselves as unworthy of others' attention and affection and thus perceive themselves to have fewer quality alternatives outside of the current relationship. Similarly, lower self-worth is expected to be related to higher relationship investment. Individuals with low self-worth may increase emotional investment because having a relationship provides validation.

Rejection sensitivity. Individuals high on rejection sensitivity tend to interpret others' behavior toward them as interpersonal rejection. Although they place a high degree of importance upon intimate relationships, they also fear rejection and abandonment from their partners (Downey & Feldman, 1996). These individuals have been shown to tolerate unwanted sexual activity and abusive partner behavior in order to maintain the relationship (Downey, Bonica & Rincon, 1999). Given their expectation of interpersonal rejection, women high on rejection sensitivity are expected to perceive that they have few alternatives to their current dating partner; thus, they may strive to maintain their current relationship despite experiencing aggression. Indeed, high rejection sensitivity among adolescents prospectively increases risk for sexual victimization from peers (Young & Furman, 2008). In addition, because individuals high on rejection sensitivity actively anticipate rejection (though simultaneously hoping not to be abandoned), they may not seek high levels of intimacy and closeness with their partner.

Thus, high rejection sensitivity is expected to be related to lower investment as well as lower satisfaction.

Romantic relational style. The final two intrapersonal variables pertain to women's style of romantic relationships. Attachment theorists have conceptualized romantic styles as representations of oneself, the partner and the relationship (Bowlby, 1980; Furman & Wehner, 1994); accordingly, such styles influence one's expectations and behavior within a romantic relationship. Differences in romantic styles are often measured in terms of two dimensions, typically described as anxious and avoidant (Brennan, Clark & Shaver, 1998).

It is expected that a more anxious romantic style will be associated with higher relationship investment. Individuals high on the anxiety dimension tend to intensely desire intimacy and closeness with their romantic partners and may become more emotionally invested in their relationships, finding it difficult to end the relationship. In fact, among adult battered women, those with more anxious styles reported greater feelings of love and desire to return to their partner (Henderson, Bartholomew & Dutton, 1997).

In contrast, it is expected that a more avoidant romantic style will be associated with lower relationship investment. Women with more avoidant romantic styles tend to minimize the affective importance of relationships, minimize emotional intimacy, and emphasize their own strength and independence (Cassidy & Kobak, 1988). Women who are more avoidant are likely to invest fewer emotional resources into an intimate relationship and are unlikely to remain in a problematic relationship (Henderson et al.,

1997). At the same time, women who are more avoidant tend to move from partner to partner and are thus likely to perceive greater quality of alternative relationship partners.

Current study. The current study seeks to understand intrapersonal factors that may influence satisfaction, investment, and quality of alternatives and that will ultimately influence the process of forming commitment when aggression is present in the dating relationships of emerging adult college women. The Investment Model was applied to a longitudinal sample of emerging adult women who have experienced physical, sexual or psychological aggression from their current partner. We expected to replicate findings that relationship commitment is concurrently predicted by higher satisfaction, higher investment, and lower perceived quality of alternatives. Further, we expected to find that higher commitment prospectively predicts continuing an aggressive dating relationship through the six-month follow-up. Finally, several intrapersonal variables were examined as predictors of the Investment Model variables, including measures of self-worth, rejection sensitivity, and anxious and avoidant relationship styles. Specifically, we expected lower self-worth to predict higher satisfaction with the current relationship and lower perceived quality of alternatives. Higher rejection sensitivity was expected to predict lower quality of alternatives, lower investment, and lower satisfaction. Both anxious and avoidant relationship styles were expected to predict higher perceived quality of alternatives, but an anxious style was expected to predict higher investment whereas a more avoidant style was expected to predict lower investment. We anticipated that these intrapersonal variables would indirectly predict commitment through satisfaction, investment, and quality of alternatives.

Chapter Two: Method

Participants

An online questionnaire administered at two universities assessed for college students' eligibility to participate in a longitudinal study of dating experiences. Female college students between the ages of 18 and 25 years were eligible to participate if they endorsed experiencing physical or sexual aggression from their current partner and were not currently married or engaged to their partner. Of the 2,358 women who completed the screening questionnaire, 430 women met eligibility criteria. Of these, 152 women completed the initial longitudinal assessment; however, 4 women were excluded because their responses on the initial assessment did not match their responses on the screening questionnaire (three indicated that they were not currently dating, and one did not endorse aggression from her current partner), resulting in a final sample at the initial assessment of 148 college women. Over the six-month follow-up, 22 participants (14.9%) were lost to attrition.

Participants' average age was 22.52 years (SD = 2.77 years), and their partners were on average slightly older (M = 23.15 years; SD = 3.94 years); 21.6% of participants were first year college students, 18.2% were sophomores, 20.3% were juniors, and 39.2% were seniors or beyond. Most participants were Caucasian (83.1%); a smaller proportion was from an ethnic minority background (6.8% Hispanic, 4.1% Asian American, 1.4% African American, 2.0% other). The average length of relationship with the current

partner was 23.14 months (SD = 17.62 months; range = 0.50 months to 72.75 months), and 19 participants (12.8%) were living with their current partner.

Procedure

All students enrolled at a private university and at a large public university in the Western United States received an email inviting them to take a brief survey on their dating experiences. The email included an internet link to the screening questionnaire (hosted by SurveyMonkey.com). Students who completed the screening questionnaire were given the opportunity to enter a $100 raffle. Eligible women were then invited to participate in the longitudinal phase of the study. In this phase, women answered more questions about the characteristics of their dating relationships, their experiences of relationship aggression, and their psychological functioning. Measures were completed at an initial assessment and again at a 6-month follow-up. Both assessments were administered online and took approximately 1.5 hours to complete. Participants in the longitudinal study were paid $20 for each assessment. The Institutional Review Boards at both universities approved the protection of human subjects in this study.

Measures

Screening questionnaire. Eleven items screened for the presence of aggression in potential participants' current dating relationships. Participants indicated the frequency (1 = never, 2 = once, 3 = a few times, 4 = many times) with which they had experienced six types of physical aggression and five types of sexual aggression from their current partner. Positive endorsement of at least one of these items (frequency of 2 or higher) was

taken as indication of being in an aggressive relationship and eligibility for the longitudinal study.

Physical aggression. In the longitudinal study, women completed the 12-item physical aggression scale of the Conflict Tactics Scale - Revised (CTS-2; Straus, Hamby, McCoy & Sugarman, 1996), indicating the frequency with which certain acts occurred (0 = never, 1 = rarely, 2 = sometimes, 3 = frequently, 4 = very frequently). Items covered a range of violent acts from less severe (e.g., "my partner pushed or shoved me") to more severe ("my partner choked me"). The frequency ratings of all items were summed to create a total scale score for each participant. The CTS is a widely used measure of interpersonal violence with demonstrated validity and reliability among college samples (Straus, 2004). Internal consistency was adequate in the current study (initial assessment: $\alpha = .72$; follow-up: $\alpha = .76$).

Sexual aggression. Seven items on the CTS-2 (Straus et al., 1996) assessed experiences of sexual aggression. Similar to the physical and psychological aggression scales, these items asked participants to rate the frequency (0 = never, 4 = very frequently) with which they experienced several types of sexual aggression from their current partner (initial assessment: $\alpha = .82$; follow-up: $\alpha = .81$). Participants also completed the Sexual Experiences Survey (SES; Koss & Gidycz, 1985). The SES consists of 11 dichotomous items that assess whether participants experienced specific types of sexual coercion from their current romantic partner (initial assessment: $\alpha = .77$; follow-up: $\alpha = .88$). The SES and the CTS contain non-overlapping items and were

combined to provide a more complete assessment of sexual aggression. Items from each scale were standardized separately and then averaged into a single composite scale.

Psychological aggression. Participants completed two measures of psychological aggression, including the 8-item subscale of the CTS-2 (Straus et al., 1996). The CTS-2 items primarily assessed the frequency of verbal attacks sustained from the current romantic partner (e.g., “My partner insulted or swore at me”). To broaden the scope of psychological aggression, participants also completed 44 items from the Psychological Maltreatment of Women Inventory (PMWI; Tolman, 1989). The PMWI assesses elements of verbal aggression (e.g., “My partner put down my physical appearance”), as well as emotional aggression (e.g., “My partner withheld affection from me”) and dominating/isolating behavior (e.g., “My partner tried to keep me from seeing or talking to my family”). Fourteen questions from the PMWI were not included in the current study due to redundancy with the CTS-2 or because they were unlikely to pertain to emerging adults (e.g., “My partner demanded that I stay home and take care of the children.”). Participants rated items from both the CTS-2 and the PMWI on the same frequency scale. As for the physical aggression scale, the frequency scores for all items across both measures were summed into a total composite scale score. Internal consistency at both assessments was $\alpha = .97$.

Participants completed the measures of physical, sexual and psychological aggression at both time points in relation to the partner they were dating at the initial assessment. In addition, participants indicated whether they had experienced any of these forms of aggression from another dating partner over the follow-up period, in which case

they completed the physical, sexual and psychological aggression measures for that other partner too.

