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<https://doi.org/10.18297/etd/1173>

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RECOGNITION OF ROMANTIC RELATIONSHIP DANGER SIGNS

By

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B.A. Central Michigan University, 2006

M.A. Central Michigan University, 2010

A Dissertation Submitted to the Faculty of
The College of Education and Human Development of the University of
Louisville in Partial Fulfillment of the Requirements for the Degree of

Doctor of Philosophy

Department of Counseling Psychology
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August 2014

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May 29th, 2014

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DEDICATION

This Dissertation is dedicated to my cohort, my peers, and the program faculty whose support, encouragement, and guidance have helped me grow into the person, researcher, and clinician I am today.

ACKNOWLEDGEMENTS

This dissertation is made possible by the patience, guidance, and unending support of my advisor, Dr. Jesse Owen. Across several years, Dr. Owen encouraged me to think ever more critically, provided a platform and opportunities to develop and test ideas, and rarely tired of my constant questioning of – *why?* Furthermore, I would like to thank the committee members for their valuable input, diverse perspectives, edits, and suggestions, which have greatly improved this project, and those to be developed in the future. I would also like to thank Dr. Kay Toe for his contributions, which have shaped this project in many ways. Lastly, I would like to acknowledge the many hours of work and thought that went into the coding process by the team of Joanna Drinane, Anna Roeder, and Darren Turner.

ABSTRACT

RECOGNITION OF ROMANTIC RELATIONSHIP DANGER SIGNS

Kelley Quirk

May 29th, 2014

Romantic relationships are a strong source of personal well being for many individuals, with unhealthy partnerships promoting greater distress and dissatisfaction. Several variables have been identified in the literature as “danger signs” which seem to predict current and/or future relational discord. These danger signs are expressed within couple communication (such as invalidation or escalation) and behaviors (such as physical violence and controlling actions). However, little is known about individual variability in the ability and willingness to accurately identify these danger signs. The current study explores this gap in the literature.

Specifically, seven video vignettes of interactions between two partners (actors) were presented to participants, which depicted specific danger signs. Participants were then asked what they noticed, and responses were coded for identification of danger signs. Further more, participants also indicated their hypothetical level of commitment to the relationship following each clip. Participants provided responses for measures of adult attachment, experiences of intimate partner violence and emotional control in romantic relationships,

engagement in negative relational maintenance behaviors, level of relational thoughtfulness and relational unawareness, past traumatic experiences, and global coping style. Generally, it was hypothesized that physical violence would be recognized at higher rates as compared to negative relational maintenance behavior danger signs, and these would be recognized at greater rates as compared to communication danger signs. It was predicted that those with greater insecure attachment would recognize danger signs more quickly (as compared to those with higher ratings of secure attachment) as the videos were presented with greater overt expression. It was also hypothesized that those with anxious attachment would report consistent commitment across videos, whereas those with greater avoidant attachment ratings would endorse lower levels of commitment. In addition, mediation models were proposed, wherein attachment would predict commitment ratings through coping strategy (active or passive coping). Lastly, it was predicted that higher ratings of relational awareness would be associated with greater danger sign recognition and lower levels of commitment.

Results of the study supported the broad hypothesis that physical violence was recognized at a higher rate as compared to negative relational maintenance behaviors, and communication danger signs were recognized at the lowest level. However, no other significant associations were found within the proposed models. Still, intimate partner violence experiences were related to higher rates of danger sign recognition, as was relational thoughtfulness. Conclusions and

implications are offered for improved methods of data collection, and possible explanations for the non-significant findings.

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CHAPTER 1

RECOGNITION OF ROMANTIC RELATIONSHIP DANGER SIGNS

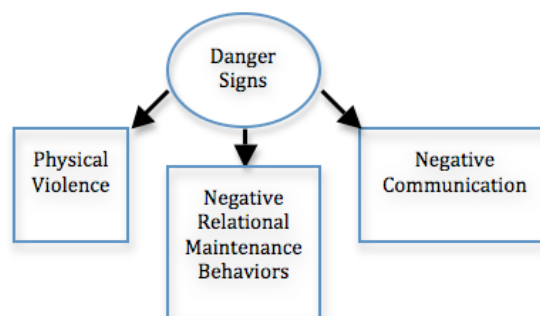
Romantic relationships engender both positive and negative experiences and outcomes. Numerous studies have identified correlations between positive relationship quality and psychosocial correlates such as increased economic, physical, and psychological wellbeing (e.g. Hawkins & Booth, 2005; Fincham & Beach, 2010; Reis & Gable, 2003; Ryff, 1995). However, as is commonly experienced, romantic relationships are not exclusively gratifying and can cause distress and conflict for partners, even amidst overall positive feelings. Less satisfied relationships have been shown to be associated with negative psychological and physical health such as depression, anxiety, and heart disease (Kiecolt-Glaser & Newton, 2001; Whisman, 2007). Trusting that less satisfied relationships are predictive of current or future negative outcomes, identification of signs that signal the initial stages of a deteriorating relationship would be essential to recognize. Are these relationship danger signs able to be accurately perceived by partners? If so, are some individuals more likely to miss these signals? Alternatively, are some individuals more likely to accurately perceive danger signs, but then handle these signs in unproductive or unhealthy ways? Although the empirical literature has established strong connections between quality of relationship satisfaction and subsequent outcomes, the ways in which individuals perceive and react to relational danger signs is less understood.

To address these important questions, foundational elements of distressed relationships may provide some answers. One of the strongest and most consistent predictors of dissatisfied and dysfunctional romantic relationship dynamics is the way in which couples handle conflict (for reviews, see Canary, Cupach, & Messman, 1995; Karney & Bradbury, 1995). Within couple conflict, there are often intense emotional or behavioral expressions, both positive and negative, that signal larger psychological, social, emotional, or relational issues (Markman, Stanley, & Blumberg, 2010). When these important dynamics are unacknowledged in romantic relationships, they are often referred to as “hidden issues” (Markman, Stanley, & Blumberg, 1994). Specifically, hidden issues are conceptualized as foundational values or dynamics that consciously or subconsciously influence priorities, perceptions, and motivations in romantic relationships. For example, when one becomes extremely upset about the late arrival of their partner, the expression of emotion is often rooted in larger dynamics rather than the content of tardiness. In this example, being late may trigger feelings of being disrespected, or a perception of unequal power in the relationship. When hidden issues emerge some individuals accept these differences while others confront or avoid these issues. In this way, unacknowledged hidden issues may drive individuals to engage in negative relationship dynamics such as negative communication, violence, or negative maintenance behaviors.

Stemming from unaddressed hidden issues, partners often react to unpleasant relational interactions by intentionally or unintentionally engaging in danger

signs. Broadly, danger signs are thought to be behavioral, cognitive, or emotional expressions that signal current or future relational discord (Campbell, 2002; Dainton & Goss, 2008; Stanley & Markman, 1997). Engagement in relationship danger signs can happen for a number of reasons, ranging from attempts to restore a desired balance of power or getting back at one's partner for a perceived wrong. Danger signs can manifest in a number of different ways, and can range in severity. For example, it is could be worse for a partner to perpetrate physical violence as compared to communicate invalidation. For the current study, danger signs will be defined as physical aggression/violence, negative relational maintenance behaviors, and negative communication (see Figure 1). It seems likely that these three categories are somewhat hierarchical in level of severity and perceptibility, with physical violence being the most severe and easily observed, followed by negative relational maintenance behaviors, and then negative communication.

Figure 1. Danger Signs



Danger Sign – Physical Aggression/ Intimate Partner Violence

It is commonly understood that physical aggression is one of the most severe and unhealthy aspects of intimate relationships with victims subsequently experiencing higher rates of mental health issues, post traumatic stress disorder, suicidal thoughts/attempts, and serious injury or even death (Campbell, 2002; Coker, Davis, & Arias, 2002; Stein & Kennedy, 2001; Thompson, Kaslow, & Kingree, 2002). Without a relational foundation of trust and physical/emotional safety, most other healthy relationship structures cannot be built or maintained. Indeed, recent studies have found that nearly half of women who had experienced Intimate Partner Violence (IPV) from their partner subsequently divorced or separated (Zlotnick, Johnson, & Kohn, 2006). Therefore, it seems clear that physical aggression or intimate partner violence is a strong relationship danger sign.

IPV manifests in varying forms and levels of severity, with the empirical literature drawing the distinction between intimate terrorism and situational couple violence (Johnson, 1995). Intimate terrorism refers to interactions wherein there is a clear relationship pattern of a threatening and controlling aggressor against a partner in a victim role. Situational couple violence, on the other hand, refers to a dynamic wherein both partners engage in physical aggression against one another and these actions are more closely tied to poor conflict management rather than pathological characteristics or intentions (Holtzworth-Munroe, Meehan, Herron, Rehman, & Stuart, 2000; Johnson & Leone, 2005). Given the abundance of empirical support for the association between intimate partner

violence and negative outcomes, as well as the overt nature of most physical violence, the current study will focus on individuals' perceptions of subtle forms of physical aggression, most consistent with situational couple violence.

In this process, it is likely important to evaluate the impact of participants' experiences with non-physical controlling behaviors within their romantic relationships. Differing from physical violence, controlling behaviors relies on tactics to influence one's partner through somewhat more subtle means.

Controlling behaviors can manifest as economic control, possessive behaviors, and threats or intimidation (Archer & Graham-Kevan, 2003; Graham-Kevan, & Archer, 2003). Empirical data has identified support for the link between controlling behaviors and physical aggression, which is in turn related to poor relationship functioning and individual distress (e.g., Follingstad, Rutledge, Berg, Hause, & Polek, 1990; Migliaccio, 2002; Shepard & Campbell, 1992). It may be that experiences of controlling behaviors within romantic relationships influences individuals to be more aware of the presence of danger signs so as to better avoid these experiences going forward. However, it may be that experiences of controlling behaviors become a normative schema within romantic relationships, making danger sign recognition less likely. Taken together, these dynamics suggest that assessing and controlling for experiences of controlling behaviors within romantic relationships is important in the examination of danger sign recognition.

Danger Signs – Negative Relational Maintenance Behaviors

Another relational dynamic that may undermine successful and satisfied

relationships are negative relational maintenance behaviors (Dainton & Gross, 2008; Stafford & Canary, 1991). Maintenance behaviors can be positive or negative, and are used by partners to retain desired relationship statuses or trajectories (Canary & Stafford, 1994). For example, when a partner feels insecure or under appreciated, a partner may attempt to resolve this by discussing their feelings (positive relational maintenance behavior) or one might attempt to increase positive feelings by intentionally making their partner feel or express jealousy (negative relational maintenance behavior). Within the empirical literature, positive relational maintenance behaviors have been studied extensively (for a review, see Canary & Dainton, 2003), however, examination of negative relational maintenance behaviors has only recently begun to receive attention. Still, for the scant research on this domain, clear and consistent associations have been identified between engagement in negative relational maintenance behaviors and relationship dissatisfaction, disrespect, commitment, and insecure attachment (Dainton & Gross, 2008; Goodboy & Bolkan, 2011; Goodboy, Myers, & Members of Investigating Communication, 2010).

Relational maintenance behaviors can vary across relationship phases, with some behaviors being more normative and taking on a different meaning in the initial dating stage as compared to a later committed stage. For example, it may be more normative and less detrimental to a relationship to avoid significant conflict during the initial dating phase of a relationship, yet avoidance of relationship conflict in later stages may be associated with low relationship satisfaction (Gottman, 1993). Conceptually there could be meaningful differences between

those who recognize negative maintenance behaviors versus those who recognize them and decide not to act, regardless of the stage of the relationship. Thus, a first step in this line of research is to better understand the degree to which individuals recognize these negative relationship maintenance behaviors.

Recently, Dainton and Gross (2008) found six negative relationship maintenance behaviors purportedly used by individuals with the intention of sustaining or enhancing relationships. Specifically, participants reported engaging in *jealousy induction* (i.e. intentionally causing a partner to feel romantically jealous), *infidelity* (i.e. extra-dyadic relationship), *spying* (i.e. attempting to obtain negative information about a partner), *avoidance* (i.e. evading one's partner or an unpleasant relationship topic/problem), *destructive conflict* (i.e. using conflict as a way to control one's partner), and *allowing control* (i.e. allowing or accepting partner control-behaviors to continue the relationship).

Jealousy induction is a relational maintenance behavior wherein an individual uses tactics to generate or increase feelings of jealousy in one's partner (Dainton & Gross, 2008; Fleischmann, Spitzberg, Andersen, & Roesch, 2005). In general, romantic jealousy has been conceptualized as thoughts, emotions, and actions in response to a perceived threat to a relationship by a rival (Guerrero & Andersen, 1998). Unlike envy, jealousy is thought to stem from a desire to protect a *current* relationship from disruption or termination by a competitor. However, romantic jealousy has been related to higher amounts of relational dissatisfaction, aggression, conflict, and break-up (Guerrero, Spitzberg, & Yoshimura, 2004), suggesting that jealousy might not be a positive element for relationships.

Jealousy induction involves generating fears of jealousy in one's partner by highlighting the potential for interference from another person. Intended goals of jealous induction range from seeking to 'get back' at one's partner by making them angry, or to increase one's sense of self-esteem in the relationship (White, 1980). Alternatively, others may exhibit these strategies to gain partner attention/affection, or increase relationship commitment (Sheets et al., 1997). Specific tactics used include discussing past relationships, showing interest in another person/relationship, or outwardly flirting with another person in front of one's partner (Sheets et al., 1997). Research has shown that engaging in jealousy induction often generates partner reactions that are either interactive (i.e. negative emotional responses such as crying or anger) or behavioral (e.g. surveillance or rival contact) and these dynamics are ultimately related to negative relational outcomes such as relatively lower relationship satisfaction and commitment (Guerrero et al. 1995; Goodboy & Meyers, 2010).

Among negative relational maintenance behaviors, infidelity is a strategy that may cause the most relational distress and damage. In couple therapy, clinicians view infidelity as one of the most damaging actions partners engage in (Whisman, Dixon, & Johnson, 1997). Engagement in infidelity often results in significant relational distress, conflict, and disillusionment (Buunk, 1995). However, using infidelity as a relational maintenance behavior may be different than other occurrences of infidelity as there is some degree of intentionality related to a goal of generating jealousy, attention, or desire from their partner. It is difficult to imagine that infidelity can be related to attempts improve or maintain a primary

relationship; however, some studies have identified reports of positive outcomes of extra-dyadic interactions such as improved self-esteem, increased closeness, and personal growth (Buunk & Van Driel, 1989; Jones & Burdette, 1994). In this way, some individuals may engage in infidelity with the intention of maintaining their primary relationship such as attaining unmet needs, generating desired distance, or inducing envy.

Spying is a relatively common relational behavior that occurs for a multitude of reasons (Dainton & Gross, 2008). Spying, within romantic relationships, can be conceptualized as attempts to quell relationship uncertainty and/or anxiety by taking covert actions to obtain information about one's partner or the relationship as a whole (Carson, 2000). From small to very aggressive actions, spying can take the form of casual questions about one's partner to his/her friends or can manifest aggressively by controlling a partner's phone information and/or online information. At times, individuals engage in spying to sustain their confidence in the relationship or to manage fears and anxieties about commitment. Other times, partners engage in spying as a maintenance strategy, seeking to prevent infidelity and/or commitment uncertainty. In this way, using spying as a negative relational maintenance behavior may decrease temporary feelings of insecurity, but ultimately is associated with negative relationship outcomes such as lower levels of respect, satisfaction, and commitment (Goodboy & Meyers, 2010).

Avoidance is a negative relational maintenance strategy wherein a partner purposefully evades addressing topics, issues, or needs in a romantic relationship that seem unpleasant or aversive (Afifi & Guerrero, 2000; Ayres 1983; Dainton &

Gross, 2008). Avoidance is extremely similar to other communication danger signs (e.g. withdrawal, denial); however, when avoidance is used as a maintenance strategy, it is more goal-oriented with the intention of continuing positive aspects of a relationship and/or commitment. A partner may perceive a relationship problem but may not attend to it so as to not “rock the boat” and not generate any potential negative feelings. Although these types of strategies may be beneficial at certain times or phases of dating, and may be effective in the short run, ultimately, avoidance does not generate effective problem solving conversations and has been shown to be associated with lower ratings of relationship satisfaction, commitment, and respect (Goodboy & Meyers, 2010).

Destructive conflict is a negative relational maintenance behavior, wherein a partner generates a disagreement with the specific intent to exert control over the relationship (Dainton & Gross, 2008). For example, an individual may initiate a conflict to gauge their partner’s commitment or to generate intense feelings of disconnection and subsequent reconnection. These behaviors share some similarities with control behaviors, wherein an individual seeks to increase their power over their partner and/or the relationship through limiting economic, emotional, or physical freedom (Goodboy & Meyers, 2010). Destructive communication may overlay with these dynamics whereby a partner uses destructive and controlling conflicts to manage desired relational processes and outcomes (Dainton & Gross, 2008).

The last negative relational maintenance behavior is allowing control by one’s partner (Dainton & Gross, 2008). An example of allowing control in a

relationship might be limiting one's engagement in a previously enjoyed activity, such as a game-night with friends, because it makes their partner jealous. If one's partner exhibits controlling behaviors, it may seem advantageous to allow the control so as to continue positive perceptions or experiences in the relationship. Addressing controlling behaviors may lead to increased conflict and possible decreased commitment levels. Controlling behaviors, whether related to insecurity or an attempt to manage vulnerability, have been found to be related to negative relational and psychological outcomes such as intimate partner violence and depressive symptoms (Galliher, Rostosky, Welsh, & Kawaguchi, 1999; Goodboy & Myers, 2010; Lyons-Ruth & Jacobvitz, 1999).

Maintenance behaviors are required of evolving relationships, necessitating actions to sustain desirable levels of intimacy and commitment. However, use of negative maintenance behaviors can undermine foundational trust and authentic intimacy. These negative relational maintenance behaviors differ from communication danger signs in that these carry an intentionality that is tied to sustaining the relationship, whereas communication danger signs may or may not be intentional (Dindia & Canary, 1993). However, both communication danger signs and negative relational maintenance behaviors have been linked to decreased relationship satisfaction (Goodboy & Myers, 2010) and individuals may benefit from a strong awareness of these characteristics.

