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The goal of this study was to provide a theoretical framework for integrating attachment style and hostile attribution concepts into a viable model that may help explain the use of aggression in intimate relationships. A review of the current literature was conducted along with a correlational study to test associations between the constructs. The first hypothesis posits that high attachment anxiety and low attachment avoidance would be significantly related to higher levels of aggression. The second hypothesis predicts that the relationship between attachment and aggression would be moderated by the level of hostile attribution bias.   Regression analyses were performed to test for both of these hypotheses. Neither hypothesis was supported by the data. Possible explanations for the outcomes were discussed along with methods used in measuring hostile attribution bias in intimate partner contexts.   Limitations and future directions are discussed.

THE RELATIONSHIP BETWEEN ADULT ATTACHMENT STYLES,

HOSTILE ATTRIBUTION BIAS

AND AGGRESSION

by

Tam Ly

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Approved By

_____
Committee Chair

APPROVAL PAGE

This thesis has been approved by the following committee of the Faculty of The

Graduate School of the University of North Carolina at Greensboro.

Committee Chair   _____

Committee Members   _____

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Date of Acceptance by Committee

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Date of Final Oral Examination

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CHAPTER I

OVERVIEW

The goal of this study was to provide a theoretical basis for integrating attachment style and hostile attribution concepts into a viable model that may help explain the utilization of aggression in intimate relationships. Attachment styles and hostile attribution bias are two phenomena in social psychology that have been well documented in children, especially in relation to aggression. In more recent years, there has been a growing interest in studying attachment within adults and a multitude of studies have been produced due to this emerging interest. However, hostile attribution bias still remains firmly seated in the peer relations research and although the area of study continues to produce compelling results, they primarily reflect younger age groups. Any foray into studying hostile attribution bias in adults has been quite limited in scope and has often been attached as a secondary factor for observation. Consequently, very little research has been done to meaningfully link these two concepts together and perhaps provide a more comprehensive look into the mechanisms that may be involved with aggression in relationships. A review of the current literature provided an argument for the compatibility of the two concepts and the appropriateness of their integration in association with aggressive tendencies. A correlational study was conducted in order to provide any initial support for further investigation into the plausibility of relating these constructs together.

CHAPTER II

REVIEW OF THE LITERATURE

Adult Attachment

There has been an abundance of research done on attachment theory within developmental psychology. Since the proposal of Bowlby's infant attachment theory, many studies have attempted to observe attachment behaviors between infants and their caregivers and equally as many studies have attempted to parse those observed attachments into distinct styles.

Originally, Bowlby's early work proposed that infants display certain behaviors as part of an attachment system in order to maintain proximity to their caregivers (Bowlby, 1982). He observed protesting behaviors from infants in orphanages when separated from their primary caregivers. A successful protest would reunite the caregiver to the infant, which would often result in a positive affective response. However, a failed protest would cause the infant to become despondent and detached over time. The most intuitive purpose of this attachment mechanism would be to maintain the proximity of the caregiver to the infant thereby increasing the likelihood of survival for the infant (Bowlby, 1982). Due to the extreme immaturity of human infants, this attachment system to maintain proximity makes evolutionary sense.

With subsequent successful protests, infants develop a secure attachment to their base caregiver (Bowlby, 1988). The infants exhibit more sociable behaviors and are more

likely to explore their surroundings within sight of their caregiver. However, with unsuccessful protests or sporadic responses from the caregiver, infants begin to create an unreliable attachment. The infants show more inhibitions when exploring their surroundings and are less trusting of their caregivers to adequately provide them with support. Bowlby proposed that infants develop an internal working model of relationships based on these experiences with their caregiver (Bowlby, 1982). These internal working models of relationships persist throughout their lifetime and help them understand both their relationships and themselves. They learn about their self-worth through the responsiveness of their caregiver and about the way others view them (Bowlby 1982).