Depression. At both longitudinal assessments, participants reported their symptoms of depression on 20 items of the Beck Depression Inventory (BDI; Beck, Rush, Shaw & Emery, 1979). Questions were rated on a 4-point scale ranging from 0 – 3, and items were averaged into a single scale. The BDI is commonly used and typically produces good psychometrics (Beck, Steer, Ball, & Raneiri, 1996). Internal consistency in the current study was $\alpha = .94$ at the initial assessment and $\alpha = .91$ at follow-up.

Posttraumatic stress. Participants completed the 27-item Revised Civilian Mississippi Scale for PTSD (RCMS; Norris & Perilla, 1996). Each item described a symptom of posttraumatic stress and was modified to refer specifically to physical, sexual and psychological aggression experienced from a current romantic partner (e.g., "I often think about the violence, even when I don't mean to"). Participants rated the extent to which they experienced each symptom (1 = not at all true of me; 5 = extremely true of me), and items rated higher than two were summed to form a symptom total. Internal consistency for the total scale was acceptable at both assessments (initial assessment: $\alpha = .82$; follow-up: $\alpha = .91$). In addition, RCMS items have been found to correspond to the DSM-IV criteria for Posttraumatic Stress Disorder (Criterion B: reexperiencing/intrusion; Criterion C: affective avoidance; Criterion D: increased arousal; see Norris & Perilla, 1996); these scales were calculated separately so as to determine the clinical significance of participants' symptoms.

Investment Model. Participants' relationship satisfaction, investment, perceived quality of alternatives, and commitment to their romantic partner were assessed with the Investment Model Scale (IMS; Rusbult, Martz, & Agnew, 1998). Participants rated the extent to which they agreed with items describing each construct (1 = Do not agree at all; 7 = Agree completely). Ten items (α = .96) assessed relationship satisfaction (e.g., "Our relationship makes me very happy"). Ten items (α = .86) described emotional investment in the relationship (e.g., "I feel very involved in our relationship – like I have put a great deal into it"). The perceived quality of alternatives scale consisted of nine items (α = .85) assessing the extent to which participants perceived appealing romantic options outside of the current relationship (e.g., "If I weren't dating my partner, I would do fine – I would find another appealing person to date"). Finally, seven items (α = .91) assessed current commitment to their partner (e.g., "I want our relationship to last for a very long time").

Rejection sensitivity. Participants' rejection sensitivity was assessed with nine items from the Rejection Sensitivity Questionnaire (RSQ; Downey & Feldman, 1996). These items pertained specifically to rejection sensitivity within the romantic domain and included situations such as asking a romantic partner to move-in, to meet family, and to spend time together. Participants first rated the degree to which they would be anxious or concerned about the outcome of a situation (1 = very unconcerned to 6 = very concerned) and then rated the extent to which they would expect their partner to respond in an accepting manner (1 = very likely to 6 = very unlikely). To create a composite, these two components of each situation were multiplied into a single score; these nine scores were then averaged into a single scale (α = .85).

Self-worth. The Rosenberg Self-Esteem Scale (RSE; Rosenberg, 1965) measured participants' global self-evaluations. Participants rated their agreement (1 = Do not agree at all; 7 = Agree completely) with ten items (α = .91) that tapped satisfaction with self ("I am satisfied with myself"), worth as a person ("I have a number of good qualities"), perceived competence (e.g., "I am inclined to feel that I am a failure"), and respect for self ("I feel that I do not have much to be proud of"). Responses were averaged into a single scale.

Romantic relational style. The romantic partner version of the Behavioral Systems Questionnaire (BSQ; Furman & Wehner, 1999) assessed participants' romantic relational style. The 36-item BSQ resembles attachment style questionnaires but assesses intimacy and closeness with respect to caregiving, affiliation, and sexuality as well as attachment. Participants rated their agreement (1 = Strongly disagree; 5 = Strongly agree) with statements related to each behavioral system. These items are divided into three scales which assess secure, dismissing (avoidant), or preoccupied (anxious) styles, respectively.

Consistent with current literature on relationship representations (see Brennan, Clark, & Shaver, 1998; Mikulincer & Shaver, 2007), previous factor analyses of the BSQ have found two underlying dimensions: anxious and avoidant romantic relational styles. The two dimensions reflect an avoidant style, on which all the dismissing items loaded positively and all the secure items loaded negatively (eigenvalue = 9.56), and an anxious style, on which all the preoccupied items loaded (eigenvalue = 5.97). These factors accounted for 40% of the variance. Thus, two relational style scores were used in all

analyses, both with good internal reliability. The avoidant dimension was computed by subtracting each participant's score on the secure scale from her score on the dismissing scale ($\alpha = .91$); the resulting scores were valenced such that a higher score indicated a more characteristically avoidant romantic style. The anxious dimension was equal to the preoccupied scale score ($\alpha = .85$); higher scores indicated greater romantic anxiety.

Relationship outcome. At follow-up, participants answered a single question indicating whether they were still dating the partner about whom they had answered questions six months earlier at the initial assessment. Continuing the relationship was coded as a 1, and ending the relationship was coded as a 2.

Chapter Three: Results

Preliminary Analyses

Data preparation and missing data. Variables in the dataset were assessed for normality of distribution and the presence of outliers. No violations of normality were noted; all values for both skew and kurtosis were within normal limits (skew = ± 3; kurtosis = ± 10). Outliers were identified and corrected by equating extreme values to scores of ±1.5 times the interquartile range below the 25th percentile or above the 75th percentile.

Missing data in the current study were estimated using full information maximum likelihood (FIML), a procedure that yields less biased estimates than listwise or pairwise deletion and yields outcomes comparable to multiple imputation methods (Schafer & Graham, 2002). Very few data were missing at the initial assessment; the average proportion of missing data was 1.8% (ranging as high as 3.4%). Because the 22 participants who did not complete the follow-up assessment were included in all analyses and their follow-up data were estimated using FIML, the average proportion of missing data at the follow-up assessment was somewhat higher (15.2%).

We undertook a series of independent samples *t*-tests to assess for differences between those who completed both longitudinal assessments and those who only completed the initial assessment. No differences were found between these groups by demographic characteristics (e.g., age, ethnicity, year in school) or by dating characteristics (number of different people dated in the past 12 months, length of time

spent dating current partner, age of current partner, satisfaction with current relationship). No differences were found for most of the primary variables of interest, including symptoms of depression and posttraumatic stress, experiences of physical and psychological aggression, rejection sensitivity, avoidant and anxious romantic styles, and relationship investment, satisfaction, quality of alternatives, and commitment. However, women who only completed the initial assessment described themselves as significantly less sexually assertive ($M_{initial} = 1.15$; $M_{initial + follow\text{-}up} = 2.67$; t (134) = 2.15, $p = .02$) and as having experienced sexual aggression from their current partner more recently ($M_{initial} = 6.11$ months; $M_{initial + follow\text{-}up} = 8.71$ months; t (136) = -2.23, $p = .03$). In addition, women who only completed the initial assessment reported significantly lower self-worth ($M_{initial} = 4.83$) than those who completed both assessments ($M_{initial + follow\text{-}up} = 5.45$; t (143) = -.249, $p = .014$).

Relationship aggression. As expected within dating relationships, aggression in the current sample generally included acts of lower severity. Fifty-six women (37.8%) reported physical aggression, mainly including being pushed or shoved (42.9%) or having an object thrown at them (33.9%); some women did report injuries as a result of the aggression (e.g., sprain, bruise or cut, 26.7%; physical pain lasting through the next day, 14.3%). Sexual aggression was more common, with 106 women (71.6%) reporting some form of unwanted sexual contact with their current romantic partner. Of these, the majority described unwanted sexual play (e.g., fondling, kissing, petting; 50.9%) or unwanted intercourse due to verbal pressure (75.5%). Nearly everyone in the sample (N = 141; 95.3%) endorsed psychological aggression. The majority of women reported that

their partner had insulted or swore at them (62.4%), treated them like they were stupid (54.6%), purposely withheld affection (57.4%), or refused to talk about a problem (73.0%). In addition, some women reported more serious forms of psychological aggression, including that her partner monitored her time and activities (27.0%), became jealous or suspicious of friends (53.2%) or other men (70.9%). Table 1 lists the means and standard deviations of the summed frequency scales for physical and psychological aggression and the standardized composite scale for sexual aggression.

Table 1. Means (and standard deviations) of relationship aggression and psychological functioning scales

	Initial				Follow-up			
	stayed (N = 86)		ended (N = 30)		stayed (N = 86)		ended (N = 30)	
Physical	0.94	(1.71)	1.05	(2.13)	0.89	(1.76)	0.97	(2.94)
Sexual	0.02	(0.88)	-0.15	(0.82)	0.11	(0.97)	0.08	(0.87)
Psych	24.19	(21.97)	25.87	(27.18)	21.00	(22.65)	31.71	(33.76)
BDI	7.87	(6.98)	6.25	(6.28)	6.74	(6.41)	5.55	(6.31)
RCMS	6.51	(1.88)	5.35	(1.96)	3.47	(2.71)	2.42	(2.54)
COM	4.90	(1.66)	5.89	(1.17)	3.30	(1.37)		

Note. Stayed = participant who did not end the relationship by follow-up; Ended = participants who ended the relationship by follow-up; BDI = Beck Depression Inventory; RCMS = Revised Civilian Mississippi Scale for PTSD; COM = relationship commitment subscale of the Investment Model Scale. The means for the sexual scale represent standardized values.