Danger Signs - Communication

The most common way that danger signs are conceptualized in the empirical literature is couched within couple communication (Gottman &

Notarius, 2000; Johnson, et al., 2002; Stanley & Markman, 1997). Danger signs expressed within couple communication deteriorate foundational aspects of a relationship such as trust, commitment, and confidence in the relationship (Rhoades, Stanley, Markman, & Ragan, 2012; Markman, Rhoades, Stanley, Regan, & Whitton, 2010). Or, more simply stated, danger signs may signal larger negative relationship issues and impede productive conversations or problem solving. Several types of communication danger signs have been identified within the empirical literature and have been linked to future relational discord and separation. These findings are largely derived from self-reports of couple communication and from observational studies wherein videotaped or live couple interactions are coded by trained observers (Gottman, 1994; Heyman, 2001; Kerig & Baucom, 2004; Weiss, Hops, & Patterson, 1973). One of the most widely recognized sets of negative communication danger signs are John Gottman's "four horsemen of the apocalypse" (Gottman & Levenson, 1994) which are criticism, contempt, defensiveness, and stonewalling. These four types of interactions have been found to predict distress and divorce for couples (Gottman, 1994).

The first of the four horsemen, criticism, can be thought of as an extension of a typical relationship 'complaint'. A complaint relates to a specific behavior whereas a criticism attacks the character of a partner. Gottman (1994) considers contempt, the second danger sign, to be the worst of the four horsemen. Contempt involves behaviors or verbalizations by a partner that convey disgust in an overtly hostile manner. Examples of behaviors that convey contempt include eye rolling,

snickering, and name-calling. The third of the four horsemen, defensiveness, is characterized by denial of responsibility and blaming within conflicts. The interplay between contempt and defensiveness essentially shuts down communication, preventing any progress forward on an issue. One outcome of this may be ‘stonewalling’, the fourth danger sign, wherein a partner essentially shuts down, tuning out the other and disengaging from the conflict and from the negative feelings that have escalated.

In addition to these four danger signs, Markman, Stanley, and Blumberg (1994) have identified similar patterns of communication danger signs that have been found to predict relational distress, and low levels of relationship satisfaction and commitment (Markman, Stanley, & Blumberg, 2001). These danger signs are escalation, invalidation, withdrawal, and negative interpretations. Escalation is characterized by exchanges back and forth between partners that increase in emotional or content intensity. Invalidation is typically expressed through subtle or direct messages that demean or put-down the feelings or viewpoint of an individual. When a partner ceases to be actively involved in a relationship conversation, either by physically leaving the room or by emotionally checking-out, this is considered withdrawal. Lastly, negative interpretations occur when one partner believes that the motivation behind some action/verbalization is really more negative than it is or is connected to a more malicious intent.

Collectively, communication danger signs are likely to be damaging and erosive to a relationship. Quality of couples’ communication has been found to be a strong predictor of relationship satisfaction and relationship sustainment based

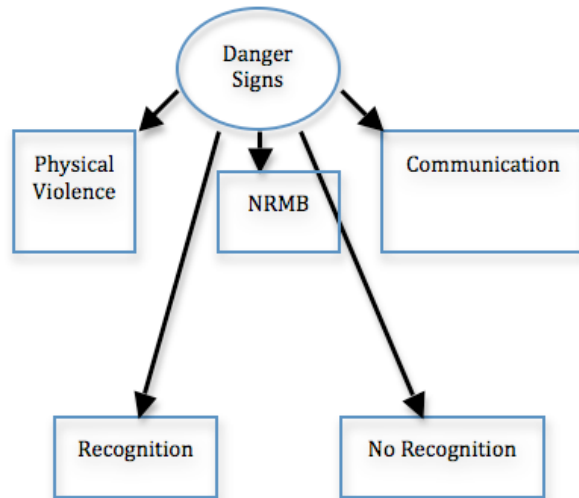
on the early observational coding work of Heller and Monahan (1977), Markman (1979), and Gottman (1977). Based on these works, many others have found that couples with communication-based conflicts are at risk for a variety of negative outcomes (Clements, Stanley, & Markman, 2004; Markman, Rhoades, Stanley, Ragan, & Whitton, 2010; Fincham & Beach, 1999; Stanley, Markman, & Whitton, 2002; Gottman, Coan, Carrere, & Swanson, 1998). Negative communication patterns have been found to be predictive of negative mental health outcomes such as increased anxiety and depression (e.g., Beach & O'Leary, 1993; Fincham, Beach, Harold, & Osborne, 1997; Halford & Bouma, 1997). Overall, research suggests that greater frequency of danger signs and/or negative communication within couple interactions is associated with current and future relational distress and dissolution of the relationship.

Ultimately, all three types of danger signs (intimate partner violence, negative relationship maintenance behaviors, and negative communication) can be understood as or subsumed under the concept of disrespect. Respect, in relationships, refers to a partner's expressions of equality/mutuality and caring/supportiveness in a relationship (Hendrick & Hendrick, 2006). Disrespect then can be conceptualized as the absence of these qualities – or, the presence of inequality and indifference. It is important for individuals to accurately recognize and make healthy decisions about the presence of danger signs in a relationship so as to avoid negative relational outcomes.

Danger sign recognition

Given the support for associations between danger signs and relationship dissatisfaction, it would make sense that individuals would attempt to avoid partners who exhibit those signs, confront danger signs that have emerged in a current relationship, and/or end a relationship if the danger signs cannot be fixed. Yet countless relationships begin or are sustained despite the presence of danger signs (Davila & Bradbury, 2001; Kirkpatrick & Davis, 1994). Different pathways may exist as it relates to danger sign recognition. Some individuals may perceive danger signs and may take action to confront them or end a relationship. Other individuals may experience difficulty in accurately perceiving danger signs, missing them entirely. Alternatively, some individuals may accurately perceive danger signs, but do not take steps to address or correct those signs. There may be overriding factors or coping mechanisms that contribute to missing danger signs or drive individuals to not attend to or make healthy decisions regarding these signs. Building upon the model depicted in figure 1, I propose that some individuals may experience greater difficulty in danger sign recognition as compared to others (see figure 2).

Figure 2. Danger Sign Recognition



There are three avenues of theory and research that lend support for the notion that some people may miss or not attend to danger signs. First, we can gain some understanding about the accuracy of individuals' perceptions based on the discrepancy between their self-reported communication quality and observer ratings of communication (i.e., communication danger signs) within couple interactions. Observational methodology usually involves asking a couple to discuss a relational issue and their discussion is videotaped and/or audio recorded and these observations are coded by trained raters (Hahlweg, Kaiser, Christensen, & Fehm-Wolfsdorf, 2000). The connection between independent observations of couple exchanges and current or future relational satisfaction or discord has been repeatedly established in the empirical literature (for a review, see Karney and Bradbury, 1995; Heyman, 2006). The observational method of analyzing couple interactions grew out of concerns about the accuracy of partner's self-reports of

relationship communication and behaviors. For example, Hahlweg et al. (2000) found that partners' self-reported ratings of communication were moderately correlated with observer's ratings of their communication ($r = .41$ to $.51$). In addition, Rhoades and Stocker (2006) found that partner ratings of one's communication was a better predictor of marital hostility and affection than self-report, indicating discrepant awareness or accurate perceptions in reporting couple communication. Another troubling confound with partners' self-reported communication refers to the idea of sentiment override (Weiss, 1980) wherein an individual's global assessment of the relationship may interfere with specific ratings of behaviors or communication. This idea lends support for the notion that partners are susceptible to interpreting their behaviors in biased ways that are connected to other embedded dynamics (Rhoades & Stocker, 2006). The discrepancy in observer or partner ratings and self-reported scores may reflect a gap in couples' awareness of danger signs, potentially an unconscious level of awareness or lack thereof. The degree to which observational coding is superior to the self-report of couples is debatable.

Second, several studies have explored danger sign recognition through self-report measures of awareness of relationship danger signs, with findings supporting the notion that individual's reported awareness is not always congruent with reported relationship outcomes. For example, a recent study identified inconsistencies in self-reported levels of relationship awareness with perceptions of feeling duped by one's partner, especially for those higher in anxious attachment (Quirk, Owen, Fincham, 2012). Vennum and Fincham (2011) found

significant negative associations between individual's reported relationship awareness of warning signs and more dedication, positive interaction, and less negative interaction and psychological aggression. It seems that underlying processes hinder some individuals ability to accurately perceive relationship dynamics or danger signs. Self-report measures may capture only certain elements of danger sign recognition, in particular the conscious recognition.

Third, Betrayal Trauma Theory (BTT) provides additional support for the notion that individuals miss important relational signs (Freyd 1994; 1996; DePrince, 2001). According to BTT, when an individual experiences trauma perpetrated by a "close" other (a person on which one *must* rely such as a caregiver or significant other), they must find a way to cope with the abuse while also continuing the necessary reliance on the perpetrator (Sivers et al. 2002). One common relatively survival strategy by which individuals handle this dynamic is dissociative coping mechanisms, wherein traumatic events are sublimated or repressed (DePrince, 2005). Unfortunately, this tendency toward dissociation and diminished awareness has been shown to persist through adulthood, leading to higher rates of subsequent revictimization (Classen, Palesh, & Aggarwal, 2005; DePrince, 2005). In addition, those with betrayal trauma histories have been shown to experience greater difficulty on tasks requiring identification of danger cues, as compared to those with fewer instances of trauma experiences (e.g., Cloitre, 1998; DePrince, 2005; DePrince & Freyd, 1999; Sandberg, Lynn, & Matorin, 2001). Importantly, a recent study found that individuals with betrayal trauma experience reported higher ratings of partner disrespect, but ratings of

relationship adjustment and dedication were not significantly different from those with higher ratings of partner respect (Owen, Quirk, Manthos, 2012). Taken together, these results could suggest that negative interpersonal experience may exert an influence over one's ability to encode relationship cues, and to make healthy decisions based on those ratings.

Perceiving Danger Signs: Attachment Theory

One theory that may support differing perspectives, motivations, and behaviors in romantic relationships is attachment theory. Bowlby (1988) asserts that early experiences between infant and caregiver shape working models that guide subsequent cognitions, behaviors and affective reactions with other people. This working model consists of beliefs about whether the self is loveable, whether important others will be available when needed, and subsequent strategies of attaining needs (Dozier & Kobak, 1992; Kobak & Sceery, 1988). Romantic adult attachment is an extension from Bowlby's (1988) theory of attachment between child and caregiver. Specifically, Hazan and Shaver (1987) extended Bowlby's theory to describe how individuals navigate romantic relationships, including the development of strategies and expectations for how one gets their needs met. Of course, individuals vary along these aspects, with some feeling more anxiety regarding the availability and stability of partners whereas others manage their expectations by avoiding feeling dependent on another person and anticipating unreliability in others. Individuals subsequently develop behaviors and strategies for safely seeking out and managing intimacy with others.

Based on these strategies, Bartholomew & Horowitz's, (1991) identified four patterns of adult attachment: (a) secure, (b) avoidant/dismissive, (c) avoidant/fearful, and (d) anxious/preoccupied (Collins & Read, 1990; Shaver, Hazan, & Bradshaw, 1988; Wei, Russell, Mallinckrodt, & Vogel, 2007). Within adult relationships, secure attachment style is characterized by effective emotion regulation and positive beliefs about the self and positive expectations about one's partner or others, and has been associated with higher reports of relationship satisfaction (Collins & Read 1990). Securely attached individuals are comfortable with and seek out support from interpersonal relationships and engage in low levels of self-criticism and self-blame (Mallinckrodt, 2000). Within these relationships, secure individuals are better able to manage emotions and engage in a reflective process about context and possible reactions of others in response to their own actions (Main, Goldwyn, & Heese, 2003; Allen, 2005).

As compared to secure attachment, insecure attachment includes two different elements: avoidant or anxious attachment (Brennan, Clark, & Shaver, 1998). Avoidant attachment is often expressed as intentional emotional distance or self-protection in a relationship, with restrained dependence on others and low levels of intimacy (Bartholomew & Horowitz, 1991; Feeney & Noller, 1990; Kobak & Sceery, 1988). An avoidant attachment style may manifest as either fearful or dismissive; those who are more dismissive-avoidant report high self-value but view others more negatively. Those who report an avoidant-fearful attachment style may have more negative views of self and other, and may avoid

intimate relationships or unpleasant relational emotions to avoid anticipated rejection (Fraley & Shaver, 1997; Mikulincer & Shaver, 2003).

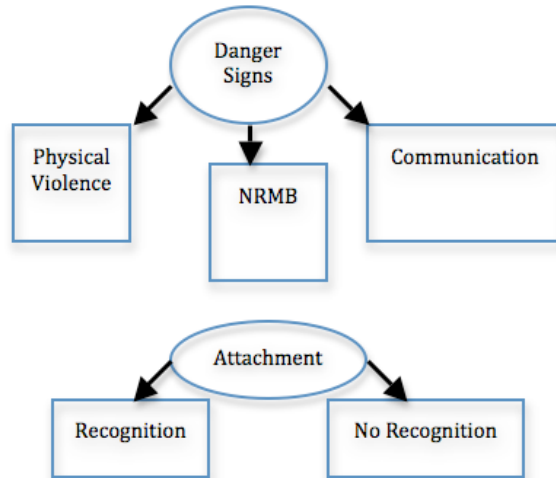
In contrast, those with more anxious/preoccupied attachment typically hold positive views about others while experiencing more negative self-views. One of the most salient features of those more anxiously attached is the high prioritization of attaining and sustaining important relationships. This may equate to a heightened focus on ones' partner and on relationship cues, with particular attention paid to separation or abandonment cues (Zuroff, Moskowitz, & Côté, 1999; Mikulincer, Florian, & Tolmacz, 1990). Focus on one's partner and on potential negative relationship cues seems to serve as an attempt to control anxiety about losing that relationship or experiencing rejection. In addition, anxiously attached individuals often experience poor emotion regulation and self-regulation (Mikulincer, Shaver, Sapir-Lavid, & Avihou-Kanza, 2009).

Previous research has found that relationship conflict or relationship distress activates one's attachment system, eliciting affect and cognitions inherent in an individual's particular attachment style (Simpson & Rholes, 1994). For those with a more anxiously attached style, perceived negative relational cues can present an interesting dilemma. Individuals reporting greater anxious attachment often exhibit a hyper-focus on shifting relational cues in order to manage relational anxiety (e.g. Campbell, Simpson, Boldry, & Kashy, 2005; Mikulincer & Shaver, 2003; Fraley, Niendenthal, Marks, Brumbaugh, & Vicary, 2006). This can engender a drive to confront and address undesirable dynamics in the relationship, which may increase feelings of security and stability. On the other hand, these

negative relational cues and associated fears of abandonment may be too anxiety provoking, leading some individuals to avoid, minimize, or distract from those negative components. Thus, it is likely that those with more anxious attachment would be more likely to attend to danger signs, but may deal with the discomfort through different coping mechanisms.

In contrast, individuals with an avoidant attachment style may miss danger signs more than individuals with more anxious attachment or secure attachment. For example, those who report higher avoidant attachment may repress emotional responses to negative relational cues. It may be that the salient features of anxious and avoidant attachment – the drive to sustain important relationships coupled with fears of rejection and abandonment or dependency – override one’s ability or propensity to accurately perceive, address, or correct negative relationship dynamics and danger signs. As such, figure 3 illustrates this point wherein danger sign recognition is filtered through the salient interpersonal mechanisms of attachment.

Figure 3. Danger Signs, Attachment, and Recognition



The interplay between attachment and romantic relationships has been studied extensively with studies finding negative associations between insecure attachment and relationship satisfaction (e.g., Davila, Bradbury, & Fincham, 1998; Feeney, 1994; Mondor, McDuff, Lussier, & Wright, 2011; Shaver & Mikulincer, 2002). Despite this association, studies have found that insecure attachment does not predict differences in relationship stability or longevity as compared to those securely attached (Kirkpatrick & Davis, 1994; Lehnart & Neyer, 2006). The subtext of these findings seems to be that individuals with an insecure attachment style experience less satisfied relationships, but they also sustain these relationships. It seems that some insecurely attached individuals report dissatisfaction within their relationships, yet these relationships are maintained and carried forward, regardless of the relational distress. It may be that some individuals would rather persist in a relatively dissatisfied relationship than

experience the potential intense negative affect or abandonment associated with confronting danger signs. To continue in a dissatisfied relationship, one must handle unpleasant dynamics and danger signs through specific coping processes.

Danger Sign Recognition: Coping

If individuals perceive danger signs, they appraise the information within the context of their relationship. Expressions and actions carry varying weight and meaning within different phases of a relationship. For example, a relatively minor danger sign may be judged more harshly within the early phase of a relationship, when commitment and investment is low, as compared to later stages. Throughout the phases of a relationship, individuals engage in a continual appraisal process, wherein actions and expressions are evaluated against current levels of commitment, constraints, and emotional attachments. Within the appraisal process, some individuals may deem the presence of danger signs “worth it” in exchange for the positive elements of being involved in an intimate relationship. Or, it may be that some occurrences of danger signs are perceived as relatively inconsequential as compared to the existence of a strong relational foundation and bond. In either case, danger signs may be weighed against some type of “bottom line” – meaning each individual possesses a unique sense of the frequency and severity of danger signs that would lead to ending a relationship (Pearson, Stanley & Kline, 2005). For example, some individuals may have a relatively high bottom line, leaving a relationship that exhibited even a small amount of danger signs, whereas others may accept a relatively high degree of danger signs in their relationships. When danger signs emerge in a relationship and do not reach an

individual's bottom line, one must engage in a coping strategy that will allow the sustainment of the relationship and sublimation of danger signs.

There are many strategies that individuals employ to cope with negative relationship dynamics and unpleasant emotion. A common general definition of coping is the "things that people do to avoid being harmed by life strains" (Pearlin & Schooler, 1978). In the context of appraising danger signs in a romantic relationship, coping can be thought of as ways in which individuals attempt to manage positive and negative components of various relational dynamics. For example, when an individual does something undesirable, their partner can decide to cope with the expression by addressing it or ignoring it, depending on the appraised importance.