Mary Ainsworth built upon the early work of Bowlby's idea of an attachment system. Utilizing her "strange situation" paradigm, she discovered three distinct styles of attachment (Ainsworth et al, 1978). A vast majority of children develop a "secure" attachment pattern and exhibit highly sociable, confident behaviors even in novel situations. The other two less prominent attachment styles are considered "insecure." These two patterns are reflective of Bowlby's observation of infants that develop unreliable attachments to their caregivers (Bowlby, 1973). Ainsworth makes a more specific distinction within the "insecure" attachment pattern. The two patterns were labeled, "anxious-ambivalent" and "avoidant" attachment and they differ in important ways.

Anxious-ambivalent children constantly exhibit anxious and fearful behavior. They seem to distrust the reliability of their caregiver and thus, lack the confidence to

explore their surroundings even in the presence of their caregiver. In the absence of their caregiver, they become very upset and protest until they return. They engage in heightened compensatory attachment behaviors upon the return of their caregiver. They consistently protest, call and cling to their caregiver which would indicate that their internal working model of relationships was built upon unreliable, unpredictable experiences (Ainsworth et al, 1978).

In contrast, avoidant children do not maintain close contact to their caregivers, but rather hover in proximity to them. They do not cling to their caregiver and exhibit detached behaviors. They seem to function well independent of the presence of their caregiver, but show no necessity to maintain close contact with their caregiver upon their return. This attachment pattern, or seemingly lack of attachment, seems to reflect an internal working model that is built upon experience with consistently unresponsive caregivers. By avoiding attachment, they avoid the disappointment of their desires being unreciprocated (Ainsworth et al, 1978).

It becomes apparent that the child attachment literature is well conceptualized and that many studies are dedicated to further understand it. However, adult attachment is a concept that has been less studied until recently within social psychology. For the purpose of this paper, a valid link between the robust findings of child attachment literature must be drawn to adult attachment.

Bowlby thought that our attachment system was relevant to our lifelong relational functioning (Bowlby, 1982). He assumed that eventually the role of the primary attachment figure would change from our caregiver to peers and that our internal working

models would be reflected and further developed in the subsequent relationships. Thus, the attachment system may develop throughout experiences in childhood, adolescent and eventually manifest itself differently adulthood.

Hazan and Shaver (1987) were the first to explicitly extend the concept of attachment to adults. In their questionnaire study to assess attachment styles within adults, they found results that were uncannily similar to Ainsworth's three distinctive styles within children in nearly the exact proportions of frequency as those manifested in children. This result seemed to indicate that internal working models developed through childhood attachment experiences may in fact persist to adulthood and are manifested with future relationships beyond the original caregiver. However, these results do not indicate 100% transference of attachment styles to adulthood. Present studies have produced somewhat mixed results when attempting to observe variability in attachment style across time for individuals. Evidence shows a strong influence from the internal working models on attachment styles and moderate stability (Buist, 2008; Scarfe & Bartholomew, 1994). The stability of attachment styles may increase as the individual experiences more relationships throughout their childhood and adolescence, but their attachment pattern is not completely immutable (Scharfe & Bartholomew, 1994).

According to Hazan and Shaver (1994), attachment styles are manifested in adults in a similar pattern to those in children. The primary attachment figure, however, has become the intimate partner. Their internal working models are represented by their current relational schemas on how relationships are supposed to work. These models also begin to reflect the individual's positive-negative view of self and of others (Griffin &

Bartholomew, 1994).

Bartholomew and Horowitz (1991) took these reflections upon the self and others to further develop the attachment theory in adults and parse the attachment styles into more specific categories. Rather than just the three distinctive style conceptualized by Ainsworth in children and then extended to adults by Hazan and Shaver, Bartholomew and Horowitz (1991) formed a four category model of attachment with respect to positive-negative self and other views along the two dimensions of anxiety and avoidance. A "secure" attachment pattern that is identical to Ainsworth's original label represents low anxiety and low avoidance scores with both positive self and other views. Securely attached individuals within relationships show confidence and competence without dysfunctional reactions and behaviors. A "preoccupied" attachment corresponds to the "anxious-ambivalent" label and represents high anxiety and low avoidance scores. These individuals have negative self views and positive other views, which is reflected in their tenuous self-worth that contingent upon the approval of their partner and their constant fear of abandonment (Bartholomew & Horowitz, 1991). They tend to be hypervigilant in detecting relational problems and are highly reactive to them often resulting in intimacy anger (Dutton et al, 1994).