In addition to these experiences, participants indicated at the initial assessment whether they had experienced physical, sexual or psychological aggression over the past six months by someone they felt close to other than their current romantic partner. Nearly one-third of women reported that they had experienced physical aggression (27.0%) or

sexual aggression (29.7%) by such a person; experiencing psychological aggression was endorsed by 16.2% of women. Finally, 41 women (27.7%) reported some form of unwanted sexual contact by an individual with whom they were not close in the six months preceding the initial assessment. Chi-square comparisons revealed no association between experiencing aggression from another person and ending the current dating relationship by follow-up.

Psychological functioning. Table 1 also lists the means and standard deviations of the BDI and RCMS at the initial and follow-up assessments. On average, participants did not report clinically significant levels of depression, although 11 women (7.4%) reported BDI scores greater than 20, a level clinically indicative of moderate-to-severe depression. In regard to posttraumatic stress, 25 women (16.9%) at the initial assessment met criteria for a positive clinical diagnosis of PTSD (based on Norris' and Perilla's (1996) classification of RCMS items into the DSM-IV diagnostic criteria).

Investment Model. Table 2 presents the means and standard deviations of the investment model variables and intrapersonal variables at the initial assessment (above the diagonal), as well as the correlations among these variables (below the diagonal). The means and standard deviations of the Investment Model variables were comparable with those reported in other studies using the IMS in similar samples (e.g., Rhatigan & Street, 2005; Rusbult, Martz & Agnew, 1998). Also consistent with other studies (Shortt et al., 2006; Truman-Schramm et al., 2000), significant differences were found on the Investment Model variables between women who remained in their relationship and women who ended the relationship. Those who continued the relationship reported

significantly higher satisfaction ($M_{continued}$ = 5.89; M_{ended} = 5.35; *t* (124) = 2.85, *p* = .005), higher investment ($M_{continued}$ = 5.46; M_{ended} = 4.89, *t* (124) = 3.19, *p* = .002) and lower perceived quality of alternatives ($M_{continued}$ = 3.54; M_{ended} = 4.13; *t* (124) = -2.54, *p* = .012). Women who continued the relationship also reported significantly higher commitment ($M_{continued}$ = 5.91; M_{ended} = 4.86; *t* (124) = 4.10, *p* < .001).

Table 2. Means (SD) and bivariate correlations (Pearson's *r*) of relationship aggression, Investment Model, and intrapersonal variables

	Mean (SD)	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1. Physical aggression	0.05 (0.08)	.22**	.65**	-.22**	.10	.09	.01	.07	-.22**	.11	.10
2. Sexual aggression	-0.01 (0.91)		.37**	-.30**	-.23**	.05	-.15	.22**	-.34**	.42**	.29**
3. Psych aggression	0.49 (0.39)			-.30**	.15	.05	-.02	.18*	-.26**	.17*	.21*
4. SAT	5.68 (1.05)				.37**	-.31**	.65**	-.37**	.31**	-.56**	-.36**
5. INV	5.27 (0.99)					-.38**	.55**	-.18*	.10	-.49**	-.14
6. ALT	3.73 (1.21)						-.52**	.01	-.02	.23**	.03
7. COM	5.55 (1.42)							-.22**	.21*	-.51**	-.16
8. Rejection sensitivity	10.05 (4.40)								-.51**	.25**	.50**
9. Self-worth	5.36 (1.04)									-.36**	-.45**
10. Avoidant rom. Style	4.09 (0.47)										.31**
11. Anxious rom. Style	2.47 (0.65)										

Note. SAT = Relationship Satisfaction; INV = Relationship Investment; ALT = Perceived Quality of Alternatives; COM = Relationship Commitment; statistical significance is indicated by: ** (*p* < .01); * (*p* < .05).

Ending an aggressive relationship. The majority of women indicated that they continued to date their romantic partner at follow-up (N = 86; 68.3%). Thirty (23.8%) women had ended their relationship but were dating a different partner. Few women

reported having no romantic partner at follow-up (N = 10; 7.9%). Although somewhat surprising given the presence of aggression, this rate of relationship maintenance is consistent with similar studies of college and early adulthood samples (e.g., Cate, Henton, Koval, Christopher & Lloyd, 1982; Flynn, 1990; Shortt, Capaldi, Kim & Owen, 2006).

Study 1 Primary Analyses

Model fitting. Primary analyses in the current study were conducted using path analysis. Figure 1 depicts each of three models that were estimated separately for each type of relationship aggression. In addition to assessing the influence of psychological symptoms on ending an aggressive relationship, we were also interested in the extent to which the *change* in victimization that occurs after ending a relationship would be associated with *change* in psychological functioning. Several methods for assessing change have been advocated, and statisticians have debated for several decades the relative merits of each (Allison, 1990; Cronbach & Furby, 1970; Lord, 1956; Rogosa & Willett, 1983). Based upon suggestions that an autoregressive approach provides greater statistical power and is preferred for use with stable constructs that tend to persist over time (Allison, 1990), we specified the models depicted in Figure 1. Specifically, change in the frequency of relationship aggression, as well as change in levels of depression and posttraumatic stress, was modeled by regressing values at follow-up on earlier values at the initial assessment. We also performed the analyses using difference scores (vs. residual gain scores), and found consistent results across methods.

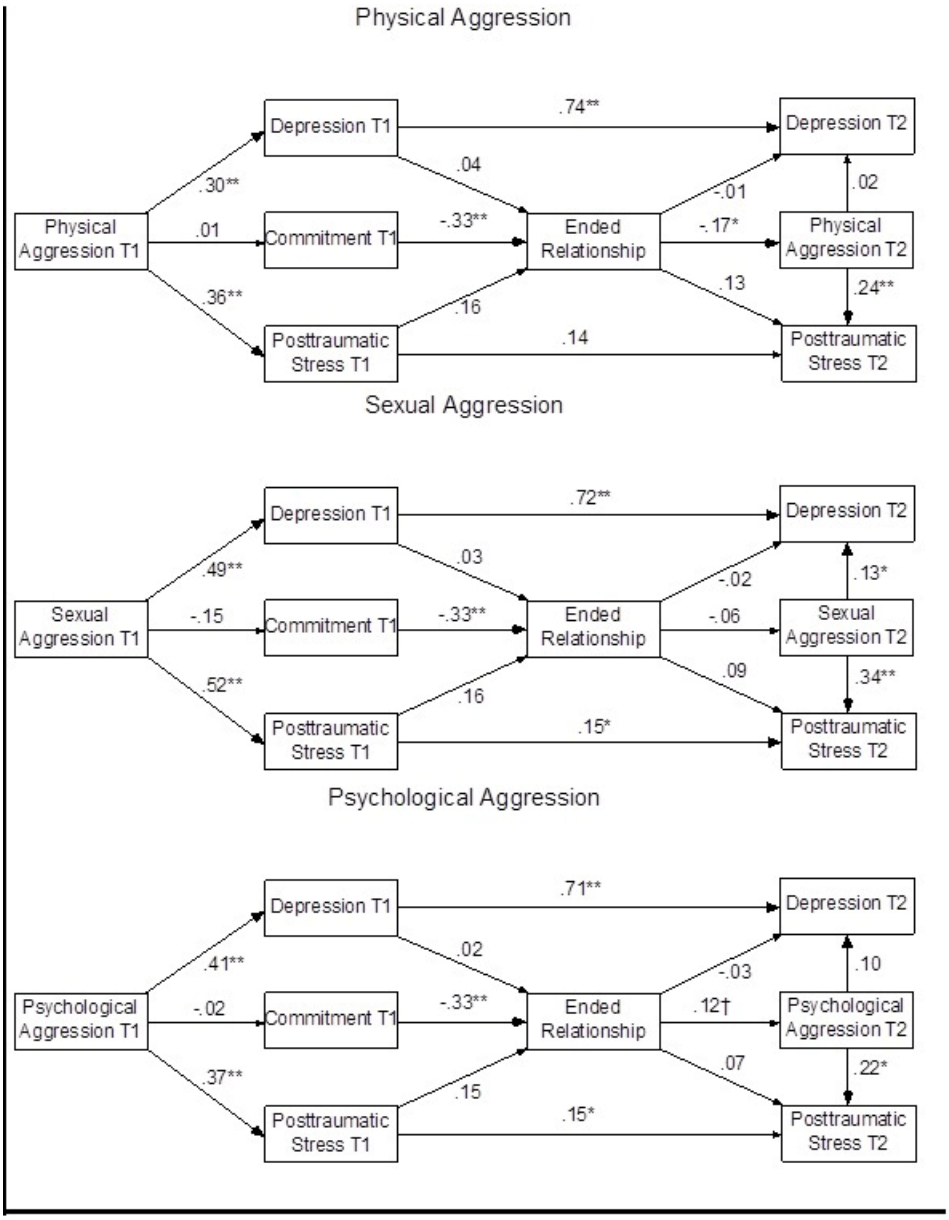

Figure 1. Path models for physical aggression, sexual aggression, and psychological aggression. Standardized estimates are depicted, and statistically significant paths are indicated by: ** ($p < .01$); * ($p < .05$); † ($p < .06$). Not pictured in the models are error terms associated with endogenous variables, covariances among concurrent variables, and the direct path from initial aggression to aggression at follow-up.