Researchers have conceptualized coping along several different dimensions such as approach-coping (emotion-focused and task-focused) versus avoidant-coping (distraction coping and cognitive coping) (Carver et al. 1989; Endler & Parker 1990, Ingledew, Hardy, Cooper and Jemal, 1996). However, there is little consensus on specific coping subscales, as is evidenced by Endler and Parker (1990) findings of 14 different categorizations of coping subscales. In addition, researchers also make several context-specific distinctions of coping within various realms such as health-related coping, academic-coping, or interpersonal-coping. Others categorize coping strategies into two broad categories – approach-coping and avoidance-coping (Finset, Steine, Haugli, Steen, & Laerum, 2002; Moos, 1990; Roth and Cohen, 1986). Approach-coping strategies involve addressing an issue directly, seeking to ameliorate the negative components of the

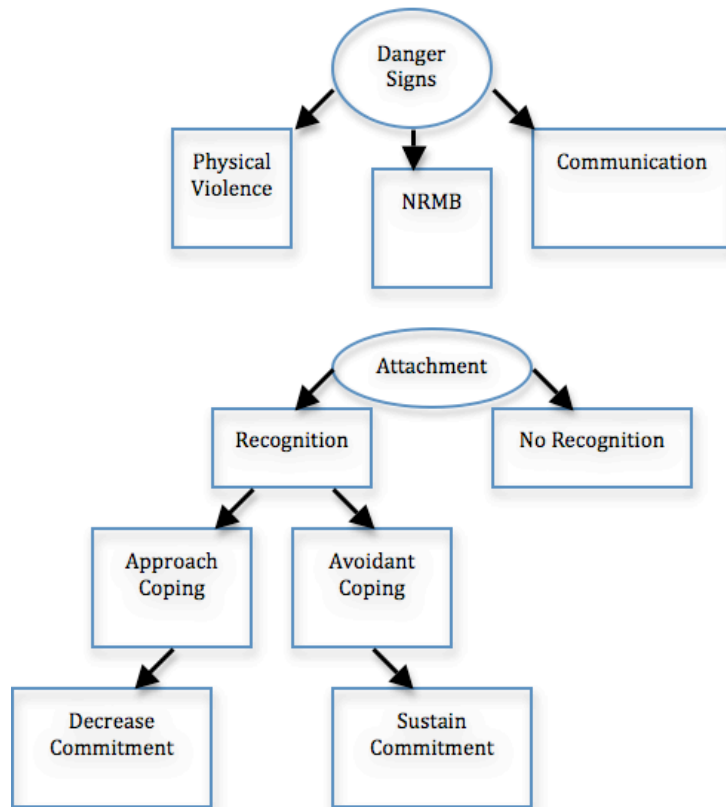
dynamic, whereas avoidance-coping refers to engagement in tactics to evade confronting unpleasant situations or negative affect (Endler & Parker, 2000). Examples of avoidance coping include distraction, dissociation, denial, and repression, whereas approach-coping strategies consist of direct discussions of issues, problem solving, or ending a relationship. Neither approach-coping nor avoidance-coping are unidimensional, and both types of strategies may encompass underlying active or passive mechanisms (Carver et al., 1989). For instance, when a partner engages in jealousy-induction techniques, an individual may choose to confront these actions through challenge and conversation, or they may cope in a more avoidant way, ignoring the occurrence of those actions or rationalizing their partner's intentions.

Greater use of approach or avoidant coping strategies has been found to be predictive of a range of psycho-social variables. Studies have found that individuals who report greater engagement in approach-coping strategies as opposed to avoidance-coping strategies scored higher on coping effectiveness and scored lower on depression (Causey and Dubow, 1992, 1993; Compas et al., 1988; Ebata and Moos, 1991, 1994; Moos, 1990; Reid *et al.*, 1995). In addition, couples who engage in approach-coping or dyadic coping report relatively lower ratings of depression, lower marital distress, and lower divorce rates as opposed to couples who engage in avoidant or disparate coping (Bodenmann, Pihet, & Kayser, 2006; Bodenmann, 2005, Bodenmann, 1995). Alternatively, higher engagement in avoidance coping has been found to be associated with negative psychological variables such as depression, stress, and poor interpersonal problem

solving (Austenfeld & Stanton, 2004; Blalock & Joiner, 2000; Penland et al., 2000). Although avoidance coping has been shown to be associated with negative psycho-social variables, use of avoidant strategies may maintain a romantic relationship. For those who are able to accurately perceive danger signs, and do not wish to directly confront them, avoidance coping may enable them to sustain the relationship and minimize the psychological effect and responsibility of danger signs. In this way, danger signs are expressed and are left unaddressed.

Use of approach or avoidant coping strategies should relate directly to levels of relationship commitment. Those who utilize avoidant-coping strategies in response to perceiving relationship danger signs should then persist in their level of commitment, whereas the commitment levels of those who engage in approach-coping strategies may vary based on the outcome of the interaction. For example, if one chooses to use the approach-coping strategy of discussing reactions and emotions to a partner's actions, this may improve the relationship (thus, possibly increasing commitment) or this conversation may end badly (thus, possibly decreasing commitment). In general, it is predicted that greater use of avoidant-coping will be associated with stable relationship commitment-levels, even as danger signs increase. As figure 4 illustrates, it is predicted that recognized danger signs will be filtered through appraisal and coping processes which will ultimately lead to confrontation of danger signs (or not) which will in turn effect the level of commitment to the relationship.

Figure 4. Full Model



The Current Study

To examine the proposed associations, the current study utilized video depictions of danger signs, embedded within interactions of a couple (actors). More specifically, participants viewed scripted video-vignette interactions between the two partners, and were then asked to report what was salient in the video. Each video segment depicted danger sign(s) that reflect one or more of those described above (i.e., physical violence, negative relationship maintenance behaviors, and negative communication). In this way, participants' responses regarding what was salient about the video could be categorized into recognition of danger sign(s) or no recognition of danger sign(s). In addition, participants

were asked to indicate what hypothetical action they might take in each situation, and their hypothetical level of commitment to the relationship after each clip. In this way, the interaction between danger sign recognition and changes in commitment level will be examined, as well as the types of strategies employed to address these dynamics. Overall, these ratings will also be considered in the context of participants' ratings of attachment, and coping styles as well as other control variables (i.e., gender, relationship status, age, race/ethnicity, sexual orientation).

Hypotheses

General Recognition of Danger Signs: Due to varying levels of severity and subtlety of danger signs, it is anticipated that physical aggression will be recognized at higher rates as compared to negative relational maintenance behaviors (hypothesis 1a) and negative communication (hypothesis 1b). In addition, it is expected that negative relational maintenance behaviors will be recognized at higher rates than negative communication (hypothesis 1c).

Recognition of Danger Signs: Attachment & Relationship Awareness: It is anticipated that individuals who report higher degrees of insecure attachment will endorse subtle danger signs more than those with more secure attachment. Specifically, individuals with higher ratings of anxious attachment (hypothesis 2a) and avoidant attachment (hypothesis 2b) will report greater recognition of more subtle danger signs as compared to individuals with lower levels of anxious and avoidant attachment, respectively. Also, individuals who report higher ratings of

relationship awareness should also report greater recognition of more subtle danger signs (hypothesis 3).

Recognition of Danger Signs, Attachment, & Commitment: It is predicted that ratings of anxious attachment will be negatively related to changes in commitment, regardless of the amount of danger signs reported (hypothesis 4a). In contrast, individuals with greater levels of avoidant attachment will be positively associated with changes in commitment (hypothesis 4b).

Recognition of Danger Signs, Attachment, Coping, & Commitment: I propose a mediation model, wherein attachment styles should predict coping strategies, which in turn predicts level of commitment. To use this mediation model approach, anxious attachment should be positively and significantly ($p < .05$) associated avoidant coping strategies, and avoidant coping should be significantly associated with changes in commitment. The indirect pathway between the predictor and dependent variable should also be significant ($p < .05$) to provide support for the hypothesis (5a). Next, it is predicted that avoidant attachment will be positively associated with greater decreases in commitment, and this relationship will be mediated by approach-coping strategies (hypothesis 5b). Evidence for mediation will be supported by a positive and significant ($p < .05$) association between avoidant attachment and approach-coping strategies, and a positive and significant association ($p < .05$) between approach-coping strategies and commitment ratings, as well as the indirect effect. In addition, it was proposed that for those who are able to recognize danger signs, who also

report lower levels of relationship unawareness, will report lower levels of commitment (independent of attachment) (hypothesis 6).

CHAPTER II

METHODS

Participants

To determine the necessary sample size for the current study, a power analysis (Cohen, 1992) was used. Ideally, one would examine the empirical literature to identify effect sizes of the findings that are typical of the research question being asked. However, given the exploratory nature of the current study, there are no effect sizes of danger sign recognition in quasi-experimental form in the literature. Empirical studies that have found medium sized effects for the association between negative communication and positive relationship outcomes (e.g Stanley, Markman, & Whitton, 2002). In addition, effect sizes of the association between negative relational maintenance behaviors and relationship satisfaction have been found to range from $-.15$ to $-.37$ (Goodboy & Bolkan, 2011). Vennum and Fincham (2011) found correlations between $.15$ and $.35$ for the association between participants' knowledge of warning signs and relational outcome variables such as dedication and relationship efficacy. Extrapolating from these results, small to medium sized effects for the proposed associations was anticipated. Working from Cohen's 1988 power analysis approach, 175 participants were needed to detect a medium sized effect, with the traditional $.05$

criterion of statistical significance and the recommended 80% power detection.

An initial total of 324 participants began the study. Only those who completed the initial informed consent document could continue on through the study. The first task for participants was to respond to the attachment priming question. Those who gave no response to this item were eliminated from further analyses ($n = 44$). In addition, individuals were removed from analyses who did not complete subsequent measures after the video ($n = 60$). Lastly, those who did not give correct response on at least two out of the three validity check questions were also eliminated from analyses ($n = 8$). One additional validity check was performed in that participants' "time lapsed" was evaluated so as to ensure all individuals gave appropriate effort and attention to the tasks. The smallest amount of time spent was 25 minutes and 53 seconds. The longest time recorded was over 7 hours, suggesting individuals may have left their browser open, as they gave valid responses through to the end of the survey. Participants' active participation and attention were promoted within the instruction which stated they would only receive their extra credit points by completing all questions with valid responses. As such, a final sample size of 212 participants was included in final analyses (eliminating 104 initial participants). Following the power analyses, this sample size seems adequate to test the proposed associations.

Racial ethnic breakdown of the final sample of participants revealed 84.8% identified as Caucasian, 2.2% identified as African American, 2.2% identify as biracial or mixed race, 1.3% identified as Latino/a, 1% identified as

Native American, 0.8% identified as Asian, and 7.7% did not indicate a race/ethnicity. Female identified participants comprised 72.8% of the sample, 19.2% identified as male, 0.9% identified as gender queer, and 7.1% did not indicate a gender identity. The average age of participants was 20.1 years. Individuals were asked to indicate their sexual orientation identity. 91.5% identified themselves as straight, 0.9% identified as gay, 0.9% as lesbian, 4.7% as bisexual, and 1.9% did not indicate a sexual orientation. Individuals were also asked to provide information about their current and past romantic relationships. Of the sample, 4.9% reported that they had never been involved in a romantic relationship, and 64.4% of participants stated that they were currently involved in a relationship, whereas 30.2% indicated there were not currently in a relationship, and 5.4% did not respond to this question. Lastly, participants were asked to report the number of romantic relationships they had been involved in in the past. 30.4% of the sample had been in one romantic relationship, 33.7% had been in two romantic relationships, and 13.4% had been in three romantic relationships. 16.5% of the sample indicated they had been in more than three romantic relationships.

Measures

Demographics. Participants were asked to report their age, gender, sexual orientation, and race. Relationship status was assessed by asking the question “*At the current time, please indicate your relationship status*” with response options of “*single, in a committed relationship, dating multiple people, engaged, or married*.” If a participant indicated that they were currently involved in a

relationship, they were then directed to complete the *Dyadic Adjustment Scale* (*DAS*; see description below). In addition, participants were asked to report how many “serious” relationships they have been involved in to control for the effects of relationship experience/history with danger sign recognition.

Attachment Priming. Participants completed an attachment-priming experience with the intention of activating each individual’s global romantic relationship attachment style. In this way, it was hoped that participants would be provoked to react and respond to the video vignettes in much the same way they might within a real-life romantic relationship. More specifically, a screen appeared with an unstructured writing field, with the following instructions: “*Think about an important romantic relationship that you have been involved in, either in the past or currently. It doesn’t matter how long you were involved in the relationship or what level of commitment you had (e.g. casual dating partners or seriously committed). Please write about this person and your relationship for 5 minutes. Your writing will not be viewed by anyone; we only want you to think about and write about this person.*” Several studies have identified support for the effects of contextually priming attachment in this way, and the effect is said to activate attachment independent of expectations, interpersonal perceptions, and behaviors (Baldwin et al., 1996; Carnelley & Rowe, 2007; Mikulincer & Arad, 1999; Mikulincer, Hirschberger, Nachmias, & Gillath, 2001; Mikulincer & Shaver, 2001). Although some studies have induced specific attachment working models (e.g. induction of secure attachment versus insecure), the current study is focused on the ways in which individuals might *typically* respond or interpret

dynamics within a romantic relationship, through the lens of their global adult attachment system. As such, the priming writing-response given by participants was not analyzed, and was only used to activate attachment.

Negative Relational Maintenance Behaviors. The Negative Maintenance Scale (NMS; Dainton & Gross, 2008) is a 20 items questionnaire that asks participants to rate how frequently they engage in six behaviors to maintain a desired relational state: jealousy induction (2 items), avoidance (4 items), spying (3 items), infidelity (2 items), destructive conflict (4 items), and allowing control (5 items). Responses are rated on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). Previous reliability coefficients have ranged from .59 to .89 for each subscale (Dainton & Gross, 2008; Goodboy et al., 2010). For the current study, cronbach's alpha was .87.

Betrayal Trauma. Experiences of trauma perpetrated by someone very close (someone that must be relied upon) were assessed using the *Brief Betrayal Trauma Survey* (BBTS; Goldberg & Freyd, 2003). The BBTS asks participants about the number of times they have experienced 12 traumatic events both before and after age 18, using a three-point scale, ranging from “*never*” to “*once*” to “*more than once*”. An example item asks how many times a participant was “*made to have sexual contact by someone with whom (they) were not close*”. Cronbach alpha for the current study was .66.

Intimate Partner Violence. The Conflict Tactics Scale-Revised (CTS2; Straus, Hamby, Boney-McCoy, & Sugarman, 1996) was used to assess experiences of intimate partner violence within participants' romantic

relationships. The CTS2 is an expanded and improved version of the original CTS, with revised wording to increase clarity, differentiation between minor and severe levels of aggression, and randomly ordered items. Instructions for the scale were altered slightly for the current study. Instead of asking young adults to indicate the frequency that they (i.e., perpetration) and their partners (i.e., victimization) engaged in specific acts during the preceding 12 months, participants were asked instead to report on how common each of the interactions have been within their relationships. As such, response options were altered (but not items) ranging from 1 (*this has happened in none of my relationships*), 2 (*this has happened in one of my relationships*), 3 (*this has happened in more than one of my relationships*), and 4 (*this has happened in more than one of my relationships*). Violence was assessed with 12 items that assess mild (i.e., *thrown an object that could hurt, twisted arm or hair*) and severe (i.e., *beat up, burned or scalded on purpose*) aggression. A total score was utilized (not differentiating victim versus perpetrator status. Cronbach alpha for this total scale was .89.

Emotional Control. Controlling behaviors was measured using a revised form of the Controlling Behaviors Scale (CBS-R; Graham-Kevan & Archer, 2005). Rated on a 1-5 likert scale, the CBS-R consists of 25 item examples of controlling behavior consistently reported by both victims and perpetrators (Domestic Abuse Intervention Project: Pence & Paymar, 1993). The CBS-R uses behavioral categories and does not involve any items of physical aggression. The scale was adapted in the current study for brevity. Specifically, the original scale uses two versions of the same item, to assess whether the behavior was

experienced by the victim or carried out as the perpetrator. For example, an item from the original scale is “*Threaten to leave the relationship*”, and participants give a rating for the degree to which they themselves acted in this way, and they also give a rating for the degree to which their partner acted in this manner. For the current study, participants viewed the same items (unchanged) but were instructed to rate the degree to which the stated behavior occurred in the relationship, regardless of who carried out the specified action. Cronbach alpha for the current study was .94

Dyadic Adjustment Scale. The four-item Dyadic Adjustment Scale (DAS-4; Sabourin et al., 2005) is a measure of relationship adjustment that was derived from the 32-item Dyadic Adjustment Scale, and was used to gauge participants’ current relationship satisfaction. The items are: “*How often do you discuss or have you considered divorce, separation, or terminating your relationship?*”, “*In general, how often do you think that things between you and your partner are going well?*”, “*Do you confide in your mate?*”, and “*Please indicate the degree of happiness, all things considered, of your relationship.* The middle point, “*happy,*” represents the degree of happiness of most relationships. The DAS-4 has been shown to predict couples satisfaction and dissolution (Sabourin et al., 2005) and previous studies have found reliability alphas to be .73 (e.g., Owen, Quirk, & Manthos, 2012). For the current study, the cronbach alpha was .72.

Experiences in Close Relationship Scale-Short Form (ECR-SF; Wei, Russell, Mallinckrodt, & Vogel, 2007). The ECR-SF was used to assess participants’ adult attachment style. Specifically, the scale is comprised of two

subscales: Anxiety and Avoidance, with six items per subscale. The items are rated on a 7-point scale ranging from 1 (*Definitely not like me*) to 7 (*Definitely like me*). Wei et al. (2007) reported support for the validity for this shortened measure through correlations with psychological well-being, loneliness, fear of intimacy, and comfort with self-disclosure measures. Internal consistency values for the short form were slightly lower as compared to the longer version (.78 (Anxious) short form, .92 (Anxious) long form; .84 (Avoidant) short form, .93 (Avoidant) long form). In addition, reliability for the measure has been demonstrated in recent studies with cronbach alphas ranging from .75 - .80 (Owen & Fincham, 2012; Quirk, Owen, Fincham, 2012). In the current study, the cronbach alpha for the total scale was .82 and the cronbach alpha for the anxiety and avoidant subscales were .77 and .71, respectively.

Thoughtfulness. (Relationship Awareness Scale: RAS; Owen & Fincham, 2011). The RAS was used to assess participants' view of relational risk factors. The RAS consists of four subscales with four items per subscale. Items are rated on a five-point scale ranging from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*). An example item is "*I am able to recognize early on the warning signs in a bad relationship.*" Cronbach alphas for the four factors have been found to range from .68 to .83 (Owen & Fincham, 2011). Evidence for concurrent validity of the RAS has been identified through correlations with scales of similar theoretical grounding (Relationship Confidence $r = .36$ and Negative Interaction $r = -.29$; Vunnum & Fincham, 2011). Data from the current study produced a Cronbach alpha of .84 for this scale.