The path models were fit in the AMOS 7.0 software package (Arbuckle, 2006), and goodness of fit was assessed using the Comparative Fit Index (CFI) and the Root Mean Square Error of Approximation (RMSEA; see Kline, 2005 for an explanation of

these indices). All three models fit the data adequately (physical: CFI = .972, RMSEA = .068; sexual: CFI = .970, RMSEA = .074; psychological: CFI = .965, RMSEA = .085).

Physical aggression. As can be seen from Figure 1, greater incidence of physical aggression at the initial assessment was concurrently associated with greater symptoms of depression and posttraumatic stress. Physical aggression did not directly predict commitment to the current romantic partner or ending the relationship by six-month follow-up (this latter effect is not depicted in Figure 1). Contrary to expectation, symptoms of depression and posttraumatic stress did not directly predict ending the relationship, either. Only women's initial commitment to their partner significantly predicted ending the relationship.

Within the same model, we next examined changes that occurred in women's experience of physical aggression as well as their depression and posttraumatic stress over the six-month follow-up. Ending the relationship was not directly related change in depression or posttraumatic stress. However, ending the relationship did predict change in the incidence of physical aggression from initial to follow-up; specifically, women who were no longer dating their partner reported experiencing decreased physical aggression. Further, reductions in physical aggression were related to reductions in posttraumatic stress (but not depression).

Sexual aggression. As was the case for physical aggression, the degree of sexual aggression was concurrently related to depression and posttraumatic stress but was not related to commitment. Again, only initial commitment significantly predicted ending the relationship by six-month follow-up.

Unlike the findings for physical aggression, ending the relationship was not directly related to changes in sexual aggression. However, changes in sexual aggression were related to changes in both depressive symptoms and posttraumatic stress. Women who experienced less sexual aggression exhibited improvement in both sets of symptoms.

Psychological aggression. In terms of predicting women's commitment and likelihood of ending their relationship, psychological aggression produced identical results as the previous two models. Greater psychological aggression was related to more depression and posttraumatic stress, but only initial commitment predicted actually ending the relationship by follow-up.

Like the previous two models, ending the relationship was related to change in the degree of psychological aggression, though at a trend level (p = .055). Unexpectedly, however, this trend was in the opposite direction: women who were no longer dating their partner reported *increases* in psychological aggression. Nevertheless, women who did experience reductions in psychological aggression also reported reductions in posttraumatic stress (but not depression).

Follow-up analyses. Based upon the path models presented above, initial support was found for the hypothesis that ending an aggressive relationship is associated with experiencing less physical aggression. Support also was found for the hypothesis that reductions in physical, sexual, and psychological aggression are associated with improvements in psychological functioning. To further test these hypotheses and to better understand the relations among the variables in the path models, we conducted several follow-up analyses.

Analyses of variance. Repeated-measures analyses of variance were conducted, comparing the mean-level changes in aggression and symptoms reported by women who ended their relationship to those changes reported by women who continued their relationship. Means and standard deviations for each group at each assessment are presented in Table 1.

A significant main effect of time was found for incidence of physical aggression, $F(1, 107) = 4.99$, $p = .03$, though this main effect was qualified by a significant group x time interaction, $F(1, 107) = 4.38$, $p = .04$. Follow-up analysis with each group indicated that women who ended their relationship reported significant decreases in the incidence of physical aggression, $F(1, 32) = 15.43$, $p < .01$, whereas significant change in physical aggression was not observed among those who continued their relationship, $F(1, 75) = .01$, $p = .91$ (see Figure 2). Consistent with the path analysis, a trend-level interaction effect was found for changes in the incidence of psychological aggression, $F(1, 105) = 3.55$, $p = .06$. An examination of the group means suggests that women who ended their relationship also experienced increases in the incidence of psychological aggression, whereas those who continued their relationship did not experience significant change. No significant changes were observed in the incidence of sexual aggression for either group.

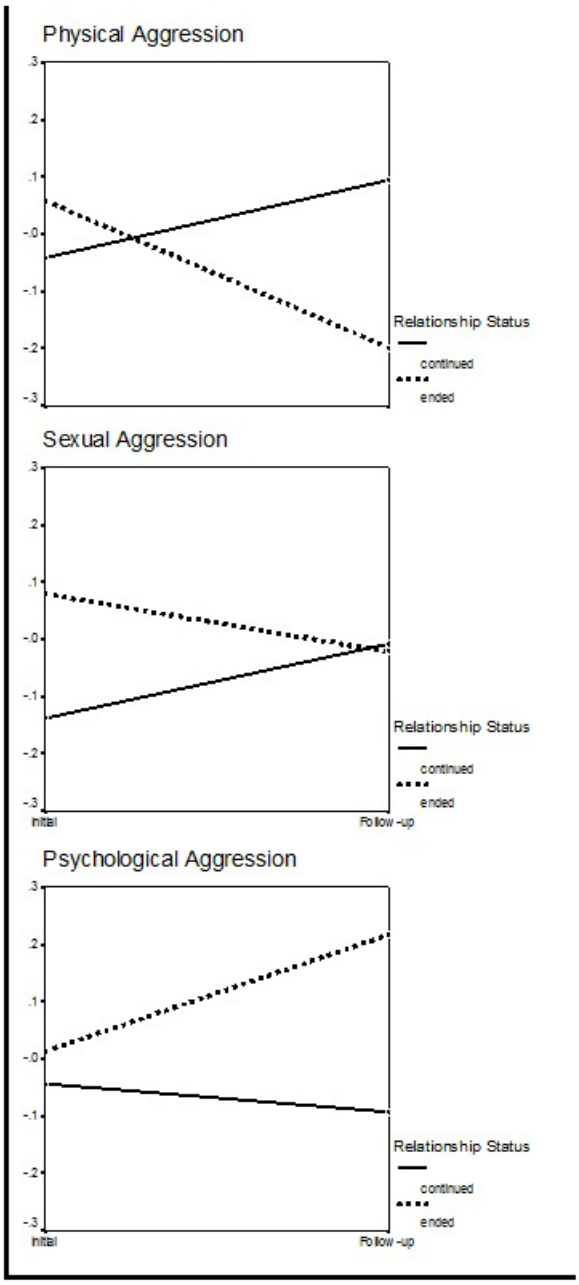

Figure 2. Changes in the standardized mean level of relationship aggression experienced by women who ended their relationship and those who continued their relationship.

In terms of psychological functioning (see Figure 3), a significant effect of time was found for posttraumatic stress, $F(1, 124) = 143.99$, $p < .001$, but the interaction was not significant. Thus, both groups exhibited significant decreases in posttraumatic stress

relative to the initial assessment. No significant mean-level changes were observed in symptoms of depression.

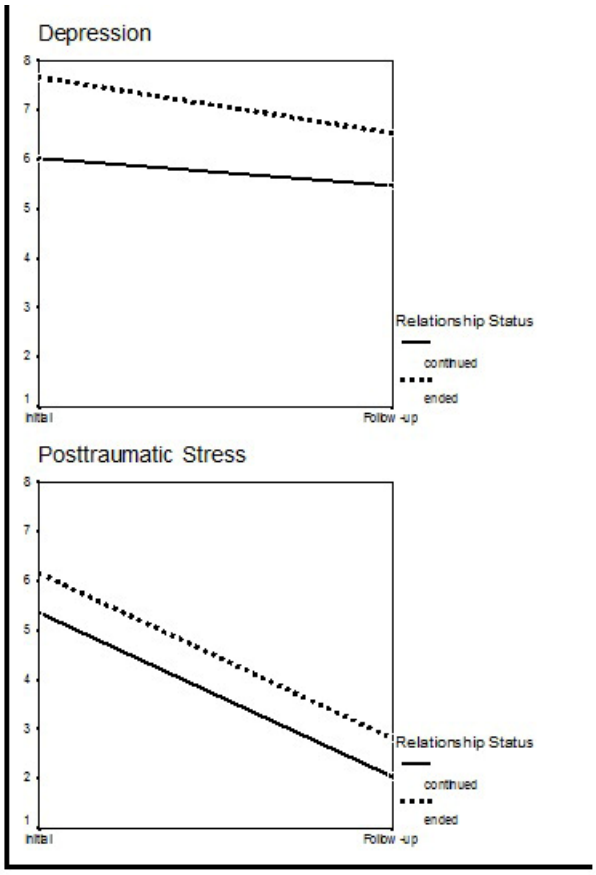

Figure 3. Changes in psychological functioning experienced by women who ended their relationship and those who continued their relationship.