Unawareness. Building upon the aforementioned existing scale (*RAS*; Owen & Fincham, 2011) that evaluates awareness of relational risk, a new more indirect measure of awareness of relationship danger signs was developed. Specifically, items were developed with the intention of asking participants about outcomes and processes of being involved in unhealthy relationships. For example, one item developed asks participants to indicate the degree to which they feel the follow statement represents their experience: *“I find myself in bad relationships over and over and I don’t know why.”* In this way, it was hoped that participants would indicate their experiences, above and beyond social-desirability bias responding. A research team of doctoral students within a romantic relationship lab generated and tested potential items. As a result, 17 final items were selected and included as the initial measure.

An exploratory factor analysis with principal axis factoring was conducted with the 17 items. Results revealed one primary factor, which was comprised of 13 items, with an eigen value of 6.40 (37% of variance explained), and three secondary factors, with eigen values of 1.82, 1.52, and 1.14 (24% of variance explained by the three factors). In addition, these three additional factors were comprised of only 1-3 items on each factor, with cross loadings on the primary factor. Items that loaded strongly (e.g., greater than .50 factor loading) on the secondary factors were excluded from the final scale, and those with strong cross loadings on the primary factor were retained. This approach resulted in a final set of 13 items, which produced an Eigen value of 6.22, with all item loading above

0.55. Finally, a reliability analysis was conducted on the 13 remaining items with a Cronbach's alpha of .87.

Coping Strategies. The COPE inventory (Carver et al., 1989) is a commonly used measure to evaluate participants' prominent global coping strategy. The COPE is a 60-item instrument that assesses 15 distinct coping methods that can be further categorized into approach or avoid strategies. Given the length of the 60-item inventory, a shorter and still reliable scale has been developed. For the current study, The Brief Coping Inventory (BCI; Carver, 1997) was utilized, which consists of 29 items assessing individual global coping strategies. An example item is "I turn to work or other substituent activities to take my mind off things." Participants are instructed to indicate how much they usually engage in each of the items/strategies when they encounter difficulties or problems. Items are scores on a 4-point Likert scale (1 = *I usually don't do this at all*, to 4 = *I usually do this a lot*). Cronbach alphas in previous studies have been found to average .73 across the subscales. For the current study, items were dichotomized into two subscales reflecting approach-coping and avoidant coping. The cronbach alphas were .82 (Avoidant-coping) and .86 (Approach-coping).

Stimuli – Video Vignettes.

Videos were scripted and created by the authors and research team to convey various danger signs and a neutral situation. Each video depicted a situation or interaction between two actors who are purported to be involved in a serious committed relationship. Actors for the videos were heterosexual young

adults, which is reflective of the majority of the sample. The script for the video is listed in Appendix 1. Participants were guided through an audio and written description of the presented couple, explaining their fictitious background and history in order to increase emotional salience (see script in Appendix I).

Following this, participants then watched the series of 7 video-vignettes, each lasting approximately 3 minutes. The segments that exhibit danger signs varied in intensity and subtlety (e.g. physical aggression versus invalidation) with more severe danger signs presented later in the series. In this way, order effects were controlled for so that more salient stimuli was viewed toward the end of the task.

Segment 1 featured a neutral interaction between the partners, with no danger signs depicted, to determine initial levels of commitment and perception, independent of danger signs. Segment 2 depicts the negative communication sign invalidation wherein the male partner expresses stress/distress, and his partner responds by dismissing and diminishing his affective experience. Segment 3 exhibits controlling behavior / allowing control (a negative relational maintenance behavior) wherein the female partner expresses an interest in visiting her family, and the male partner responds with subtle and overt pressure to encourage her to see them. Segment 4 illustrates an interaction wherein the couple discusses which partner should work more and make more money, and the female partner expresses a belief that he is intentionally trying to control her by suggesting she work less, exhibiting negative interpretation. Segment 5 exhibits the communication danger sign of escalation wherein the male partner arrives home late, and the discussion quickly moves from this topic to not feeling cared for, not

prioritizing the relationship, and name-calling. Segment 6 illustrates the negative relational maintenance behavior of infidelity/jealousy induction by showing a scene where the female partner engages in a phone conversation with a friend wherein she describes having kissed another person, with the hopes of increasing desire and commitment from her partner. Segment 7, the last segment, depicts physical aggression, wherein the two partners engage in a heated discussion that leads to arm grabbing and shoving by both partners.

Danger Sign Recognition. Participants were asked to respond to a single item, “*What stood out to you in this segment*” after each video clip, and were provided with an open writing field for response. Although intuitively it would make sense to ask participants to identify danger signs in the video, it was assumed that this type of inquiry would prompt participants to actively search for danger signs, whereas they may not otherwise have attended to danger signs. In this way, responses were coded for identification of danger signs versus no danger signs identified.

Danger Sign Response Coding. Responses were coded by four trained research assistants, including the primary author, for the presence of danger sign recognition in each segment. Raters were provided with a list of danger signs used in the current study, and then raters engaged in several weeks of practice coding to obtain the highest level of inter-rater agreement. Raters coded a portion of the response for the presence or absence of the listed danger signs. This author coded every response in the dataset, and inter-rater reliability was established with 1-3

other raters (depending on the portion of the data). Agreement for the 7 rated danger sign responses ranged from 51% to 74% between all raters.

Commitment Score. After each video-vignette segment, participants were asked to indicate their hypothetical commitment level to the depicted relationship. Participants responded to one broad commitment question – “*Given the current dynamic and events just viewed, what would be your level of commitment to this relationship, all things considered.*” Response options range from 1 (*Not at all committed*) to 7 (*Completely Committed*).

Stimuli Screening Questions: At the end of the first video segment, participants were asked to complete a set of questions that were intended to gauge their reaction and perceptions related to the characters and/or situation. In gathering this data, it was hoped that participants’ responses could then be interpreted above and beyond their initial reactions to extraneous variables. As such, participants were asked to rate the attractiveness and relative “likability” of each of the actors (see Appendix 3) across 10 questions (five questions directed at each actor). An example item on a bipolar scale asked participants to rate each actor from 1 -“*Cold*” to 7- “*Warm*”. Responses obtained for the female actor displayed a mean rating of 3.66 ($SD= 0.86$) and a cronbach alpha of .60 and ratings for the male actor resulted in a mean of 5.28 ($SD= 0.54$) and a cronbach alpha of .44.

Procedure

Participants were recruited from a large Midwestern university, via a research portal that offers opportunities for extra credit in psychology courses. The only inclusion criterion used was that prospective participants must indicate they are over the age of 18. Due to the exploratory nature of the study, there were no exclusion criteria; participants of any age, sexual orientation, gender, and relationship status (single versus partnered, etc.) were invited to participate in the study.

The current study is a quasi-experimental design. Recruited participants were given access to an electronic link to the study's tasks, wherein they completed the survey and videos remotely. At the outset, participants completed an informed consent document as well as demographic information (see measures section). Next, participants engaged in an attachment-priming procedure (described below), intended to activate internal working models of romantic attachment. Participants then viewed a series of video clips, depicting interactions of a couple, with danger sign expressions embedded in the scenarios (see *Stimuli* section below for more specific information on these videos). To increase participants' identification with the couple, the couple's factitious relationship history and current status was described in great detail, including descriptions of their emotional connection, current and future plans together, and commitment level (see Appendix 1). Participants were informed that they will be presented with several video clips depicting interactions between these partners, and

following these clips, participants will be asked questions about what they have seen.

Participants were presented with a total of seven video clips, one neutral scene with no danger signs presented, and the other video scenes displaying varying danger signs). Each video clip was approximately three minutes in length. After the first video clip had been viewed, participants were asked to rate their perceptions of the actors on a number of domains (items and response ranges listed in measures section), such as attractiveness and personal liking, to control for these influences. At the end of each clip, the video stopped, and three questions appeared on the computer screen; “*What stood out to you in the situation you just watched?*” was asked to assess perception of danger signs. To determine what kinds of coping strategies or actions participants might engage in, participants were asked “*What might you do, if anything, in the situation you just watched?*” Lastly, participants were asked to indicate their level of hypothetical commitment to this relationship, on a scale ranging from 0 to 7 (see *Commitment* in measures section).

Upon completion of viewing all videos and completing the associated questions, participants completed all other measures, assessing attachment, current relationship status and satisfaction, relationship awareness, betrayal trauma, intimate partner violence, emotional control within romantic relationships, and coping strategies (see measures section below).

CHAPTER III

RESULTS

Preliminary Analyses:

For an overview, Table 1 reveals the relationships among the variables in the study: ratings of betrayal trauma, intimate partner violence, emotional control within romantic relationships, adult attachment, coping strategies, negative relational maintenance behaviors, relational thoughtfulness, relationship satisfaction, gender, relational unawareness, sexual orientation, changes in commitment across videos, and attraction ratings for the male and female actors. Given the high degree of significant inter-correlations, all variables were considered in the initial models as controls. Relationship status (single versus partnered), number of previous relationships, and relationship satisfaction (if currently partnered) were not significantly related to the outcome variables ($ps > .05$), and therefore not utilized going forward with analyses. Due to the large number of variables, the bivariate correlation table has been omitted from the current form of this manuscript. This table is available upon request to the author.

Primary Analyses:

Recognition of Danger Signs: Due to varying levels of subtlety of danger signs, it was anticipated that physical aggression would be recognized at higher rates as compared to negative relational maintenance behaviors (hypothesis 1a) and negative communication (hypothesis 1b). In addition, it was expected that negative relational maintenance behaviors would be recognized at higher rates than negative communication (hypothesis 1c).

To evaluate this set of hypotheses, the data was restructured into a time-to-event model, which allows for an evaluation of survival probability (the amount of time until a danger sign is recognized is referred to as survival) or hazard time (the time at which a danger sign is first observed is referred to as a hazard). Under the assumption that rates of danger sign recognition would increase as the subtleness in danger signs decrease, a proportional hazard model or survival analysis can be used to evaluate time until danger sign recognition, while taking into account the variance of covariates and predictors (see *Table 3* and *Figure 5*). As such, a Cox Regression Survival Analysis was conducted wherein the effect of attachment and relationship unawareness can be assessed multivariately as it relates to time until danger sign recognition. The proportional hazard model requires that relative risks are the same across participants.

An initial set of control variables were tested which included relational thoughtfulness, negative relational maintenance behaviors, betrayal trauma, intimate partner violence, emotional control, and ratings of attraction to the male and female actors in the video clip. Control variables that were not significant

were trimmed from the final model. This approach resulted in retaining only the variables of intimate partner violence ($p = .04$) and attraction ratings of the male actor ($p = .01$). These variables were retained within Step 1 as control variables.

The overall baseline model was significant with $-2 \text{ Log Likelihood} = 2036.55$, $\chi^2 = 13.62$, $p < .001$. The control variable intimate partner violence was significant in the model ($B = -.67$, $SE = .35$, $Wald = 3.90$, $Exp(B) = .50$, $p = .04$) and the control variable of attraction Austin remained significant ($B = .28$, $SE = .11$, $Wald = 7.36$, $Exp(B) = 1.33$, $p = .01$). The median survival time was 3.8, meaning half of the participants recognized a danger sign for the first time at the third video. Illustration of the proportion surviving at each video point is provided in Figure 5. Further breakdown of danger sign recognition revealed that negative communication danger signs recognized by 40.4% of participants, negative relational maintenance behaviors recognized by 66% of participants, and physical violence recognized by 75.9% of participants (see Table 2). As such, there was some support for hypotheses 1a – 1c.

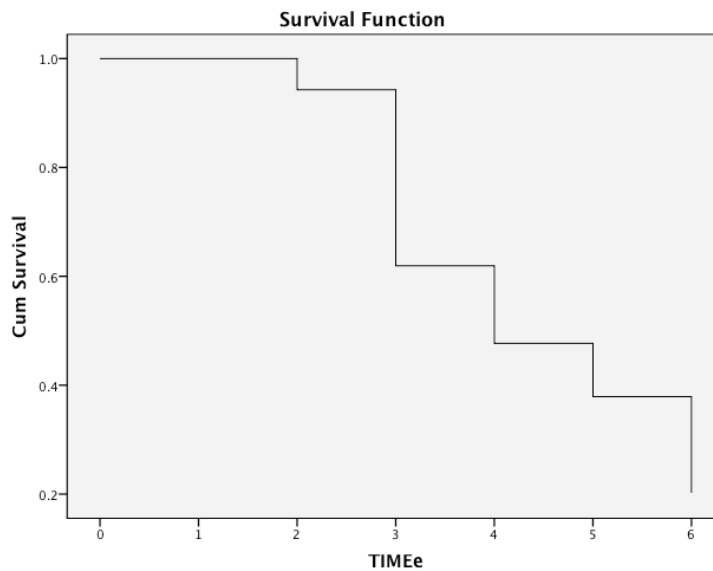
Table 2. Danger Sign Recognition

Danger Sign Video	% Recognized
Neutral	9.4
Invalidation	13.2
Controlling Behavior	51.9
Negative Interpretation	50.0
Escalation	58.0
Jealousy Induction	80.1
Physical Violence	75.9

Table 3. Hazard Rate by Video

	<i>Hazard</i>	<i>Standard</i>
	<i>Rate</i>	<i>Error</i>
Video 1	.00	.00
Video 2	.06	.01
Video 3	.41	.04
Video 4	.26	.04
Video 5	.23	.06
Video 6	.61	.14
Video 7	.00	.00

Figure 5. Danger Sign Survival Proportions



Danger Signs: Attachment & Relationship Awareness: It was hypothesized that individuals with high ratings of anxious attachment (hypothesis 2a) and avoidant attachment (hypothesis 2b) would report greater recognition of subtle danger signs as compared to individuals with lower levels of anxious and avoidant attachment, respectively. Additionally, it was hypothesized that individuals who reported high ratings of relationship awareness would also report higher ratings of subtle danger sign recognition (hypothesis 3).

Using the same significant control variables that were found in the baseline model analyses (intimate partner violence and attraction to Austin), a Cox Regression Analysis was utilized in prediction of time to recognition. Specifically, intimate partner violence and attraction to Austin ratings were included in Step 1 as control variables, while ratings of anxious and avoidant attachment were added as predictors in Step 2. Neither anxious nor avoidant attachment were statistically significant predictors (anxious attachment; $\chi^2 = 2.50, p = .11$) (avoidant attachment; $\chi^2 = .07, p = .81$), thus hypotheses 2a and 2b were not supported.

In the next model, the same control variables were used, and relationship unawareness was added as a predictor at Step 2. Results for this model were significant overall (-2 Log Likelihood = 2036.55, $\chi^2 = 13.62, p < .001$). More specifically, the control variables were significant in the model ($ps < .05$), however the relational unawareness predictor variable was not significant ($\chi^2 = 1.60, p = .21$). Thus, there was no support for hypothesis 3.

Danger Signs: Attachment & Commitment: It was hypothesized that anxious attachment would be negatively related to ratings of relationship commitment (hypothesis 4a). In contrast, it was hypothesized that avoidant attachment, would be positively associated with ratings of commitment (hypothesis 4b). To evaluate this set of hypotheses, changes in commitment across videos were evaluated. As such, a Linear Growth Curve Model was utilized with hierarchical linear modeling Version 6 (HLM6; Raudenbush, Bryk, Cheong, & Congdon, 2005). Commitment ratings were utilized as the outcome variable for the model. An initial baseline model was run to determine the variability among participants' changes in commitment over time. For each video viewed, participant's ratings of commitment decreased by .47, supporting an overall decreasing trend in commitment scores.

Table 4. Predicting Changes in Commitment

	<i>Model 1: Baseline</i>	<i>Model 2 Predictors</i>	<i>Model 3: Final</i>
	<i>Coefficient (SE)</i>	<i>Coefficient (SE)</i>	<i>Coefficient (SE)</i>
Intercept (γ_{00})	5.39** (0.08)	5.39** (0.08)	5.39** (0.08)
Attract male (β_{1j})		0.02 (0.10)	
Attract female (β_{2j})		0.45** (0.09)	0.45** (0.09)
IPV (β_{3j})		- 0.01 (0.47)	
Thoughtfulness (β_{4j})		0.25* (0.14)	
NRMB (β_{5j})		0.06 (0.12)	
Emotional Cont. (β_{6j})		- 0.38 (0.22)	

Anxious Attach (β_{7j})		0.08 (0.08)	0.08 (0.08)
Avoidant Attach (β_{8j})		-0.16 (0.08)	-0.16 (0.08)
Time (slope)	- 0.47** (0.02)	-0.47** (0.02)	-0.47** (0.02)
Attract male (β_{1j})		0.00 (0.03)	
Attract female (β_{2j})		- 0.02 (0.02)	-0.02 (0.02)
IPV (β_{3j})		0.11 (0.12)	
Thoughtfulness (β_{4j})		- 0.08* (0.04)	-0.06* (0.04)
NRMB (β_{5j})		- 0.02 (0.02)	
Emotional Cont. (β_{6j})		0.03 (0.04)	
Anxious Attach (β_{7j})		0.01 (0.02)	0.01 (0.02)
Avoidant Attach (β_{8j})		0.01 (0.02)	0.01 (0.02)

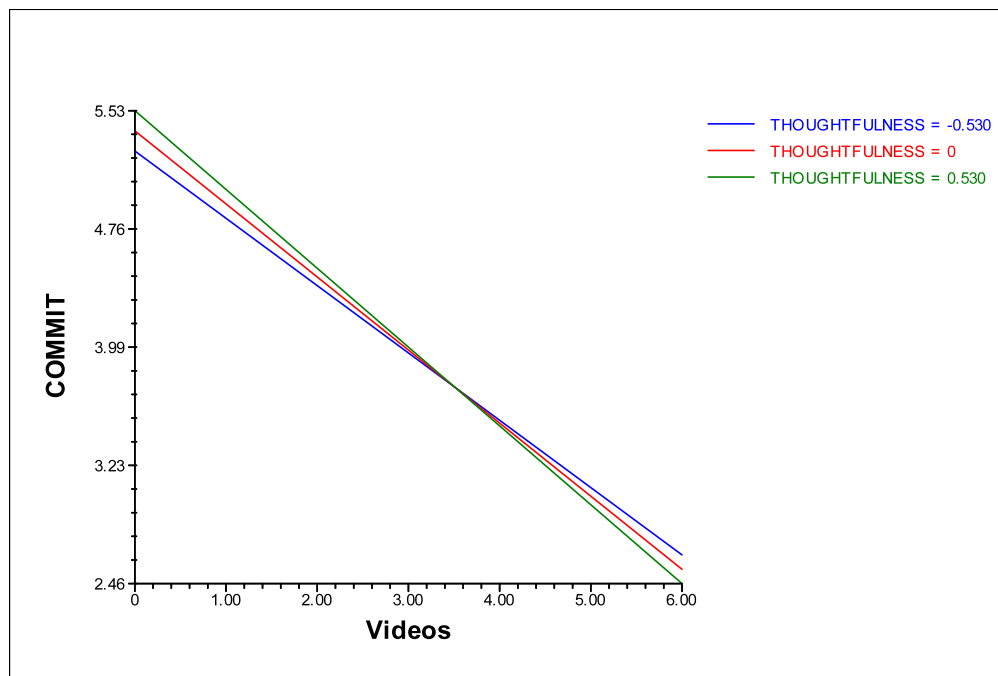
Notes: Attract male = ratings of attractiveness to the male actor. Attract female = ratings of attractiveness to the female actor. IPV = intimate partner violence. Thoughtfulness = relational thoughtfulness. NRMB = Negative relational maintenance behaviors. Emotional Cont. = emotional control within romantic relationships. Anxious Attach = ratings of anxious attachment. Avoidant Attach = ratings of avoidant attachment.

* = $p < .05$. ** = $p < .001$

Next, all control variables were added into the model (ratings of attraction to male and female actors, ratings of intimate partner violence, relational thoughtfulness, negative relational maintenance behaviors, emotional control, and betrayal trauma). Of these one control variable was significant in the prediction of commitment intercept (attraction to Clare) ($b = 0.45$, $SE = 0.09$, $p = .00$) and one variable was significant in the prediction of slope (relational thoughtfulness) ($b = -.08$, $SE = .04$, $p = .03$). Thus, these two control variables were retained within the

model. Next, the predictor variables of anxious and avoidant attachment were added to the model, with the control variables. The results demonstrated that anxious and avoidant attachment were not significant predictors of changes in commitment ($b = 0.01, SE = 0.02, p = 0.66$; $b = 0.01, SE = 0.02, p = 0.77$). Since there was only one significant predictor of the changes in commitment scores, (thoughtfulness), this association is illustrated in Figure 6. For those reporting greater relational thoughtfulness, their ratings of commitment decreased by .07 across the video presentations.

Figure 6. Thoughtfulness and Relationship Commitment



Danger Signs, Attachment, Coping, & Commitment: The current study predicted that anxious attachment would be positively associated with changes in commitment, and this relationship would be mediated by avoidant-coping

strategies (hypothesis 5a). Furthermore, avoidant attachment was hypothesized to be positively associated with greater decreases in commitment, and this relationship would be mediated by approach-coping strategies (hypothesis 5b). To evaluate these predictions, a mediation model was proposed, wherein anxious attachment was hypothesized to be positively and significantly ($p < .05$) associated avoidant coping strategies, and avoidant coping would be significantly associated with commitment. The indirect pathway between the predictor and dependent variable should also be significant ($p < .05$) to provide support for hypothesis 5a (Baron & Kenny, 1986; Hayes, 2009).

First, the assumption that the mediation variable must be related to the outcome variable was tested. Using multilevel modeling within the Hierarchical Linear Modeling statistical software program, approach-coping and avoidant-coping were used to predict changes in commitment. Result revealed no significant associations between coping style and changes in commitment (approach-coping: $b = -0.04$, $SE = 0.03$, $p = 0.21$) (avoidant-coping: $b = 0.08$, $SE = 0.04$, $p = 0.81$). Given the lack of significant associations between these variables, a mediation model could not be conducted given the violation of the assumption that the mediator be significantly associated with the outcome. Thus, there was no support for hypothesis 5a or 5b.

Finally, it was hypothesized that those who also report lower levels of relationship unawareness will report lower levels of changes in commitment (independent of attachment) (hypothesis 6). Using growth curve modeling, ratings of unawareness were used to predict changes in commitment across videos.

Results revealed no significant association between ratings of unawareness and changes in commitment ratings ($b = 0.04$, $SE = 0.03$, $p = 0.13$). Thus, there was no support for hypothesis 6.

CHAPTER IV

DISCUSSION

Numerous studies have identified poor communication and low relationship satisfaction as predictors of individual distress, couple violence, and relationship termination (Jacobson et al., 1994; Murphy & Eckhardt, 2005; O’Leary, 1999; Rogge & Bradbury, 1999; Stith et al., 2004). As such, the accurate and early detection of the expressions that signal unhealthy relationships seems an important skill or ability to needing further exploration within the empirical literature. The recognition of danger signs within romantic relationships is difficult to assess, and likely impacted by many relational and individual variables. The current study sought to better assess and understand these relationships by evaluating participants’ recognition of danger signs within video vignette couple interactions.

First, it was predicted that different types of danger signs would be recognized at different rates due to varying levels of subtlety. Specifically, results revealed that a larger proportion of individuals recognized physical violence as compared to negative relational maintenance behaviors, and communication danger signs were recognized at the lowest percentage. Intuitively, physical violence may be more easily perceived in a video vignette presentation (as compared to subtle communication exchanges), and physical violence may be

more widely discussed and regarded as unhealthy and dangerous as compared to other categories of danger signs. The same logic may support the finding that participants were more able to recognize NRMB danger signs, as compared to communication danger signs. In the video vignettes, jealousy induction (by way of infidelity) and controlling behaviors / allowing control were depicted as the NRMBs. These types of danger signs may also seem more obviously unhealthy and may be more commonly discussed as definitely bad signs from a partner in a relationship. On the contrary, more subtle forms of danger signs, as many communication danger signs seem to be, there may be less common knowledge about the importance and impact these expressions can have in a romantic relationship. For example, one of the depicted communication danger signs was Negative Interpretation wherein one partner makes an inaccurate negative assumption about their partner's intent or hope in their actions. This type of danger sign may be construed as normative, fleeting, and unimportant to many individuals and therefore may not be recognized or encoded as a danger sign.

The notion that more overt and/or severe danger signs are recognized at higher rates may be supported by relational safety theory. As Scott Stanley and colleagues assert (e.g., Stanley, 2003; Stanley, 2004) relational safety is comprised of emotional safety, personal safety, and commitment safety. Each of these components builds upon the other, ranging from day-to-day safety (emotional safety), to concerns about well-being safety (physical safety), to safety and security of the future (commitment safety) (Stanley, Blumberg, & Markman, 1999; Stanley, Markman, Whitton, 2002). It would seem that each of these

domains may be linked to certain types of danger signs, that then trigger these more or less salient levels of safety. For example, physical safety is paramount to the fabric of a healthy relationship, and therefore, danger signs that indicate a threat to this safety may be more salient and readily perceived. Alternatively, danger signs that signal diminished commitment safety may be less perceptible in small single expressions, and it may take numerous expressions of these types of danger signs to be recognized and encoded as a danger sign.

Insecure attachment styles are known to be related to a host of negative romantic relationship process and outcome variables (Fraley & Shaver, 2000). As individuals develop expectations of others, and associated strategies to help guide successful interpersonal relationships, one may be more or less attuned to micro expressions and fluctuations within relationships. As such, it was hypothesized that anxious attachment would be associated with lower ratings of danger sign recognition due to the competing or overriding drive to be attached to others, potentially despite the presence of danger signs. In addition, it was hypothesized that the drive to sustain self-protection and autonomy for those who endorse more avoidant attachment strategies would lead to higher rates of danger sign recognition. However, these hypotheses were not supported in the models.

One of the concerns throughout this study was how to best assess individual's perceptions of danger signs in a way that would be most akin to their real-world tendency or ability to correctly identify danger signs. Presenting danger signs via video vignette format may have generated some distance between the emotionality and numerous competing factors within a real

relationship (constraint, love, commitment) versus a fictitious relationship (Gillath, Selcuk, & Shaver, 2008) In this way, one's attachment strategies may be impactful in weighing many relational considerations in concert with danger sign recognition, but the influence of attachment may not be as salient without these dynamics (Simpson, Rholes, & Nelligan, 1992). Therefore, perceiving and assessing danger signs via fictitious video vignette modality may reduce or obscure the connection between attachment strategies and recognition. Relatedly, removing one's self from a relational interaction, as one must in watching videos depicting two partners, may make it easier to identify danger signs as compared to one's ability to do so with their partner in real-time. As such, it seems that there may be no connection between attachment and danger sign recognition in this distanced modality, but there may be important associations and processes within real-world real-time relationships between attachment and danger sign recognition.

Relationship unawareness is a relatively new relational construct that is thought to be impactful in romantic relationship functioning and sustainability. Like danger sign recognition, relationship unawareness is difficult to assess given that it requires asking an individual their degree of awareness about their unawareness. Still, the impact of this construct on danger signs seems important in that one must first be aware of danger signs in the abstract, and then one must be aware of their own ability and propensity to accurately identify danger signs in relationships. As such, it was hypothesized that higher ratings of relationship awareness would be related to higher rates of recognition of danger signs.

However, the data from the current study did not support this association. From an assessment standpoint, it may be that unawareness of one's own relationship dynamics is unrelated to an ability to recognize danger signs in *other's* relationships. For example, an individual may have a poor ability to accurately identify danger signs in their own relationships, but may be extremely accurate and attuned to recognizing danger signs within another dyad. Support for this gap in implicit versus explicit knowledge or recognition may be found in attitudinal change studies, wherein researchers have found low correlations between implicit and explicit attitudes and a puzzling gap between the two sides of the coin (Gawronski & Bodenhausen, 2006). It may also be that the analogue design of the study was not adept at detecting the nuance of these associations. This distinction has been highlighted in the literature in which researcher suggest that use of a clinical interview technique is far superior for assessment of adult attachment than self-report due to limitations of self-awareness at this nuanced psychological level (Crowell, Fraley, & Shaver, 1999). Alternatively, it could be that unawareness and danger sign recognition are truly unrelated, as self-report of one's relational awareness may only consist of a broad cognitive recognition of relationship patterns whereas danger sign recognition may be a depersonalized process wherein one is able to identify healthy and unhealthy interactions between others.

Of the control variables, intimate partner violence was a significant predictor in the recognition of danger signs. Although one may assume that intimate partner violence rates are relatively low, literature reviews support startling high occurrences of violence between partners, with average reports

around 1 in 6 couples reporting violence (e.g., Magdol et al., 1997; McLaughlin, Leonard, & Senchak, 1992; Straus, 2004; Schafer, Caetano, & Clark, 1998). In addition, these rates are highest among younger, newly dating couples, which places the greatest need for early detection on individuals within the young adult or college student age (Archer, 2000).

Within the literature on partner physical and emotional violence, several theories offer models and definitions of partner violence, as well as the origins and causes of violence. One such theory, *I³ Theory* (pronounced “I-cubed theory”) (Finkel, 2008) asserts that three processes promote IPV perpetration: *instigation*, which refers to situational events that normatively trigger an urge to aggress; *impellance*, which are personal dynamics that influence individuals’ “urge-readiness” or tipping point; and *inhibition*, which is the counteraction to the urge to aggress. These manifestations of behavior may be signals, among others, that individuals learn to be attuned to in order to predict and prepare for unhealthy or dangerous relationship behavior. In this way, it may be that those who have experienced IPV have a greater attunement to micro and macro expressions of relational behaviors such as danger signs.

Another interpersonally based theory of IPV perpetration relies on social learning theory, wherein one’s behavior is learned and modified via observation and encoding of the behavior of others (Delsol & Margolin, 2004; Stith et al., 2000). In compliment to this theory, others assert the important of social information processing in the learning of aggressive behavior social information processing (Crick & Dodge, 1994) or the internalization of scripts formed in

viewing others interactions (Huesmann, 1988). Taken together, one important theme consistent among these theories is the centrality of observing and encoding others behaviors. Those individuals who have experienced intimate partner violence may possess a heightened attunement for recognizing early expressions of personality or behavior that may signal subsequent unhealthy or violent interactions between partners. Furthermore, ratings of attraction to the male actor were significantly predictive of danger sign recognition. Building upon the previously discussed theories and rationale, it may be that those more highly attuned and attracted to the actor may have heightened their attention and information processing and were thus more likely to recognize the micro and macro couple dynamics. The significant findings related to experiences of IPV and attraction to the actor in the current study seem to be in line with interpersonal and information processing theories of partner violence, however, further research is needed to disentangle other competing explanations and to determine direct causation.

Changes in Commitment

Broadly, data from the current study show a linear decline in ratings of commitment as danger sign presentation became more overt and/or severe. This suggests that as individuals were presented more danger signs, their reported level of relational commitment decreased. Within the empirical literature on romantic partnership commitment, several factors seem to influence the generation and maintenance of commitment, such as social approval, constraints, dedication, attachment and uncertainty, and these variables may exert unique influences on

the trajectory of commitment over time (Lehmiller & Agnew, 2006; Quirk, Owen, Shuck, in press; Stanley, Lobitz, Dickson, 1999; Stanley, Rhodes, Whitton, 2010). To some degree, research shows that commitment fluctuates in normative and predictable ways, becoming challenged or strengthened during times of strain or strengthened during times of cohesion (Drigotas, Rusbult, & Verette, 1999; Glenn, 2002; Simon, Krawczyk, & Holyoak, 2004).

The recognition of danger signs may be an important and impactful consideration for individuals in the evaluation and maintenance of commitment in a romantic relationship. More specifically, data from the current study seem to support the notion that individuals actively assess their relational bottom-line – or the point at which one no longer wishes to continue a relationship – and make corresponding ratings of commitment as varying relational situations are presented. The trend of decreasing commitment across videos suggests that as danger signs become more overt and severe (e.g., physical violence), individuals are evaluating the future and at which point they would no longer persist in the relationship.

Within the literature on commitment, researchers seem to agree that a strong sense of a vision of the future as a couple is necessary for relational satisfaction (Waite & Gallagher, 2000; Waite & Joyner, 2001). Within the domain of romantic relationship commitment, researchers have investigated the impact of sacrifice and investment. Specifically, sacrifice has been described as an intentional choice to prioritize the relationship as a whole, setting aside immediate self-interest (Stanley, Whitton, Sadberry, Clements, & Markman, 2006; Whitton,

Stanley, & Markman, 2002). In addition, as relationships progress, there is most often a necessary associated level of investment and interdependence (Rusbult, 1983; Rusbult, & Agnew, 2010). These theories suggest that individuals must navigate a host of competing factors and drives as they decide to continue to invest in a relationship despite the emergence of a danger sign, questioning whether they should sacrifice an instance of distress or disrespect for the bigger picture, or should one take action to reduce or end one's commitment to the relationship.

Within the current study, it may be that individuals possess differing values about which danger signs are most salient and impactful to their level of commitment, or, it may be a cumulative effect wherein no single danger sign necessarily changes their level of commitment but the presence of numerous danger signs in succession generates a point at which commitment is no longer desired. Still, the general trend found was that more overt presentations of danger signs were associated with greater decreases in commitment. Additional research is needed to identify the specific signs that generate changes in commitment for different individuals.

Higher ratings of insecure attachment style were also predicted to be associated with changes in commitment scores. However, this effect was not found for either anxious or avoidant attachment styles. No matter the degree of secure or insecure attachment, individuals endorsed decreases in their level of commitment. It may be that changes in levels of commitment are not based in attachment strategies but associated with other overriding relational variables or

processes such as those described above including perceived safety, information processing, sacrifice, or investment. Furthermore, the self-protective nature of adult romantic attachment may be geared toward minimizing pain and maximizing connectedness, and these drives may influence one to divest from a harmful relationship in order to remain safe, and open the possibility of connecting with another possible partner (Le, 2003; Mikulincer, & Shaver, 2003; Morgan & Shaver, 1999). In addition, given the analogue design of the current study, participants were possibly not able to form perceptions and make decisions grounded in more personal and affective dynamics (Gillath, Selcuk, & Shaver, 2008). As such, it may be necessary to include and evaluate the emotional salience and degree of relational constraint in real-world relationships (Givertz & Segrin, 2005).

Alternatively, it may be that simply asking how committed one might be to this relationship at the given time does not assess for how one might re-evaluate the sustainability of a relationship *based on* the perceived danger sign. Or stated otherwise, it would be interesting to ask participants *how would your commitment level change **in response to** the danger sign just viewed*. Of course, the drawback of this type of overt polling cues individuals to heighten their attunement to danger signs, which prevents organic recognition processes. Perhaps the methodology of the study (viewing a 3-minute video clip, and then indicating one rating for how committed one might be) did not fully highlight the connection between shifting relational dynamics as danger signs are expressed and the corresponding possibility that one might change their level of investment.

The relationship between attachment and changes in commitment was predicted to be mediated by coping styles. Specifically, it was thought that those reporting greater anxious attachment would engage in more avoidant coping strategies and thus, sustaining commitment across the presentation of danger sign videos. Given the drive for anxiously attached individuals to sustain important relationships, it was thought that the recognition of danger signs would need to be filtered through avoidant coping strategies. This hypothesis was supported in the literature by foundational studies such as Lazarus and Folkman's work (1984) which theorized that those more anxiously attached engage in more passive coping strategies when distressed, as compared to those more securely or avoidantly attached. In addition, those more avoidantly attached were hypothesized to reduce their commitment, based on theoretical models highlighting the "compulsive self-reliance" of those endorsing avoidant attachment (Shaver & Hazan, 1993). However, support for these mediation effects were not found given that coping strategy was not significantly related to commitment.

The current study utilized a broad and global measure of coping styles, assessing the ways in which individuals cope with day-to-day stressors, or unexpected stressful events. It may be that individuals employ different coping strategies when facing relational conflicts, concerns, and decisions and this coping style may be entirely different than how one copes with daily life stressors (Wei, Heppner, & Mallinckrodt, 2003). For example, there is a burgeoning literature on dyadic coping, which refers to the ways in which partners address strain and

difficulty that one or both are confronting (Bodenmann, 2000; Revenson, Kayser, & Bodenmann, 2005; Story & Bradbury, 2004). Different that individual coping, dyadic coping necessitates a way of thinking and approaching a problem that necessitates the inclusion of one's partner's perspective and the immediate and/or long term future of the couple (Acitelli & Badr, 2005; Bodenmann, Pihet, & Kayser, 2006; Coyne & Smith, 1991). However, this type of coping was not assessed in the current study given that participants were individuals, some of whom may never have engaged in a relationship. Future studies should seek to measure coping in a way that directly reflects coping styles, strategies, or thought processes as they related to relationship decision-making.