Mediation. Ending a relationship was found to predict changes in victimization, which in turn were found to predict changes in depression and posttraumatic stress, suggesting the presence of mediation. To test for mediation, a distribution-of-products approach was taken to construct confidence intervals around the indirect effects in the path models (MacKinnon, Lockwood, Hoffman, West & Sheets, 2002; MacKinnon, Lockwood & Williams, 2004); confidence intervals were constructed using the Prodclin

software program (MacKinnon, Fritz, Williams & Lockwood, 2007). Ending the relationship indirectly predicted change in posttraumatic stress through the changes that occurred in physical aggression ($\alpha\beta$ = -.221; 95% CI [-.522, -.022]). In other words, women who ended their aggressive relationship experienced less physical aggression, which was associated with reduced symptoms of posttraumatic stress. Similar mediation was found for changes in psychological aggression, though the indirect effect narrowly missed meeting statistical significance ($\alpha\beta$ = .138; 95% CI [.000, .351]). Changes in sexual aggression did not mediate changes in depression or posttraumatic stress.

Study 2 Primary Analyses

Path analysis. Hypotheses in the current study were examined using a series of path models. First, the Investment Model was replicated and extended to include prediction of actual relationship outcome. Next, the intrapersonal variables were added as direct predictors of investment, satisfaction, and perceived quality of alternatives, and the indirect effect of the intrapersonal variables on relationship commitment was tested. Path models were estimated in the Amos 7.0 software program (Arbuckle, 2006), and model fit was assessed using Chi-square, the Comparative Fit Index (CFI), and the Root Mean Square Error of Approximation (RMSEA; see Kline, 2005).

The first step in model-building was to replicate the original Investment Model in concurrently predicting relationship commitment and to extend that model to prospectively predict relationship outcome. This model fit the data well (X^2 (3, N = 148) = 1.71, p = .64; CFI = 1.00; RMSEA = .00). As expected, higher satisfaction and greater investment predicted more commitment. Higher perceived quality of alternatives

predicted less commitment. Among the current sample of emerging adults, these variables explained approximately 59% of the variance in commitment (R^2 = .59). Further, more relationship commitment significantly predicted continuing the relationship at six-month follow-up (R^2 = .12). Standardized path estimates are depicted in Figure 4.

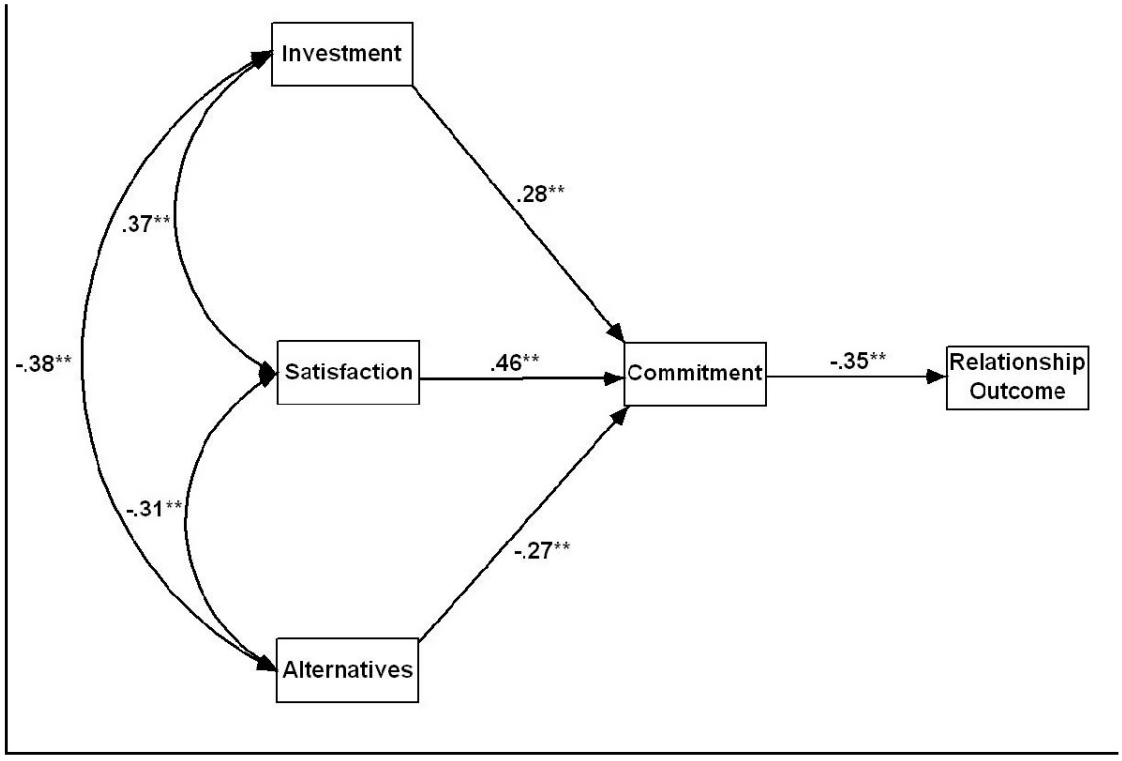

Figure 4. The Investment Model predicting relationship outcome at six-month follow-up. Standardized estimates are depicted, and statistically significant paths are indicated by: ** ($p < .01$); * ($p < .05$). Not pictured in the model are error terms associated with endogenous variables.

Next, the four additional intrapersonal variables were added to the model. These variables were included as indirect predictors of commitment through relationship investment, satisfaction, and perceived quality of alternatives (Figure 5). This model provided adequate fit to the data (X^2 (11, N = 148) = 20.52; CFI = .98; RMSEA = .08). Adding these variables to the model did not alter the path coefficients from the previous

step (e.g., Investment Model variables predicting commitment and relationship outcome). In addition, more avoidant romantic styles (e.g., less secure) were directly related to lower investment, lower satisfaction, and higher perceived quality of alternatives. Higher rejection sensitivity also was directly related to lower satisfaction.

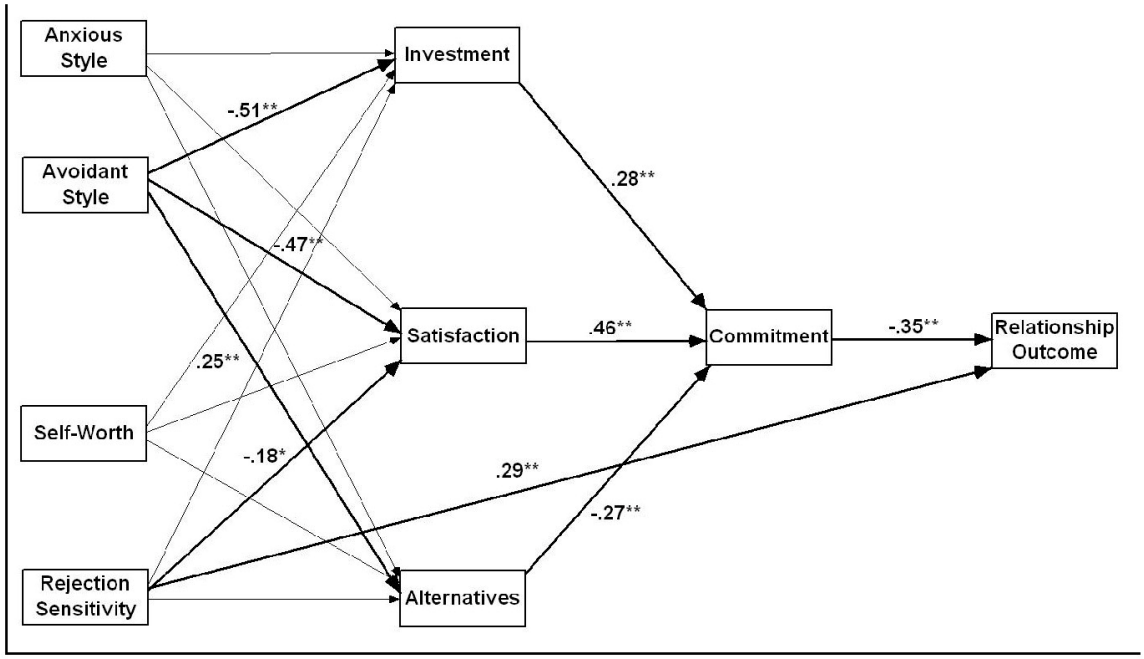

Figure 5. The Investment Model with intrapersonal variables. Standardized estimates are depicted, and statistically significant paths are indicated by: ** ($p < .01$); * ($p < .05$). Not pictured are error terms associated with endogenous variables and covariances among the exogenous intrapersonal variables.