Lastly, it was hypothesized that relationship unawareness would be negatively related to changes in commitment. It was assumed that those reporting higher levels of unawareness about relational dynamics would endorse higher levels of commitment despite the presence of increasingly severe or overt danger signs. This link seemed intuitive given the nature of relationship unawareness (i.e., diminished self-knowledge of one's own unhealthy relationship dynamics and patterns). However, a significant relationship between unawareness and commitment was not supported. It seems that individuals may vary in their own self-reported level of relationship unawareness, but this may not equate to changes in commitment level. Changes in commitment may be reflective of, or grounded in, alternative processes. Or, stated otherwise, individuals may or may not be able and willing to recognize danger signs, and when they do, their level of

commitment may be impacted by other competing or overriding dynamics such as security, affection, or constraint commitment factors.

Still, a related construct was found to be significant in the prediction of changes in commitment scores. Specifically, relational thoughtfulness was related to commitment scores, in that higher ratings of thoughtfulness were associated with greater decreases in commitment across videos. . It may be that those who endorse self-reported relational thoughtfulness engage in a more proactive approach to evaluating commitment. Supporting this notion is the relational dynamic coined “sliding versus deciding” wherein partners who make effortful and intentional choices about turning points and commitment within their relationship report greater satisfaction and longevity (Brown, 2004; Brown & Booth, 1996; Stanley, Rhodes, & Markman, 2006). This highlights an important aspect of this research, wherein greater clarity is needed in identifying the specific connections individuals make between recognition of quality and quantity of danger sign expression, and adjustments in thinking and actions about the trajectory of the relationship. Items assessing this domain include assessment of not only awareness of relational risk factors, but also clarity about what one desires in a partner, and confidence in ones ability to select such a partner and sustain a healthy relationship (Owen & Fincham, 2011). It seems that those who report greater attunement or mindfulness of these dynamics are also more attuned to making changes in levels of commitment that correspond to their preferred relationship trajectory. On the other hand, those who endorse lower levels of relationship thoughtfulness may recognize danger signs but do not see a reason to

take action in the relationship. In summary, the significant association between thoughtfulness and changes in commitment suggests that those who engage in more intentional and effortful processing of relationship dynamics, may place greater emphasis on danger sign expressions as they evaluate their desire to persist in the relationship (Frazier & Esterly, 1990)

Relational unawareness was not significant in the prediction of initial commitment, or changes in commitment. This was an interesting finding given the significant association between commitment ratings and thoughtfulness. The two constructs seem to tap into domains of relational self-awareness, but with differing approaches. Thoughtfulness was assessed using items that focus on positive self-affirming statements such as *“I know what to avoid in romantic relationships”* whereas relationship unawareness utilized a more indirect approach with statements such as *“I tend to find myself in bad relationships over and over and I don’t know why.”* These different approaches, with different associations to changes in commitment, may reflect an important and under studied dynamic about the ways in which we measure self-reported relational efficacy. Relational thoughtfulness may be tapping into one’s decision-making perspective on commitment, whereas relational unawareness may be highlighting individuals’ appraisals of the outcomes of their relationships. Additional research is needed to clarify the nature of these assessment approaches and corresponding associations with commitment.

Limitations

The way in which danger sign recognition is assessed is a complicated dynamic. Simply asking individuals if they are aware of danger signs generates attention and awareness that may not otherwise be present. This is the case in assessing individuals' self-reported level of danger sign awareness, and in assessing individuals' real-time recognition of the presence of danger signs. The current study utilized an analogue design, wherein participants were asked to identify danger signs in a fictitious relationship. As is common with analogue study designs, it is unknown if the ways in which participants responded translates to an ability or willingness to identify danger signs in one's own relationship (Koyi, 1997).

To bridge the gap between analogue study participation, and real-world influences within relationships, an attachment-priming task was utilized in hopes of provoking internal working models of romantic involvement. However, this task was limited in a few ways. First, to include those who had not yet been involved in a romantic relationship, participants could write and reflect on any relationship, romantic or otherwise. This may have activated a more global attachment, or may not have activated attachment at all, which may have prevented activation of romantic attachment influences within the study. In addition, this task was not monitored or reviewed, meaning that participants may have breezed through the writing and may not have engaged in the task for the instructed amount of time, or with the thoughtfulness desired. Salient and impactful features of a real relationship likely influence one's propensity to

identify danger signs due to the competing factors of emotional interdependency, attraction, and commitment (Morgan & Shaver, 1999). It may also be that viewing relational interactions via Internet access prevents heightened identification with the actors and relational dynamics, especially if the attachment-priming task was not effective. Future studies should seek to measure danger sign recognition in real-time relationship interactions between two partnered people.

In addition, the coding of danger sign recognition proved to be a complex and nuanced process. The ways in which participants responded with vague or personalized answers made it difficult to determine if danger sign recognition was occurring. For example, one response was “*he did not seem interested in talking to her.*” This answer might be reflective of recognizing withdrawal in one of the partners, or might be referring to the actors seeming disinterest in engaging in a conversation at the moment. Furthermore, some responses seemed to suggest recognition of a danger sign, yet their actual verbiage did not reach the stipulations of recognition. For example, in response to the physical violence recognition video, one participant remarked “*oh god, this is horrible, they need to end their relationship now, this is not okay*”. The participant seemed to recognize the presence of physical violence, yet their response did not include any language that fit the criteria set for coding the response as such. As such, some responses may not have been coded as danger sign recognition, despite the participant identifying the behavior. Broadly, reaching agreement on coding responses that refer to normative negative relationship dynamics, and those that reach the level

of qualifying as a danger sign was a difficult process to disentangle among raters. As such, future studies should seek to identify an improved method of defining and coding these responses, including differentiating between normative negative relational interactions and those that are defined as danger signs.

The participants were undergraduate college students, which presents a limitation in a few ways. First, given the relatively younger age of the sample and lower number of relationships participants had been involved in, the results may not generalize to those who possess more diverse and lengthy relationship histories. In addition, sampling college students enrolled in one particular geographical and cultural region may limit generalizability of danger sign recognition within other diverse groups. Future studies should seek to address this gap by including participants with greater diversity of age, racial/ethnic identification, sexual orientation, and geographical location.

Implications and Future Directions

Evaluating individual differences that predict one's ability to accurately identify danger signs within romantic relationships may be an important avenue toward promoting healthy and sustainable partnerships. Given the established connection in the literature between presence of danger signs in a relationship, and current and future relational satisfaction and functioning (Fincham & Beach, 1999; Gottman & Notarius, 2000; Johnson, et al., 2002; Stanley, Markman, & Whitton, 2002), it would seem wise to promote and heighten recognition ability.

The current study sought to identify individual differences in the ability to detect danger signs. Although many of the hypothesized predictor variables did

not reach significance in the models proposed, it seems important to continue to evaluate underlying individual dynamics and experiences that influence danger sign recognition. For example, participants' experiences of intimate partner violence within their relationships were predictive of greater danger sign recognition. It seems that these individuals may have developed a heightened attunement for micro and macro expression of unhealthy relationships, potentially as a way to preserve safety in subsequent relationships. Interestingly, betrayal trauma reports were not found to be predictive of danger sign recognition, despite similarities in these trauma-based constructs. Experiences of violence within a romantic relationship seem to evoke a different process of information processing. Indeed, Betrayal Trauma Theory asserts that individuals must endure this type of trauma by mechanisms of dissociation, and this mechanism may prevent individuals from identifying danger signs in romantic relationship situations (Frey, 1995, DePrince, 2005). Future research should address this interesting finding by greater exploration of how these types of different traumas effect relational information processing.

Furthermore, the way in which danger sign recognition is related to relationship commitment should be explored in greater depth. The current study found no support for the proposed associations between attachment and coping and changes in commitment across danger signs. This dynamic is critically important given that individuals may identify danger signs, and still take no steps to address these, sustaining involvement in an unhealthy relationship. For example, perhaps one single expression of invalidation may not necessitate a

change in commitment, however, countless experiences of invalidation, infidelity, or physical violence creates a potentially unhealthy and dangerous relationship. Continued commitment in this kind of relationship may prove damaging to an individual, and future studies should continue to disentangle the relationship between danger sign recognition and commitment.

Still, the current study identified a significant association between relational thoughtfulness and changes in commitment, suggesting that some individuals engage in a more active process of relationship decision-making than others. For example, it may be that if one identifies a danger sign, this is assessed in terms of relative importance, severity, chronicity of expression, and likely impact on the health of the relationship. The outcome of this assessment process may then in term dictate the degree of change in commitment rating. Future studies should examine the specific connections between recognition of danger signs, and the ways in which individuals use this information in these specific ways in making decisions about their relationship trajectory.

Many other factors and dynamics are left to explore in the domain of danger sign recognition within romantic relationships. Within the current study, current involvement in a romantic relationship and number of previous relationships was not significantly related to danger sign recognition. Still, the sample was somewhat limited in terms of age and corresponding number and diversity of relationship experiences. Future studies should seek to explore the associations between danger sign recognition and experiences of those with a richer relational history to gain perspective on this influential dynamic. For

example, it would be interesting to examine danger sign recognition within a college student population such as the one utilized in this study, as compared to recognition within a population drawn from a shelter for battered partners.

Furthermore, the current study was limited in diversity in terms of participants' identified gender and sexual orientation, thus preventing a richer understanding of how recognition processes differ within these populations. It may be that men and women who reported intimate partner violence have experienced extremely different types of violence (perpetration versus victimization, common couple violence versus intimate partner terrorism, Kelly, & Johnson, 2008). Future studies should seek to better understand the potentially differing processes of recognition and information processing across the gender spectrum (Del Giudice, 2011; Ruble, Martin, & Berenbaum, 1998). In addition, the schemas and norms of romantic relationships and danger sign recognition may vary based on sexual orientation and associated differential processes of romantic partnership and identity formation (Diamond, 1998; Savin-Williams, & Diamond, 2000).

At the outset of the study, a general and global attachment priming task was utilized wherein participants were asked to describe and write about an important individual in their life. Given that the sample was comprised of relatively young college students, there was a possibility that some individuals may have not yet been involved in a romantic relationship, and thus could not write about a romantic attachment. This open-priming garnered responses related to participants' relationship with a good friend or a roommate or a cousin. These

relationships, although important, may not have yielded the same type of desired priming as those participants who wrote about and reflected on a romantic attachment. In addition, there were no controls for length of time used to write or if the participant was truly immersing themselves in the memories and activation of the relationship they selected to write about. As such, future studies should seek to address this dynamic by (a) only including those who have had at least one important romantic relationship, and (b) utilizing a more specified attachment priming tasks (i.e., romantic attachment priming instead of global attachment) (Mikulincer, Gillath, & Shaver, 2002).

One of the most important themes within this study was the role of awareness. Specifically, we were interested in participants' awareness of danger signs, their relational awareness and thoughtfulness, as well as their self-reported awareness of other psychological dynamics such as attachment. Reliance of self-report for each of these areas may limit a more empirically sound and richer assessment of individuals' variability and the identification of gaps in self-awareness and real-world tendencies. For example, use of the Experiences in Close Relationships attachment measure (Wei, Russell, Mallinckrodt, & Vogel, 2007) may garner how an individual *thinks* they relation to romantic partners, yet the use of the Adult Attachment interview may provide a more objective and nuanced approach that could highlight a crucial gap in self understanding (Crowell, Fraley, & Shaver, 2008; Hesse, 2008).

These questions related to the impact of participant awareness call for future studies to evaluate not only the ways in which awareness and recognition

are assessed, but also how one might design a study to best detect the effect. Several approaches may yield more nuanced and ecologically viable results. For example, a diverse set of participants, varying along the aforementioned demographic variables, could be randomly assigned to differing danger sign expression conditions, as well as a control group, thereby allowing greater comparisons among recognition of differing levels of subtlety. In this way, those who detect danger signs, even when there are none being presented, could also be explored. This approach would also control for the habituation and order effects. Alternatively, real-world examination could be explored by asking couples to engage in a relationship talk, followed by each partner assessing the presence of various danger signs in their conversation, compared with the ratings of the presence of danger signs by trained raters. Furthermore, it would be interesting to test the pre- post- effect of various intervention and prevention programs that are designed to increase one's awareness of relational risk factors.

In summary, the current study reveals preliminary data to support a general trend of danger sign recognition across varying types of danger signs and across levels of subtlety in expression. In addition, the findings also support the association between recognition of danger signs, and a general decrease in relationship commitment. Experiences of intimate partner violence seem to play an important role in the recognition of danger signs, while relational thoughtfulness was found to be a significant factor in relationship commitment. These dynamics seem to be two of many influential individual differences in relational processes, with many questions remaining unanswered. Moving

forward, adjustments in the assessment of self-reported awareness of relational dynamics, and improved methodology in study design, may reveal additional salient interpersonal variables important to the recognition of romantic relationship danger signs.

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Appendix 1.

Couple Relationship History: Script. (Presented in written and audio format).

NARRATOR: *You are about to watch a video depicting various interactions between two partners who are in a romantic relationship.*

Austin and Clare have been dating for two years. They met in a college class where they became study partners. Frequently, they would meet for coffee and to work on study guides and assignments. During these meetings, they noticed that they both had a lot in common. Clare and Austin were both outgoing people who loved to go out to parties, football games, and music shows. They found out they both had been skiing at the same nearby resort, but had never ran into each other. They also shared the same interest in indie-rock music and had many of the same artists on their ipods. Coffee and studying soon extended into sharing meals and meeting for a drink. They both shared that they had been in serious relationships that ended and were a little wary of jumping into something serious again. But their personalities, sense of humor, and attraction to one another soon won out, with daily hangouts leading to finally confirming that they were dating.

Recently, Austin graduated from college and started at a job in marketing for a local hotel. Clare is finishing her last year in school, majoring in Veterinary Science, and she currently works for a Veterinary clinic. Both Clare and Austin are very busy – with Austin navigating his first serious job and Clare finishing school and working part time. Still, the two recently went on a skiing trip together, staying in a cabin on the mountain and having a really great time. Last Christmas, they went to Clare’s family’s place for the holiday and everyone really liked and approved of Austin. He made everyone laugh and had a good time playing with Clare’s little cousins. Clare also made a good impression with Austin’s family – his brothers thought she was a blast to hang out with and his parents thought she was very sweet.

After graduating, Austin moved out from his roommates and got his own apartment. Clare and Austin spend most of their time at his place, though Clare still has her own studio. In the new few months, they plan to join their group of mutual friends on a road trip to Florida for a wedding. They enjoy the fact that they can hang out with a large group of friends who all know each other and have a good time together.

Clare and Austin feel very happy in their relationship, yet, the stress and strain of their current life responsibilities and changes has made them start to

fight more often. Both Clare and Austin hate these fights but have difficulty in preventing them from happening.

The following video clips show various situations and discussions between Austin and Clare. I want you to imagine yourself in this relationship. Think about the history of this couple, how they feel for each other, the things they have been through, and the future they are planning. The good times. The bad times. Try to imagine what you would think in each situation...how you might feel....how you might react. Imagine that Clare and Austin hope to continue the relationship, but, like most couples, sometimes it can be hard to weather the rough times together.

Appendix 2. Video Script (Danger signs are underlined)

SEGMENT 1. Neutral.

Her: I just don't know if I am going to have time to go camping over the next few weekends. Im just so overwhelmed with work.

Him: I know. But you have to get away a little bit! Or else you will go crazy!

Her: I know, I know. But I literally don't think I can. The amount of things I have to cross off my list in the new few weeks is so huge.

Him: Yeah. Well maybe we can do, like, a small trip?

Her: I don't know. I guess. What could we do?

Him: Well, even if we just went on a day hike or something. I just miss being able to hang out with you more.

Her: Yeah. I know. I agree. I wish life wasn't so busy.

Him: Well, what part are you most worried about?

Her: Just, having to cover so many hours at the clinic over the next few weeks, plus all the regular stuff on top of it. Everyone is going out of town for vacation and, since Im the lowest one in terms of seniority, I have to cover things. I mean, I know it's the way the system works, it just feels unfair and Im sick of it.

Him: Yeah. That sucks. Well, lets try to use the little bits of time we do get in ways that are fun, instead of just sitting in front of the TV like we always do. We could go catch shows more often or movies. I don't know. Something to make things a little more mixed up.

Her: Yeah. I just worry about money too. But you are right. We can do little things that don't take that much time or money. I just need to feel like I can shake off the work stuff.

Him: Yeah, I know its hard. I mean, when we are out doing stuff, Im thinking about how I could be doing more research for work. I hate that, having that stuff in the back of your head. But I think we gotta try harder to really break away.

Her: Yeah. True. Maybe we could just buy tickets to something. Then we are locked in and we cant rationalize our way out of it when the time comes.

Him: Yeah, like we could buy tickets to that Folk Festival that is coming up at the end of the month!

Her: Yeah. We should.

SEGMENT 3. NEGATIVE INTERPRETATIONS.

[Both partners, sitting on couch]

Her: I think that we could use more money. I mean, I'm sick of only having so much money every month. We never have any extra. We never get to go and do bigger more fun things like other people.

Him: Well, I just got that promotion! I think we will have more money after I pay down some of my debt and some of this raise-money starts coming in.

Her: Yeah, but I could easily get another job to be able to add to what we have!

Him: I just don't think you need to get another job! I am going to be bringing in more and more now that I am on the road.

Her: I feel like you want to be able to control all of our money and what we do with it! Like, if I worked and made money, then you would have to share the power of where it goes and how much!

Him: What?! That's not true! I just want to be able to provide for us, especially if we are going to move in together!

Her: But see, even with that, you would be the one making the money and then deciding where it goes, including what place we live in! It's like you don't want me to be able to make any decisions!!

Him: Wow. That's not true! Where is this coming from?! I just don't want you to have to take another job, be stressed and tired all the time. We wouldn't even be able to see each other!

Her: Well then maybe you should scale back at work, and I will get another job! You want to be able to spend time with me while keeping me in my place, not being able to make decisions or decide how much time we spend together! It's like you want to make all the decisions!

Him: That's not what I'm saying! If you want to work more, you should, I guess. But you don't *really* that! You just want to make money, and I'm saying, I can provide that for stuff we want to do together.

Her: Exactly. You provide it. You pick the places and things we spend money on. You don't want me to have control over the money because then you would have to do the things I want to do!

SEGMENT 7. Invalidation.

[Him and her are sitting at a table, both on their laptops, drinking coffee]

Him: ...so, I don't know. I just feel really worried that they think they can send me on business trips all the time now. Like I don't have a life here. Like I want to spend all my time in airports and security check points and in lines.

Her: But you got promoted! And you make a bunch more money now! They must think you are really worth it!

Him: Yeah, but for what? I am tired all the time, I never get to be home and relax. My schedule is all wacked.

Her: Yeah, but you will get used to it.

Him: But its almost like they didn't even ask. It was just like, one day – “you are going to Chicago” and then a few days later “oh we need you to go to Denver” and then “by the way, we need you in Philly next weekend.” Its just so crazy. I mean, I appreciate it or whatever, and its kind fun, but, I don't know. I didn't really think it would be like this.

Her: I don't know, it seems part of the package, you got the promotion and the raise, this is what it came with I guess.

Him: I just don't know if its worth it. I mean, the money is good I guess, and its nice for the resume to have been promoted. But I didn't sign up for this. Im constantly stressed out, constantly tired, and always feeling like I cant get my regular work done.

Her: You just need to appreciate the good stuff. You seem like you don't even appreciate the opportunity its giving you. I wish I could fly around to a bunch of different cities.

Him: (*sigh*) I do appreciate it. Its just, its made my life a lot harder and I just feel like I cant keep up with everything. I wish I knew how to handle it better.

Her: I think you will figure it out.

SEGMENT 4. Allowing Control

[Man and woman are eating dinner]

Him: ...so then I told her that I would just finish the project for her. I mean, she has been really stressed out lately with her divorce and having to move into a new house. I just feel bad for her.

Her: Yeah, I cant believe it. They were only married a year! How sad, I don't know how she gets through having to answer everyone's questions about what is going on – like its anyone's business.

Him: I know. I try to just stay out of it. But, I mean, he was a pretty big jerk it sounds like. Its probably for the best.

Her: Yeah. Well does this mean you will have to take on more of her projects at work?

Him: Well no, not really. I was just trying to be helpful. She didn't even ask, I offered, and even then, she tried to refuse. I'm sure once she moves out and things start to move forward, she will be better. But for now, man, Scott is just really being annoying about getting everything done on time for our client and, its like, I get that, but come on man, clearly she is having a rough time.

Her: Wow. Yeah. When do you guys propose the project?

Him: The deadline is in 2 weeks. There isn't a lot of time to wait until she is more on the ball and has more time at night to help me. So that means Im going to have to be bringing things home to work on at night.

Her: Oh man, really?? (sigh). Well its only for a few weeks, I guess it wont be that bad.

Him: Yeah, and Im sure she will pay me back in some way in the future.

...[*she gets a text message, he nervously glances over her shoulder...*]

Him: Hey, we should do something together this weekend.

Her: Well its my sister's birthday party. I should probably go to that.

Him: I don't think you should go to your sister's party. She always has a ton of really wild friends over who get really drunk and things get out of control.

Her: Yeah. That's true. But, I don't know, I feel like I can handle it when I am there.

Him: Well, yeah, Im sure you can. But don't you think you would rather be home with me? I mean, we could rent a movie and make some food...

Her: Yeah. That does sound good. My sister is going to be so bummed though. I haven't seen her in months, and its her birthday.

Him: She will be ok.

Her: Well maybe I could go and I could take Heather?

Him: I don't think Heather is going to be any better of an influence. Just stay home tonight.

Her: Your right. I mean, I haven't seen Heather in forever either. She keeps nagging me that she never sees me any more.

Him: She sounds jealous! (*He smiles*).

Her: Haha. You are probably right. But maybe we could invite her over here for dinner?

Him: I don't know. Then we would have to cook for all three of us, and you guys would get to talking about your classes and your work. I think it would be better if it were just me and you, don't you think?

Her: Yeah. Yeah, you are right. (*she smiles reassuringly*). Lets just stay in. We could make a pizza?

Him: Yeah! That sounds good. We could use some of the vegetables from the garden and I could go grab some bacon from the store.

Her: Sounds good.

SEGMENT 5. Escalation.

[She sits in a living room chair, looking upset. A moment later, he walks in the door]

Her: Hi. I guess you are home now...

Him: Hi to you too....how was your night?

Her: Where have you been...

Him: Work.

Her: I thought you were going to be able to come home early tonight...

Him: I got held up, had a bunch of crap piled on me at the last second.

Her: What does that even mean?! I know your office closes at 6pm. What do you mean work?

[He leaves the room. She follows]

Her: Hey! HEY! You always do this, doing things behind my back, and you certainly don't seem to care about spending time with me, its like you don't even care whether we stay together or not!

Him: Look. I just went to the bar after work with a few friends, I don't see why you are making such a huge deal out of this.

Her: Because! I was here, waiting for you, and I feel like you dont care about this relationship any more. I mean you don't take time to visit my family, my friends barely remember what you look like. When is the last time we went anywhere together?!

Him: Me?! You hide in this house like you might catch on fire if you went outside! My friends think you don't even exist any more! Its like all you want to do it play house, we don't even have fun any more!

Her: Who builds a relationship on going out and getting wasted and acting like an idiot?! We are grown ups now, at least I am. You act like a 21 year old boy who plays pretend at the office in-between acting like a drunk animal with your friends!

Him: Well at least I have a good time!! All you do is mope and balance the checkbook and eat lunch with your parents. Its like you're an 80 year old woman already!

Her: I am so sick of this! I cant handle you!

Him: Then why don't you go do a crossword puzzle and knit yourself a blanky!!

SEGMENT 6. Infidelity.

[She is on the phone, talking to a friend, while putting away laundry]

Her: I know! Heather, it was such a crazy weekend. I don't know when the last time I had so much fun was. *[pause]*. I know! He was just some friend of Sarah's, I don't think they ever dated or anything. But yeah, he was definitely cute. *[pause]*. I know, I know, I didn't think it would go that far, but then all the sudden I was kissing him! I don't know where that came from! *[pause]* No, of course Im not going to tell Austin. But you know, we got into a big fight yesterday. He is never home any more and when we are together he always seems distracted and distant. I don't know. Part of me thinks that if he were to find out about this, maybe it would make him realize how much he has to lose! *[pause]* No, I know, he would probably be really pissed. Which is why Im not going to tell him. But I really think that is part of why I kissed that guy. I just feel... unappreciated, and maybe if Austin knew that how he is acting is hurting our relationship and making me look elsewhere, well maybe he would change. I don't know.

SEGMENT 7. Physical Aggression.

[Standing in a bedroom]

Her: What is your problem!! We have talked about this 100 times and you always say you will stay away from her!

Him: I never said that, this is so stupid...*(starts to walk away)*

Her: Hey! *(runs around in front of him)* I don't understand why you wont listen to me! She pisses me off, she clearly just wants to make me jealous, and then you go out and have drinks with her! Its like you want me to be jealous too!

Him: I didn't have drinks with HER. She was THERE!! I didn't invite her, she was just there! What was I supposed to do, leave?!

Her: Yes! Leave! If you cared about me, you would get that this is a big deal, and you would frickin leave!!

Him: Oh, right, cause that's what a sane person would do. Walk into a bar, see someone, and walk back out for no good reason. *(rolls eyes, starts to walk away).*

Her: *(aggressively grabs his arm to spin him around and pull him back toward her).* Don't roll your eyes at me! You know why she bothers me! You guys have a history and she clearly wants you back! Its like neither of you care how that makes me feel at **all!!**

Him: What do you want me to do?! Promise Ill never touch her?! **I promise!**
(Yells in her face).

Her: *(she pushes him, hard).* Get away from me! You make me seem like a crazy person, but you are the one who wont consider how this makes me feel and what it looks like to everyone else!!

Him: Screw this, I cant win. Im leaving. *(Attempts to walk out the door)*

Her: *(Grabs at his arms and clothes to get him to stay).* Stop! Im talking to you!!

Him: *(Pushes her backwards, shaking her off).*

Appendix 2: Measures and Items

Demographics

Please indicate your gender:

- Transgender
- Gender Queer
- Male
- Female

Please describe your race/ethnicity:

[open-ended]

Please indicate your sexual orientation:

- Heterosexual
- Gay
- Lesbian
- Bisexual
- Other _____

How many serious romantic relationships have you had, including any you are in now? (open field).

Are you currently involved a romantic relationship?

Yes

No

(NOTE: If participants answer yes, they will complete the rest of the questions. If they answer no, the survey will conclude and their browser will be directed to the thank you page).

The COPE Inventory (Carver et al. 1989)

We are interested in how people respond when they confront difficult or stressful events in their lives. There are lots of ways to try to deal with stress. This questionnaire asks you to indicate what you generally do and feel, when you experience stressful events. Obviously, different events bring out somewhat different responses, but think about what you usually do when you are under a lot of stress.

Then respond to each of the following items by blackening one number on your answer sheet for each, using the response choices listed just below. Please try to respond to each item separately in your mind from each other item. Choose your answers thoughtfully, and make your answers as true FOR YOU as you can. Please answer every item. There are no "right" or "wrong" answers, so choose the most accurate answer for YOU--not what you think "most people" would say or do. Indicate what YOU usually do when YOU experience a stressful event.

- 1 = I usually don't do this at all
- 2 = I usually do this a little bit
- 3 = I usually do this a medium amount
- 4 = I usually do this a lot

1. I've been turning to work or other activities to take my mind off things.
2. I've been concentrating my efforts on doing something about the situation I'm in.
3. I've been saying to myself "this isn't real."
4. I've been using alcohol or other drugs to make myself feel better.
5. I've been getting emotional support from others.
6. I've been giving up trying to deal with it.
7. I've been taking action to try to make the situation better.
8. I've been refusing to believe that it has happened.
9. I've been saying things to let my unpleasant feelings escape.
10. I've been getting help and advice from other people.
11. I've been using alcohol or other drugs to help me get through it.
12. I've been trying to see it in a different light, to make it seem more positive.
13. I've been criticizing myself.
14. I've been trying to come up with a strategy about what to do.
15. I've been getting comfort and understanding from someone.
16. I've been giving up the attempt to cope.
17. I've been looking for something good in what is happening.
18. I've been making jokes about it.
19. I've been doing something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping.
21. I've been accepting the reality of the fact that it has happened.
22. I've been expressing my negative feelings.
23. I've been trying to find comfort in my religion or spiritual beliefs.
24. I've been trying to get advice or help from other people about what to do.
25. I've been learning to live with it.
26. I've been thinking hard about what steps to take.
27. I've been blaming myself for things that happened.
28. I've been praying or meditating.
29. I've been making fun of the situation.

Relationship Awareness Scale (RAS; Owen & Fincham, 2010)

1. With romantic partners, I weigh the pros and cons before allowing myself to take the next step in a relationship.
2. I feel good about the prospects of making a romantic relationship last.
3. I have the skills needed for a lasting, stable romantic relationship.
4. I am able to recognize early on the warning signs in a bad relationship.
5. It is important to make conscious decisions about whether to take each major step in romantic relationships.
6. I know exactly what to avoid in a potential partner.
7. In romantic relationships, the heart rules the head.
8. Considering the pros and cons of each major step in a romantic relationship destroys its chemistry.
9. I know what to do when I recognize the warning signs in a bad relationship.
10. I am quickly able to see danger signals in a romantic relationship.
11. It is important to me to discuss with my partner each major step we take in the relationship.
12. I am very confident when I think of having a stable, long term relationship.
13. It is better to “go with the flow” than to think carefully about each major step in a romantic relationship.
14. I know exactly what to avoid in a potential partner.
15. I have a clear vision of what I want in my long term romantic relationship to be like.
16. I am very aware of my own relationship expectations and how these can influence my future long term relationship.
17. I can tell when I am “sliding” into a bad relationship decision rather than “deciding”.

Experiences in Close Relationship Scale-Short Form (ECR-SF; Wei, Russell, Mallinckrodt, & Vogel, 2007).

Instruction: The following statements concern how you feel in romantic relationships. We are interested in how you generally experience relationships, not just in what is happening in a current relationship. Respond to each statement by indicating how much you agree or disagree with it. Mark your answer using the following rating scale:

1. It helps to turn to my romantic partner in times of need.
2. I need a lot of reassurance that I am loved by my partner.
3. I want to get close to my partner, but I keep pulling back.
4. I find that my partner(s) don't want to get as close as I would like.
5. I turn to my partner for many things, including comfort and reassurance.
6. My desire to be very close sometimes scares people away.
7. I try to avoid getting too close to my partner.
8. I do not often worry about being abandoned.
9. I usually discuss my problems and concerns with my partner.
10. I get frustrated if romantic partners are not available when I need them.
11. I am nervous when partners get too close to me.
12. I worry that romantic partners won't care about me as much as I care about them.

Dyadic Adjustment Scale. (DAS-4; Sabourin et al., 2005)

1. How often do you discuss or have you considered divorce, separation, or terminating your relationship?
2. In general, how often do you think that things between you and your partner are going well?
3. Do you confide in your mate?
4. Please indicate the degree of happiness, all things considered, of your relationship.

The Conflict Tactics Scale-Revised (CTS2; Straus, Hamby, Boney-McCoy, & Sugarman, 1996)

Instructions: No matter how well a couple gets along, there are times when they disagree, get annoyed with the other person, want different things from each other, or just had spats or fights because they are in a bad mood, are tired or for some other reason. Couples also have many different ways of trying to settle their differences. This is a list of things that might happen when you have differences.

Please read each example and rate how often this has happened in your relationships.

[This happened in none of my relationships]

[This happened in one of my relationships]

[This happened in more than one of my relationships]

[This has happened frequently in my relationships]

-
1. I threw something at my partner that could hurt.
 2. My partner threw something at me that could hurt.
 3. I twisted my partner's arm or pulled their hair.
 4. My partner twisted my arm or pulled my hair.
 5. I pushed or shoved my partner.
 6. My partner pushed or shoved me.
 7. I grabbed my partner.
 8. My partner grabbed me.
 9. I slapped my partner.
 10. My partner slapped me.
 11. I used a knife or gun on my partner.
 12. My partner used a knife or gun on me.
 13. I punched or hit my partner with something that could hurt.
 14. My partner punched or hit me with something that could hurt.
 15. I choked my partner.
 16. My partner choked me.
 17. I slammed my partner against a wall.

18. My partner slammed me against a wall.
19. I beat up my partner.
20. My partner beat me up.
21. I burned or scalded my partner on purpose.
22. My partner burned or scalded me on purpose.
23. I kicked my partner on purpose.
24. My partner kicked me on purpose.

Brief Betrayal Trauma Survey (BBTS; Goldberg & Freyd, 2003).

Instructions: For each of the following events, please indicate your best estimate of how many times the event has happened to you.

1. You were in a major earthquake, fire, flood, hurricane, or tornado that resulted in significant loss of personal property, serious injury to yourself or a significant other, the death of a significant other, or the fear of your own death.

Before age 18:	never	1 or 2 times	More than that
Age 18 or after:	never	1 or 2 times	More than that

2. You were in a major automobile, boat, motorcycle, plane, train, or industrial accident that resulted in similar consequences.

Before age 18:	never	1 or 2 times	More than that
Age 18 or after:	never	1 or 2 times	More than that

3. You witnessed someone with whom you were very close (such as a parent, brother or sister, caretaker, or intimate partner) committing suicide, being killed, or being injured by another person so severely as to result in marks, bruises, burns, blood, or broken bones. This might include a close friend in combat.

Before age 18:	never	1 or 2 times	More than that
Age 18 or after:	never	1 or 2 times	More than that

4. You witnessed someone with whom you were not so close undergoing a similar kind of traumatic event.

Before age 18:	never	1 or 2 times	More than that
Age 18 or after:	never	1 or 2 times	More than that

5. You witnessed someone with whom you were very close deliberately attack another family member so severely as to result in marks, bruises, blood, broken bones, or broken teeth.

Before age 18:	never	1 or 2 times	More than that
Age 18 or after:	never	1 or 2 times	More than that

6. You witnessed someone with whom you were not so close deliberately attack a family member that severely.

Before age 18:	never	1 or 2 times	More than that
Age 18 or after:	never	1 or 2 times	More than that

7. You were deliberately attacked that severely by someone with whom you were very close.

Before age 18:	never	1 or 2 times	More than that
Age 18 or after:	never	1 or 2 times	More than that

8. You were deliberately attacked that severely by someone with whom you were not close.

Before age 18:	never	1 or 2 times	More than that
Age 18 or after:	never	1 or 2 times	More than that

9. You were made to have some form of sexual contact, such as touching or penetration, by someone with whom you were very close (such as a parent or lover).

Before age 18:	never	1 or 2 times	More than that
Age 18 or after:	never	1 or 2 times	More than that

10. You were made to have such sexual contact by someone with whom you were not close.

Before age 18:	never	1 or 2 times	More than that
Age 18 or after:	never	1 or 2 times	More than that

11. You were emotionally or psychologically mistreated over a significant period of time by someone with whom you were very close (such as a parent or lover).

Before age 18:	never	1 or 2 times	More than that
Age 18 or after:	never	1 or 2 times	More than that

12. You were emotionally or psychologically mistreated over a significant period of time by someone with whom you were not close.

Before age 18:	never	1 or 2 times	More than that
Age 18 or after:	never	1 or 2 times	More than that

13. You experienced the death of one of your own children.

Before age 18:	never	1 or 2 times	More than that
Age 18 or after:	never	1 or 2 times	More than that

14. You experienced a seriously traumatic event not already covered in any of these questions.

Before age 18:	never	1 or 2 times	More than that
Age 18 or after:	never	1 or 2 times	More than that

The Negative Maintenance Scale (NMS; Dainton & Gross, 2008)

Instructions: Below are some behaviors that happen within relationships. In thinking about your own relationships, in general, please indicate the degree to

which you agree with the following statements as they apply to your TYPICAL relationships.

[1] = Strongly Disagree : [7] = Strongly Agree

- #1. I flirt with others to make my partner jealous.
- #2. I comment on how attractive others are to make my partner jealous.
- #3. Avoidance I avoid my partner when I do not want to deal with him=her.
- #4. I avoid interacting with my partner when he=she is angry with me.
- #5. I avoid topics that lead to arguments.
- #6. I will not talk about a subject if it upsets me.
- #7. Spying I make sure I know everyone who is calling him=her.
- #8. I check his/her email or cell phone for messages.
- #9. I talk to his/her friends to get information.
- #10. I have affairs with other people so I can stay satisfied with my relationship.
- #11. I flirt with other people to keep myself from getting bored.
- #12. Destructive conflict I fight with my partner when I am upset.
- #13. I start arguments with my partner.
- #14. I try to control my partner's behavior.
- #15. I tell my partner what to do.
- #16. Allow control I break plans with my friends to spend more time with my partner.
- #17. I spend less time with my family because of my partner.
- #18. I have stopped doing activities I enjoy because my partner doesn't enjoy them.
- #19. I skip out on other responsibilities because of my partner.
- #20. I let my partner make decisions for me.

The Controlling Behaviors Scale (CBS-R (Graham-Kevan & Archer, 2005).

Instructions: Here is a list of things you and your partner may have done during your relationship.