In addition, several post hoc analyses were performed based on the bivariate correlations listed in Table 2. First, a significant bivariate correlation was noted between rejection sensitivity at the initial assessment and relationship outcome at six-month follow-up (see Table 2). Although this was not an a priori hypothesis, a direct path was estimated in the model from rejection sensitivity to relationship outcome. The statistically significant path coefficient indicated that higher rejection sensitivity prospectively

predicted ending the relationship six months later. Adding this path provided a significant improvement in model fit (ΔX^2 (1, N = 148) = 11.48, p = .001). In addition, adding this direct effect increased the amount of variance predicted in relationship outcome (R^2 = .20). The final model provided excellent fit to the data (X^2 (10, N = 148) = 9.04; CFI = 1.00; RMSEA = .00) and is depicted in Figure 5.

Second, although the variables in the model were examined for multicollinearity, we recognized that the measures of rejection sensitivity and anxious romantic styles were strongly related to each other (see Table 2). In order to assess whether rejection sensitivity may have masked an effect for anxious romantic styles, the model was estimated without rejection sensitivity. Interestingly, higher anxious romantic styles significantly predicted lower satisfaction. The model without rejection sensitivity also fit the data very well (X^2 (9, N = 148) = 9.03; CFI = 1.00; RMSEA = .01).

Mediation. The intrapersonal variables were hypothesized to exert an indirect effect on relationship commitment. To test this, a distribution-of-products approach was taken to construct confidence intervals around the indirect effects in the path model specified in Figure 2 (MacKinnon, Lockwood, Hoffman, West & Sheets, 2002; MacKinnon, Lockwood & Williams, 2004). Each indirect effect was calculated as the product of two direct effects ($\alpha\beta$), and a confidence interval around the indirect effect was calculated using the Prodclin software program (MacKinnon, Fritz, Williams, & Lockwood, 2007). An avoidant romantic style was found to have significant indirect effects upon commitment separately through satisfaction ($\alpha\beta$ = -.652; 95% CI [-.416, -.923]), investment ($\alpha\beta$ = -.438; 95% CI [-.233, -.681]), and perceived quality of

alternatives ($\alpha\beta$ = -.206; 95% CI [-.059, -.390). The indirect effect of rejection sensitivity on relationship commitment through satisfaction also was significant ($\alpha\beta$ = -.027; 95% CI [-.054, -.003]). Self-worth and anxious romantic style did not have a significant effect on relationship commitment.

Chapter Four: Discussion

Study 1 Discussion

Relationship aggression represents a significant public health concern in the United States, affecting over a million women annually and significantly increasing risk for physical and mental health problems (Tjaden & Thoennes, 2000; Walker et al., 2004). The current study examined the effect of depression and posttraumatic stress on emerging adult women's decisions to continue or end an aggressive dating relationship. The current study also examined changes in aggression experienced by emerging adult women and in their psychological functioning after ending an aggressive relationship.

Most women in the current sample who reported physical and sexual aggression described experiences of being hit, grabbed, pushed, shoved, and being verbally pressured to engage in unwanted sexual behavior with their partner. Nearly everyone reported experiencing psychological aggression in the form of shouting, insulting, or ignoring. This level of aggression is consistent with several studies suggesting that aggression tends to remain moderate through the initial courtship stage of a relationship but begins to escalate once emotional commitment and other external constraints increase (Capaldi, Shortt & Crosby, 2003; Lawrence, Yoon, Langer & Ro, 2009). Nevertheless, even at the courtship stage, some women experienced relationship aggression that included physical injury, unwanted or unprotected sexual intercourse, demeaning verbal aggression, and restricted independence. In the current sample, sexual aggression was

experienced by more women than was physical aggression, consistent with a recent review of dating violence among college students (Murray & Kardatzke, 2007). It is possible that attitudes toward sexual behavior among college students, as well as the context in which many students socialize, contribute to a higher incidence of sexual aggression.

Despite the presence of aggression, over two-thirds of women in this study continued their relationship through the six month follow-up. Relationship commitment emerged as the primary predictor of continuing to date an aggressive partner. Not surprisingly, women who felt more committed to their relationship at the initial assessment were more likely to be dating the same partner six months later. This is consistent with the body of literature on both aggressive and non-aggressive relationship development. As operationalized in the current study, women's subjective feelings of wanting the relationship to continue, being oriented to the long term with a partner, and feelings of being emotionally and psychologically linked to a partner played a strong role in their decisions to continue dating their partner. Less understood is how these feelings of commitment arise when aggression has become part of a dating relationship.

Indeed, the current study also lends support to the growing recognition that experiencing aggression from an intimate partner does not necessarily lead to diminished relationship commitment or the end of the relationship. Although somewhat counterintuitive, none of the three forms of aggression reliably predicted relationship commitment, a finding consistent with other studies of dating violence (e.g., Dutton, Goodman & Bennett, 1999; Rhatigan & Axsom, 2006; Truman-Schramm, Cann,

Calhoun, & Vanwallendael, 2000). Perhaps, for some women, other positive features of the relationship offset the negative effects of experiencing aggression. For example, satisfaction with other aspects of a dating relationship, such as having a companion or experiencing feelings of sexual or even at times emotional intimacy, may buffer the effects of aggression and keep overall commitment to the relationship high. For other women, a perceived lack of other options for dating partners may influence higher commitment to their current partner (Rusbult, 1993).

This finding holds at least among women who have experienced dating aggression in a college setting; it is possible that including women in nonaggressive relationships would introduce additional variance in commitment (e.g., women who are not experiencing aggression may generally have higher commitment), revealing a significant link between experiencing aggression and commitment to a partner. However, the overall level of commitment in the current study was similar to levels reported in other samples of undergraduates dating both aggressive and non-aggressive partners (Rhatigan & Street, 2005; Rusbult, Martz & Agnew, 1998). Alternatively, it is possible that the lack of significant association between relationship aggression and commitment may be due to restricted variance in women's experiences of aggression; most women in the current study reported aggression of relatively low severity. However, this explanation seems less likely given that robust associations were still found between aggression and symptoms of depression and posttraumatic stress.

These explanations are offered only tentatively, as null findings are difficult to interpret. What can be concluded, however, is the importance of continuing to study the

formation of commitment to relationships in which aggression is present. All of the women in the current study experienced some degree of relationship aggression, yet commitment—the sole predictor of ending the relationship—was not uniformly low. At least for some women, it seems that other aspects of the relationship may be moderating the influence of experiencing aggression on commitment. Thus, factors that produce important variance in relationship commitment should continue to be investigated.

Underscoring the need for continued research in this area is the finding that neither symptoms of depression nor posttraumatic stress were significantly related to ending the relationship. One reason for this finding may be that psychological symptoms in the current sample were generally low. The majority of women exhibited subclinical levels of depression and posttraumatic stress. Whereas our hypotheses suggested that reduced problem-solving, lack of energy, social isolation and other aspects of depression and posttraumatic stress would interfere with ending a relationship, the level of symptoms present in the current sample may not have been sufficient to produce significant interference in cognitive functioning and motivation. This explanation is consistent with the relatively low severity of aggression experienced among this sample.

It is also possible that symptoms of depression and posttraumatic stress have more complex effects than originally proposed. In the case of depression, some women may experience the hypothesized effects on cognitive functioning and reduced motivation that would make it difficult to end a relationship. Other women may be affected by depression differently, such as through significantly reduced satisfaction in the relationship or increased restlessness and agitation, both of which may increase the likelihood of ending

the relationship. In the case of posttraumatic stress, symptoms of intrusion (e.g., re-experiencing, preoccupation) may produce the hypothesized effects on cognitive functioning making it difficult to end the relationship, whereas symptoms of avoidance (e.g., avoiding associated stimuli and reminders of the aggression) or arousal (e.g., hypervigilance, exaggerated startle) may make remaining in the relationship aversive and increase women's motivation to leave. Indeed, follow-up analyses revealed that greater symptoms of avoidance predicted ending the relationship, providing initial support for this explanation. In both cases, group-level effects may be obscured if women experience depression and posttraumatic stress differently.

Women's experiences of all three forms of relationship aggression were significantly related to higher symptoms of both depression and posttraumatic stress. This finding has been consistently documented in the dating violence literature and, in the current study, serves to further acknowledge the detrimental impact of relationship aggression on college women's psychological health. These effects are noted to occur even at the courtship stage of relationship development and at what might be considered relatively lower levels of severity. It is likely that the effects of relationship aggression are further reaching than assessed in the current study and likely impact women's academic achievement, physical health, and relationships with friends and family.

For these reasons, it becomes all the more important to examine the extent to which aggression decreases and psychological functioning improves after ending an aggressive relationship. Several key findings were present in the data. First, emerging adult women who ended their college dating relationship subsequently experienced less

physical aggression. It is likely that women who end the relationship spend less time with their former romantic partner, especially in settings where they are alone together and in which conflict may escalate into physical aggression. This finding is in contrast to studies of adult women that indicate physical violence from an ex-partner continues and may even escalate after ending the relationship (Bybee & Sullivan 2005; Fleury, Sullivan & Bybee, 2000). It seems possible that the college social environment, in which roommates, house mates, classmates and others are often present, may discourage continued or escalated physical aggression after ending a relationship. It is important to note, however, that this effect may not apply to other age groups or even to emerging adults outside of a traditional college setting. Nevertheless, to our knowledge, this is the first study to demonstrate with longitudinal data the link between ending a relationship and reduced victimization.

Whereas psychological aggression also was hypothesized to decrease after the ending of a relationship, this form of aggression was actually found to increase. Although former partners of emerging adults may not engage in physical aggression after a break-up, the current results suggest that they may engage in stalking or other jealous behavior, as has been reported among adult married couples (Anderson & Saunders, 2003). Further, a former partner may engage in verbal aggression as a means to blame for relationship problems or may seek to re-establish the relationship through guilt, threats of self-harm or other emotionally abusive tactics. Such behavior may make it difficult to end an aggressive relationship in the first place and may be connected to the majority of women choosing to maintain their relationship by follow-up. It may also play a role in

influencing a woman's decision to ultimately return to her partner. Thus, for emerging adult women in college who have decided to separate from an aggressive partner, it may be important to prepare for an increase in psychologically aggressive behavior. For example, it may be prudent to limit further contact, including communication through social networking media, email, and text messages. Gathering social support or even seeking professional help to cope with psychological aggression may be beneficial as well.

Alternatively, it is possible that women who ultimately ended their relationship actually experienced an increase in psychological aggression from their partner soon after the initial assessment and that this increase was what prompted the break-up to occur. In this case, increased psychological aggression would precede rather than follow the break-up. Unfortunately, due to the design of the study, the exact timing of increased psychological aggression is unknown, and this alternate explanation cannot be ruled-out.

Ending an aggressive college dating relationship did not reliably predict experiencing reduced sexual aggression. However, an examination of the group means (see Figure 2) suggested that the observed changes in sexual aggression were in the expected direction (e.g., women who ended the relationship reported decreases in sexual aggression), but these differences did not reach statistical significance. Although experiencing sexual aggression was fairly common among participants in this study, most of those experiences were of lower severity, usually involving unwanted sexual contact due to verbal pressure. A larger sample of emerging adults drawn from more diverse

settings (e.g., beyond college campuses) may produce more variance in sexual aggression experiences and more power to detect significant associations.

Another key finding in the current study was the link between ending an aggressive relationship and improved psychological functioning. Women who experienced less physical aggression or less psychological aggression after ending their relationship subsequently reported decreases in posttraumatic stress. In both cases, experiencing less aggression mediated the association between ending a relationship and improved psychological functioning. Though the association between ending the relationship and experiencing reduced sexual aggression missed meeting statistical significance, reduced sexual aggression was related to improvement in symptoms of both depression and posttraumatic stress.

It should be noted that participants were not asked to specify what experience of aggression they were thinking of when answering questions about symptoms of posttraumatic stress. Thus, it is possible that women who exhibited reductions in posttraumatic stress described symptoms that were connected to less frightening, less traumatic experiences at follow-up than at the initial assessment, thereby accounting for the reductions in posttraumatic stress over time. However, it is not clear why, as a group, women who ended their relationship would be more prone to respond in this way than women who continued their relationship, as evidenced by the indirect association between ending an aggressive relationship and greater symptom reduction by follow-up. Thus, it seems that this alternative explanation cannot fully account for the data.

The finding that ending an aggressive college dating relationship is associated with improved psychological functioning stands in contrast to the literature on non-aggressive couples suggesting that romantic break-ups are a risk factor for increased depression and anxiety (LaGreca & Harrison, 2005; Monroe, Rohde, Seeley & Lewinsohn, 1999). Also impressive is the fact that the improvements in psychological functioning observed in the current study occurred over the relatively short period of six months. Further, to the extent that emerging adult women who leave an aggressive partner begin to feel less depressed, have more energy, and experience less stress from their relationship, they may be able to re-connect with their social networks and enjoy more positive social interactions. These gains may actually reduce the likelihood of returning to their aggressive partner. Future work should address these questions with a longer follow-up period.

Several limitations were present in the current study. First, the sample consisted of emerging adult women attending college, and the findings and conclusions may not generalize beyond this population. For example, emerging adults not attending college may hold different attitudes and attributions about relationship aggression or may experience more severe forms of aggression. In addition, the social environment within a college setting presents a unique set of circumstances (e.g., dormitories or other shared housing with roommates, large-group social gatherings, extensive social networks, etc.) in which patterns of relationship aggression may unfold differently than outside this environment. As mentioned previously, the near-presence of others in a college setting may discourage physical aggression after ending a relationship, but emerging adults in a

non-college setting with smaller social networks may have experiences more similar to adult victims, in which physical aggression can increase after ending a relationship (Bybee & Sullivan, 2005). Smaller social networks among emerging adults not attending college may also present fewer opportunities for dating alternative partners, thereby increasing commitment to an aggressive partner.

Other populations to whom the current results may not apply include younger adolescents still living at home, same-gender couples, or couples from a culture or socioeconomic background not represented in the current sample. These factors may differently influence the experience of aggression, women's understanding and attributions of aggression, and may play differently into women's commitment to an aggressive partner. Thus, it will be important to replicate the current results with other populations, in particular with adolescents and emerging adults not in a college setting.

Second, participants could not be randomly assigned to end or continue their aggressive relationship, which limits causal inference in the current study. Although commitment was predictive of ending a relationship, and changes in aggression as well as changes in symptoms of depression and posttraumatic stress followed the ending of a relationship, it cannot be concluded that lower commitment caused the relationship to end or that ending a relationship caused the observed changes in aggression and symptoms. It remains possible that these associations were caused by other variables not measured in the current study. For example, increases in women's assertiveness or willingness to fight back against partner aggression may be responsible for the ending of the relationship or even for the reductions observed in physical aggression. Other women may have sought

counseling which led to a break-up or was responsible for improvements in psychological functioning.

A final limitation is noted in that, as a group, women who ultimately ended their relationship reported higher posttraumatic stress at the initial assessment than women who continued their relationship. Although posttraumatic stress was not directly related to ending the relationship, it is possible that this group of women may somehow be qualitatively different than the group of women who continued their relationship on factors not measured in the current study. It is important to bear in mind that no pre-existing group differences were found at the initial assessment for symptoms of depression or incidence of physical, psychological, or sexual aggression.

Despite these limitations, the current study holds several important clinical implications. It is important to respect a woman's choice in deciding whether to continue an aggressive relationship. However, the current results suggest that ending the relationship may be an effective solution for reducing physical aggression with potential benefits for psychological functioning—at least for women in a traditional college setting. Advocates working with college women who seek help for their aggressive relationships may consider helping their clients explore ending the relationship as one potential option. Ending the relationship is not the only means to reduce aggression, though, and some women may want to continue the relationship while finding other ways to curtail the aggression. In such cases, interventions that help couples to non-aggressively resolve conflict and that improve communication skills are clearly indicated. Finally, the current results suggest that psychological aggression increases after a break-

up; preventing or stopping continued psychological aggression after a break-up or helping women to cope with those behaviors may help them to successfully maintain their decision to have ended the relationship.

In addition to those already discussed, the current study suggests several directions for future work. Replication of the current results with a longer follow-up period and multiple assessment points would be beneficial. In fact, before firmly concluding that ending a relationship is recommended for college women experiencing aggression, it seems prudent to caution that a longer follow-up period may be necessary to better understand women's experiences and interactions with an aggressive partner after ending the relationship. In addition, such a design would allow for the identification of other relationship outcomes, including ending relationships later than the six-month follow-up or eventually returning to the relationship. A longer follow-up period also would be better suited to assess relationship experiences with other, future dating partners. Future studies may also examine changes that occur in other aspects of psychological functioning as a result of ending an aggressive relationship, such as changes in self-esteem, confidence, self-satisfaction, or even friendships.

Study 2 Discussion

Aggression that begins during courtship is likely to continue and even escalate over the course of a relationship (Capaldi, Shortt & Crosby, 2003; Stets & Pirog-Good, 1987), and chronic patterns of relationship aggression are likely to have a cumulative effect on women's mental health (Arata, 2002). For emerging adults in a college setting, ending an aggressive relationship has been associated with experiencing less physical

aggression and with improvements in psychological functioning (Young & Furman, under review); yet, the process of ending an aggressive dating relationship for emerging adults is not well understood. The current study sought to better understand factors that contribute to individual differences in emerging adults' commitment to aggressive dating relationships. Several intrapersonal variables were examined as direct predictors of Investment Model variables and as indirect predictors of commitment. The continuation or ending of aggressive relationships also was examined over a six-month follow-up period.

Unlike most studies of dating aggression that focus on a single form of aggression, findings from the current study are notable for their replication of the Investment Model among a sample that included emerging adult women who experienced physical, sexual or psychological aggression from a current dating partner. Both the direction and strength of relations among the Investment Model variables in the current sample were similar to previous studies (e.g., Le & Agnew, 2003; Rhatigan & Street, 2005; Rusbult, Martz, & Agnew, 1998). Greater investment and higher satisfaction predicted more commitment, whereas lower perceived quality of alternatives predicted lower commitment; satisfaction emerged as the strongest predictor of commitment. Together, these variables predicted nearly 60% of the variance in women's commitment to their aggressive partner.