Indicate how frequently each of you did the following. Using the following code, select the number which best describes your actions toward your partner and your partner's actions toward you.

0 = Never, 1 = Rarely, 2 = Sometimes, 3 = Often, 4 = Always.

---[Scale for self and partner perpetrator]

1. Made it difficult to work or study
2. Control the other's money
3. Keep own money matters secret
4. Refuse to share money/pay fair share
5. Threaten to harm the other one
6. Threaten to leave the relationship
7. Threaten to harm self

8. Threaten to disclose damaging or embarrassing information
9. Try to make the other do things they didn't want to
10. Use nasty looks and gestures to make the other one feel bad or silly
11. Smash the other one's property when annoyed/angry
12. Be nasty or rude to other one's friends or family
13. Vent anger on pets
14. Try to put the other down when getting 'too big for their boots'
15. Show the other one up in public
16. Tell the other they were going mad
17. Tell the other they were lying or confused
18. Call the other unpleasant names
19. Try to restrict time one spent with family or friends
20. Want to know where the other went and who they spoke to when not together
21. Try to limit the amount of activities outside the relationship the other engaged in
22. Act suspicious and jealous of the other one
23. Check up on other's movements
24. Try to make the other feel jealous

Video Vignette Questions

Danger Sign Recognition

"What stood out to you in the video you just viewed?"

Open-ended response format. Answers coded for the presence of danger sign recognition.

Overall Commitment

"Given the current dynamic and events just viewed, what would be your level of commitment to this relationship, all things considered."

Response options range from 1 (*Not at all committed*) to 7 (*Completely Committed*).

Stimuli Screening Questions

1. Rate the attractiveness of the female partner, with a rating between 1 (*not at all attractive to me*) to 10 (*Extremely attractive to me*).
2. Rate the attractiveness of the male partner, with a rating between 1 (*not at all attractive to me*) to 5 (*neutral*) to 10 (*Extremely attractive to me*).
3. Pick a number that most closely fits your first perception of the female partner:
[Cold] —1—2—3--neutral —5—6—7—[Warm]

4. Pick a number that most closely fits your first perception of the male partner:
[Cold] -1—2—3--neutral -5—6—7—[Warm]
5. Pick a number that most closely fits your first perception of the female partner:
[Not at all similar to me] -1—2—3--neutral -5—6—7—[Very similar to me]
6. Pick a number that most closely fits your first perception of the male partner:
[Not at all similar to me] -1—2—3--neutral -5—6—7—[Very similar to me]
7. Pick a number that most closely fits your first perception of the female partner:
[I dislike her] -1—2—3--neutral -5—6—7—[I like her]
8. Pick a number that most closely fits your first perception of the male partner:
[I dislike him] -1—2—3--neutral -5—6—7—[I like him]
9. Pick a number that most closely fits your first perception of the female partner:
[Unfriendly] -1—2—3--neutral -5—6—7—[Friendly]
10. Pick a number that most closely fits your first perception of the male partner:
[Unfriendly] -1—2—3--neutral -5—6—7—[Friendly]

CURRICULUM VITAE

Kelley M. Quirk

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Education Information

Ph.D. **Counseling Psychology** (APA Accredited) Expected, August 2014
University of Louisville, Louisville, Kentucky
Dissertation: The Role of Attachment in Romantic Relationship
Danger Sign Recognition.
Status: Defended

APA Accredited Pre-Doctoral Internship, August 2013 – July 2014
University of Utah Counseling Center
Salt Lake City, Utah

M.A. **Professional Counseling.** May 2010
Central Michigan University, Mount Pleasant, Michigan
Thesis: Acting Bicultural Versus Feeling Bicultural: Cultural
Adaptation and School-Related Attitudes Among U.S. Latina/o
Youth.

B.S. **Major:** Psychology. May 2006
Central Michigan University, Mount Pleasant, Michigan

Publications

Quirk, K., Owen, J., Inch, L. J., France, I., & Bergen, C. (in press). The alliance
in relationship education programs. *Journal of Marital and Family Therapy.*

- Quirk, K.,** Owen, J., & Fincham, F. (in press). Perceptions of deception in friends with benefits relationships. *Journal of Sex and Marital Therapy*.
- Quirk, K.,** Miller, S., Duncan, B., & Owen, J. (2013). Group session rating scale: Preliminary psychometrics in substance abuse group interventions, *Counselling and Psychotherapy Research*, 13, 194-200.
- Quirk, K.,** Strokoff, J., Owen, J., Inch, L., Bergen, C., McMillen, A., & France, T. (under review). Distressed couples in relationship education.
- Quirk, K.,** Owen, J., & Shuck, B. (under review). Breaking bad: Commitment uncertainty, alternative monitoring, and relationship termination.
- Owen, J. & **Quirk, K.** (in press). Heightening in couple therapy. *Psychotherapy*.
- Acevedo-Polakovich, I. D., **Quirk, K. M.,** Cousineau, J. R., Saxena, S. R., & Gerhart, J. I. (in press). Acting bicultural versus feeling bicultural: Cultural adaptation and school-related attitudes among U.S. Latina/o youth. *Journal of Hispanic Higher Education*.
- Owen, J., **Quirk, K.,** & Rodolfa, E. (in press). Selecting graduate students: Doctoral program and internship admissions. In W. B. Johnson & N. Kaslow (Eds.) Oxford Handbook of Education and Training.
- Owen, J., Reese, R. J., **Quirk, K.,** & Rodolfa, E. (in press). Alliance in action: A new look the working alliance. *Psychotherapy Research*, 23, 67-77.
- Owen, J., **Quirk, K.,** & Fincham, F. (in press). Towards a more complete understanding of reactions to hooking up among college women. *Journal of Sex and Marital Therapy*.
- Acevedo-Polakovich, I. D., Cousineau, J. M., **Quirk, K.,** Gerhart, J. I., Bell, K. M. & Adomako, M. S. (in press). Toward an asset orientation in the study of US Latina/o youth: Biculturalism, ethnic identity, and positive youth development. *The Counseling Psychologist*.
- Owen, J., Manthos, M., & **Quirk, K.** (2013). Dismantling study of prevention and relationship education program: The effects of a structured communication intervention. *Journal of Family Psychology*, 27, 336-341.
- Owen, J., **Quirk, K.,** Hilsenroth, M., & Rodolfa, E. (2012). Working through: Intersession processes, alliance, and techniques. *Journal of Counseling Psychology*, 59, 161-167

- Owen, J., **Quirk, K.**, Inch, L. J., Bergen, C., McMillen, A., & France, T. (2012). The effectiveness of PREP with lower-income racial/ethnic minority couples. *Journal of Marital and Family Therapy*, 38, 296-307
- Owen, J., **Quirk, K.**, & Manthos, M. (2012). I get no respect: The relationship between betrayal trauma theory and relationship functioning. *Journal of Trauma and Dissociation*, 13, 179-189.
- Owen, J., Chapman, K., **Quirk, K.**, Inch, L., Bergen, C., McMillen, A., & France, T. (2012). Processes of change in relationship education for lower income African American couples. *Journal of Couple and Relationship Therapy*, 11, 51-68.
- Acevedo-Polakovich, I. D., **Quirk, K.**, & Wakefield, J. (2009). The Hispanic Youth Congress: An evaluation and directions for future development. Mount Pleasant, MI: Center for Community AID at Central Michigan University.

Manuscripts in Preparation

- Quirk, K.**, Owen, J., Fincham, F. (in preparation). Relationship awareness; Too much of a good thing?
- Quirk, K.**, & Owen, J. (in preparation). The role of attachment in the recognition of relationship danger signs.
- Quirk, K.**, Acevedo-Polakovich, D. I., Piña-Watson, B. M., Gerhart, J. I., & Ojeda, L. (in preparation). Biculturalism and academic success: A replication study using the ARSMA-II measure.
- Owen, J., **Quirk, K.**, & Fincham F. (in preparation). The role of commitment and commitment uncertainty in Friends with Benefits relationships.
- Owen, J. Antle, B., & Quirk, K. (in preparation). Within My Reach as a primary prevention for intimate partner violence.

Presentations

- Owen, J., Manthos, M., & Quirk, K. (2013). Communication skills training: Dismantling study of PREP. Symposium at 47th Annual Convention of Association of Behavioral and Cognitive Therapies. Nashville, TN.
- Manthos, M., **Quirk, K.**, & Owen, J. [Moderator: Jesse Owen]. (2013, October). Structured communication intervention for couples: A pilot dismantling study. Panel presented at the North American Society for Psychotherapy Research. Memphis, TN.

- Strokoff, J., **Quirk, K.**, & Owen, J. [Moderator: Jesse Owen]. (2013, October). Group or couple format for couple interventions: Distress as a moderator. Panel presented at the North American Society for Psychotherapy Research. Memphis, TN.
- Halford, T., Manthos, M., & **Quirk, K.** [Moderator: Jesse Owen]. (2013, October). Group processes in group interventions for couples. Panel presented at the North American Society for Psychotherapy Research. Memphis, TN.
- Quirk, K.**, Quirk, S. W., Owen, J., & Bontrager, M. (2012, October). Negative schemas, motives, and reactions to sex with ex-partners. Poster presented at the annual meeting of the Society for Research in Psychopathology. Ann Arbor, MI.
- Quirk, K.**, Manthos, M., & Moore, J. [Discussant J. Owen] (2011, March). No strings attached: What counselors need to know about friends with benefits relationships and hooking up experiences. Symposium presented at the Great Lakes Conference. Bloomington, IN.
- Manthos, M., **Quirk, K.**, & Moore, J. [Discussant J. Owen] (2011, March). Understanding clients' sexual self-schema: The role of SSS and hooking up. Symposium presented at the Great Lakes Counseling Conference. Bloomington, IN.
- Moore, J., Manthos, M., & **Quirk, K.** [Discussant J. Owen] (2011, March). Can hooking up be good for you? Symposium presented at the Great Lakes Counseling Conference. Bloomington, IN.
- Quirk, K.**, & Owen, J. [Discussant M. Leach]. (2011, March). Promoting session outcomes & intersession processes: alliance, cognitive-behavioral and psychodynamic-interpersonal techniques. Symposium Presented at the Great Lakes Conference. Bloomington, IN.
- Quirk, K.**, & Owen, J. (2011, August). Getting bamboozled: Predictors of getting duped in a FWB relationship. Poster presented at the American Psychological Association Conference. Washington, DC.
- Quirk, K.**, & Owen, J. (2011, August). I won't forget this: In-session processes that promote between session thoughts and activities. Poster presented at the American Psychological Association Conference. Washington, DC.
- Gerhart, J. I., **Quirk, K. M.**, Acevedo-Polakovich, I. D., & Cousineau, J. R. (2010, June). Bicultural identities, bicultural involvement, and their relation to academic attitudes in Latina/o youth. Symposium conducted at the

Conference of the Society for the Psychological Study of Ethnic Minority Issues. Ann Arbor, MI.

Acevedo-Polakovich, I. D., **Quirk, K.**, & Wakefield, J.E. (2009, May).
Desarrollando la Ciencia y Práctica del Éxito Académico en Jóvenes de Escasos Recursos a través de Asociaciones Entre la Comunidad y las Universidades. Paper presented at the Third International Conference on Community Psychology. Puebla, Puebla, México.

Research Experience

Lab Leader

Relationship and Psychotherapy Lab
University of Louisville

Aug. 2010 – Jul. 2013
Supervisor: Dr. Owen

- Created data protocols, recruited study participants, managed therapist and client schedules, organized study materials.
- Supervised undergraduate, master's, and doctoral students' theses projects and clinical work.
- Senior/lead couples therapist, providing clinical supervision, mentoring, didactic instruction, and support to junior therapists.
- Collected, and analyzed data including use of actor-partner modeling, hierarchical linear modeling, and structural equation modeling, and observational coding of couple interactions.

Research Assistant

Multicultural Ethnic Identity Lab.
Central Michigan University

Jan. 2009 – May 2010
Supervisor: Dr.
Acevedo- Polakovitch

- Supervised research and writing of undergraduate research assistants.
- Generated innovative and theoretically grounded study ideas.
- Analyzed data including hierarchical regression and tests of moderation approaches.
- Presented data at national and international conferences.

Research Assistant

Wellness and Strength Based Interventions Lab.
Central Michigan University

Mar 2009 – May 2010
Supervisor: Dr. Ward

- Served as the research-based reflection team for senior therapists.
- Co-constructed treatment conceptualizations based on wellness models.
- Performed literature reviews of current trends and responses to special educator attrition and wellness in higher education.

Teaching Experiences (Co-Instructor)

Multicultural Issues

University of Utah

Aug. 2013 – Present

- Undergraduate Seminar.
- The course introduces multicultural issues involved in human interactions. Emphasis is placed on understanding the role that the cultural environment plays in the lives of people and the implications of that role for self and others.

Theory and Technique of Couples/Family Therapy

University of Louisville

Jan. 2012 – May 2012

- Master's and Doctoral level course.
- The course provides a comprehensive understanding of various approaches to couples and family therapy. Within the context of systems theory, emphasis is placed on understanding various methods for assessing, conceptualizing, and intervening in couples and families' dynamics. Incorporation of cultural considerations in with couples and families throughout the course.

Theory and Techniques of Counseling

University of Louisville

Jan. 2011 – May 2011

- Master's and Doctoral level course.
- The course focuses on training students in empirically supported methods and techniques of counseling, with an emphasis on cognitive, behavioral, and affective approaches. Theory and research will be incorporated into practice, including training in professional practices and ethical decision making.

Theoretical Foundations of Psychotherapy

University of Louisville

Aug. 2010 – Dec. 2010

- Master's and Doctoral level course.
- The course builds student understanding of major theoretical approaches to counseling and psychotherapy including the similarities and differences among theory and application. Students also evaluate the empirical evidence supporting major theoretical approaches to counseling and psychotherapy and integrate cross-cultural considerations into major theoretical approaches.

Developmental Career Counseling
Central Michigan University

Aug. 2009 – Dec. 2009

- Undergraduate course.
- The course emphasis is on student development of self-awareness, career awareness, and academic awareness leading to a comprehensive career plan. Students are guided through the use of several career assessment tools, with individualized feedback and interpretation from the instructors.

Clinical Experience

Pre-doctoral Intern

University of Utah Counseling Center
Salt Lake City, UT

Aug 2013– Present
Supervisor: Dr. Ravarino

- Utilized empirically supported treatments with individual, couple, and group therapy clients.
- Incorporated feedback measures to inform treatment.
- Co-instructor of undergraduate Multicultural Issues course.
- Committee member of Research Team to analyze center data.
- Provided outreach and psychoeducation on stress management and depression screenings.
- Conducted structured intakes and effectively managed team dispositions.
- Supervised doctoral student therapists' clinical work.
- Group facilitator of co-ed interpersonal process group.
- Group facilitator of graduate student process and support group.

Couples Therapist

Couples Therapy Commitment Study
University of Louisville

Jan. 2012 – Jul. 2013
Supervisor: Dr. Owen

- Conducted assessments, intakes, and weekly couple therapy.
- Utilized primarily emotion-focused and psychodynamic interventions.
- Trained and supervised junior level therapists in assessment and clinical approaches.
- Demonstrated Emotional Focused techniques with colleague therapists.
- Collected, entered, and analyzed couple data.
- Routinely tracked and incorporated couple feedback and outcome data.

Counseling Center Therapist

Indiana University Southeast Counseling Center
New Albany, IN

Aug. 2012 – May 2011
Supervisor: Dr. Day

- Conducted structured intakes with college students.
- Effectively managed crisis/urgent appointments.
- Provided individual and couple therapy.
- Connected students to appropriate referral sources.
- Co-facilitator of a Social Anxiety psychotherapy group.

Group Leader

Prevention and Relationship Enhancement Program
University of Louisville

Jul. 2010 – Aug. 2011
Supervisor: Dr. Owen

- Co-facilitated psychoeducation couples group.
- Provided manualized and unstructured interventions.
- Utilized psychoeducational materials and presentations.
- Scored, tracked, and analyzed client outcome data.
- Taught and modeled couple communication techniques.

Counseling Center Therapist

Bellarmino Counseling Center
Bellarmino University

Aug. 2011 – May 2012
Supervisor: Dr. Petiprin

- Facilitated intake processes for new clients.
- Provided individual therapy for clients.
- Served as liaison to the Bellarmino Athletic Department.
- Implemented numerous outreach programming (e.g. stress-management).

Community Therapist

Communicare
Radcliff, Kentucky

May 2011 – Aug 2011
Supervisor: Dr. Wendall

- Provided individual therapy and case management to adults and adolescents.
- Created managed treatment plans with those with serious mental illness.
- Co-therapist leader for Wellness Group.
- Contributed to treatment planning in group-consultation.
- Effectively managed large client-case load.

Therapist/Advocate

Cancer Services
Midland, Michigan

May 2010 – Aug. 2010
Supervisor: Dr. Dusseau

- Provided ongoing wellness counseling to patients.
- Facilitated support and interpersonal process groups.

- Connected clients with resources throughout the community.
- Advocated for client's needs within multidisciplinary teams/settings.

Health Therapist

Cancer Services
Midland, Michigan.

Nov. 2009 – May 2010
Supervisor: Dr. Dusseau

- Facilitated support and wellness groups for cancer patients.
- Provided individual counseling to patients and their families.
- Consulted with professionals within a multidisciplinary team.
- Coordinated and implemented educational presentations to the community.
- Facilitated participation in various complementary /alternative therapies.

Community Therapist

Human Development Clinic
Central Michigan University

Aug. 2009 – Dec. 2009
Supervisor : Dr. Parmer

- Provided individual and couple psychological services including assessment, evaluation, and goal setting.
- Formulated empirically grounded treatment plans
- Effectively worked within various treat modalities tailored to client needs.
- Contributed feedback within a dynamic case consultation group.

Professional Activities

Certified Leader

Jul. 2010 – Present

Prevention and Relationship Enhancement Program (PREP)

Ad hoc reviewer

Aug. 2012 – Present

Archives of Sexual Behavior

Author

Sept. 2010 – Present

Psychology Today Magazine

Student Member

Aug. 2010 – Present

APA Division 29 Committee

President

May 2012 – Jun. 2013

Doctoral Student Organization

University of Louisville

Outreach Coordinator

Jan. 2012 – Aug 2012

Doctoral Student Organization

Member Diversity Committee
Aug. 2010 – Jun. 2013

Ad hoc reviewer The Journal of Black Psychology
May 2010 – Dec 2011

Guest Speaker Dr. Stan Frager Radio Show
Dec 2011 – Jun 2013