The use of longitudinal data in extending the Investment Model to prospectively predict actual relationship outcome represents another strength of the current study. To our knowledge, this was the first study to demonstrate that earlier commitment would

prospectively predict actual relationship outcome in aggressive dating relationships. Less than two-thirds of women had ended their aggressive relationship by the six-month follow-up. This rate is similar to that found in other samples of emerging adults (e.g., Cate, Henton, Koval, Christopher & Lloyd, 1982; Flynn, 1990; Shortt, Capaldi, Kim & Owen, 2006) and underscores the propensity for emerging adults to remain in a relationship despite experiencing aggression. Women who remained in the relationship also reported significantly higher satisfaction and greater investment than women who ended their relationship, and they perceived themselves as having fewer quality alternatives to their current dating partner. Together, these findings provide further evidence in support of the Investment Model as an explanatory mechanism in the development of commitment and the process of ending aggressive dating relationships.

Beyond this replication, the current study also examined the role of four intrapersonal factors and their contribution to predicting individual differences in commitment. Avoidant romantic styles directly predicted relationship investment, satisfaction, and perceived quality of alternatives. Women who were more avoidant in their romantic style reported less investment and less satisfaction in their relationships, and they perceived greater availability of romantic opportunities outside their current relationships. The discomfort with intimacy and emotional closeness and the lower expectations about a partner's availability for support that are the hallmark of an avoidant romantic style likely serve to diminish women's enjoyment of a relationship and orient her toward the eventual ending of the relationship. Thus, for romantically avoidant women whose satisfaction and investment are already low (relative to less romantically

avoidant women), experiencing aggression may serve to further diminish their satisfaction and investment, reducing their overall commitment, and increasing the likelihood that they will end the relationship. Indeed, a more avoidant style provided indirect prediction of commitment, wherein women with more avoidant romantic styles felt less committed to their current partner than women who were more secure in their romantic style.

In similar fashion, higher rejection sensitivity and higher anxious romantic styles were both related to lower satisfaction, though only rejection sensitivity was a significant predictor when both variables were in the model simultaneously. These variables were highly related to each other, and the degree of shared variance seems to have negated the effect of anxious romantic styles on satisfaction. Both measures assess worry and negative anticipation of being rebuffed by an uninterested partner (e.g., rating concern/worry about whether "*your boyfriend really loves you*" on the RSQ and "*I worry that my romantic partners think I need to be comforted too much"* on the BSQ). Whereas rejection sensitivity focuses more exclusively on this type of fear and worry, anxious romantic styles also include aspects of providing care to a partner and the importance of affiliation, which may explain the weaker effect for this variable.

Thus, it seems that the fear of rejection and worry about a partner's responsiveness captured by measures of rejection sensitivity and anxious romantic styles were negatively related to satisfaction, which in turn predicted lower relationship commitment. Women with higher rejection sensitivity tend to react angrily and defensively toward others when they perceive interpersonal rejection. Thus, it may be

that women with higher rejection sensitivity are more likely to interpret a partner's aggressive behavior as a sign of potential rejection. This seems to have the effect of reducing satisfaction within the relationship as well as reducing commitment. This explanation is supported by the finding that higher rejection sensitivity was also directly related to ending the relationship by follow-up. Alternatively, it is possible that women's defensive and angry reactions to perceived rejection made it more likely for their partners to become dissatisfied and to end the relationship; the design of the current study cannot rule out this alternative explanation.

Interestingly, rejection sensitivity was not associated with perceived quality of alternatives as was expected. Although women high on rejection sensitivity more easily perceive rejection within a relationship, it seems that this may not influence their perception of available alternatives outside the relationship. It is possible that future partners may be romanticized and that hope for a better relationship in the future serve to maintain higher perceived quality of alternatives. However, once a relationship is established, both the opportunity for perceiving rejection and the emotional costs of being rejected increase—particularly when aggression is present.

As mentioned previously, the current study extends previous cross-sectional findings to include the prospective prediction of relationship outcome. Future work should follow these relationships beyond the six-month follow-up to assess patterns of continued interaction and relationship development. For example, a large proportion of women in the current study continued to date their partner through the six-month follow-up. As these relationships continue to develop, it seems likely that aggression in the

relationship will change (possibly escalating) and that the intrapersonal factors influencing commitment will also change. A longer follow-up period would be helpful in observing and understanding these changes. Further, some women who continued their relationship through the six-month follow-up may ultimately end the relationship at a later time. It would be important to assess how the intrapersonal factors may have influenced the later-timing of this break-up or how new experiences in the relationship (e.g, escalating aggression) may play a role.

A longer follow-up period also would help to understand what happens after ending an aggressive dating relationship. For example, what dating experiences did women have after the break-up? Were they able to establish a new dating relationship, and did that relationship involve aggression? Conversely, some women who ended their relationship by the six-month follow-up may begin dating the same partner again. In this case, it would be important to know what factors predict returning to an aggressive partner. It is possible that higher rejection sensitivity or more anxious romantic styles may be associated with patterns of repeated victimization over a longer period than observed in the current study. For example, frequent break-ups that occur as a result of perceived rejection may not be lasting, putting an individual at risk for experiencing continued aggression. In fact, among adult women seeking shelter, an anxious romantic attachment was associated with greater emotional involvement in the relationship and more frequent separations and reunions with an aggressive partner (Henderson, Bartholomew & Dutton, 1997).

In addition to a longer follow-up period, future work should explore the relations among these intrapersonal variables and the Investment Model in samples from a non-college setting. For college students, relationship investment seems to be primarily based upon emotional resources and time put into a relationship, whereas individuals from a non-college setting may also have more financial resources invested in their relationship. Thus, for women not attending college, investment may play a stronger role in predicting commitment, and rejection sensitivity, worry about the status of the relationship, and romantic avoidance may predict commitment less strongly. Alternatively, women not attending college may have smaller social networks, making their perceived quality of dating alternatives a stronger factor in predicting commitment. Finally, the concepts of rejection sensitivity and romantic style are thought to be formed over accumulated relationship experience. Thus, women with more romantic experience than emerging adults in college may have a qualitatively different understanding of romantic relationships, and the concepts of rejection sensitivity and romantic anxiety and avoidance may be differently related to the Investment Model variables.

The variables in the current study accounted for approximately 60% of the variance in commitment and 20% of the variance in actual relationship outcome. Although this represents a moderate proportion of explained variance within the field of psychosocial research, it also indicates that a significant amount of variance remains unexplained. It will be important for future work to continue identifying factors that help to explain why satisfaction may remain high despite aggression and how emerging adults may become emotionally invested in aggressive dating relationships. Continuing to

identify factors that influence the development of commitment will ultimately help to explain individual differences in the process of ending aggressive dating relationships and inform ways in which to provide support for women who seek help because of aggression.

The search for other intrapersonal factors that influence women's satisfaction, investment, and perceived quality of alternatives may be expanded to include skill-based characteristics such as assertiveness (including sexual assertiveness), communication and problem-solving skills, and emotion regulation and coping abilities that may offer specific targets of intervention. In addition, other experiences within the relationship may play a role; even aggressive relationships likely contain some positive features, and experiences of caregiving or support, positive affiliation and companionship, sexual fulfillment, and others may serve to moderate the influence of aggression on women's satisfaction, investment, and perceived quality of alternatives. Finally, the current study focused on characteristics and attributions of a single partner in the relationship. Yet it will likely be important to also understand the characteristics (beyond the aggressive behavior) of the other partner and the ways in which characteristics of both partners interact to influence the development of commitment.

Finally, it is important to acknowledge that causal inferences cannot be made from the current data about the ending of aggressive dating relationships. In particular, among the relationships that ended during the current study, we do not know who decided to end the relationship. It is possible that in some cases the partner initiated the break-up and that some women may have preferred for the relationship to continue. For

others, the decision may have been mutual. Further, the current study focused only on one partner's perceptions and commitment to the relationship. Relationships are dyadic by nature, and the characteristics of both individuals combine and interact to influence each other. Thus, it will be important for future work to take into consideration the characteristics and relationship commitment of both partners.

Chapter Five: Summary

There is growing recognition of the longterm effects of relationship aggression and of the difficulty in putting an end to such aggression. For many emerging adults, relationship aggression is a part of courtship, a time during which interaction patterns with partners and expectations for relationships are still developing. For a significant proportion of these relationships, aggression that begins in courtship carries forward as commitment increases and escalates into more severe violence. However, the process of forming commitment in aggressive dating relationships is not well understood. The current study demonstrated that commitment plays an important role in the process of ending aggressive dating relationships for emerging adult women and that doing so is associated with experiencing less aggression and improvements in psychological functioning. Further, the current study has begun to identify intrapersonal factors that influence commitment and help to explain individual differences in relationship outcome when aggression is present. Continuing to identify factors that influence satisfaction, investment, quality of alternatives, and ultimately commitment will improve our understanding of these processes and inform interventions that seek to help women who have decided to end their aggressive relationship.

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