Two new categories further divide the original "avoidant" attachment into more specific categories. These categories are called "dismissive" and "fearful" attachments. They reflect the integration of self-other views along the anxiety-avoidance dimensions. "Dismissive" attachment has a negative view of others and a positive view of self with low anxiety, but high avoidance. Individuals with this attachment style tend to have a

positive view of themselves, but feel unworthy of the relationship. They tend to distance themselves from others to maintain their self-worth (Bartholomew & Horowitz, 1991). "Fearful" attachment indicates a negative view of others and a negative view of self with high anxiety and high avoidance. Fearfully attached individuals are sensitive to negativity and feel unlovable and incapable of relationships, thus avoiding close relationships altogether (Bartholomew & Horowitz, 1991).

The four-category model of attachment is currently the primary model used to examine attachment within adults. For the purposes of the present proposal, the most pertinent attachment style to focus upon is the "preoccupied" attachment style, as discussed below. This attachment style is related to high reactivity and low self-esteem. Intimacy anger, a milder more constructive form of aggression, represents the possible utility of such aggressive responses in maintaining the relationship. These concepts will be further expounded upon in later sections.

Hostile Attribution Bias

The hostile attribution bias is a phenomenon that, much like attachment, is primarily looked at within children. Hostile attribution bias is a tendency towards making hostile attributions of intent during ambiguous situations and consequently, reacting aggressively against the perpetrating individual (such as someone accidentally bumping into them and reacting angrily). This phenomenon is commonly seen in chronically aggressive children. They tend to more frequently interpret ambiguous behavior as aggressive (Orobio de Castro et al, 2002).

Dodge (1980) demonstrated this skewed tendency toward aggressive attributions

in boys in an early study that asked children to interpret the intent of a peer's behavior that resulted in a negative, undesirable outcome for them. The intent of the peer was portrayed as clearly hostile, clearly benign or ambiguous. The aggressive boys interpreted more hostility within the ambiguous conditions. Furthermore, in another study by Dodge, aggressive boys made more aggressive attributions as well, but did so while discounting relevant information that suggested more benign intent in their judgments (Dodge & Frame, 1982). Thus, it seems that some sort of selective process influences the way the aggressive children interpret the incoming social information.

One theory posited by Huesmann's (1988) cognitive-behavioral information processing model assumes that aggressive responses are caused by judgments that are influenced by ineffective online cognitions of social cues. The idea is that children develop cognitive "scripts" for behaving in various situations throughout their childhood. These scripts allow them to engage successfully in interaction and guide their subsequent behaviors in future situations. The rehearsal of these scripts creates a normative, automatic response to similar situations. Within aggressive children, an aggressive response develops as a proper script for dealing with ambiguous behaviors. They are predisposed to search for highly salient cues that coincide with their belief that the world is hostile and that they must react aggressively in response. Thus, they tend to ignore any benign explanations and immediately adopt a hostile attribution. This reaction is especially frequent when the provocation has a particularly ambiguous intent (Epps & Kendall, 1995).

Dodge (1986) provides a stepwise explanation for aggressive children's

information processing. He posits in his social information processing theory that children: 1) decode and perceive environmental cues, 2) develop expectations for certain behaviors based on their attributions, 3) search for proper responses to the behavior, 4) determine the appropriateness of the response, and 5) execute the response. Any distortions or deficiencies within these steps would lead to inappropriate behavioral responses such as aggression. Thus, the selective recall of the benign explanations is a distortion in step 1. The aggression "scripts" posited by Huesmann are a distortion in steps 2 to 4. These errors results in the aggressive reaction in chronically aggressive children (Dodge, 1986).

It is important to note that the aggressive reaction to perceived hostility results in rejection for aggressive children. Aggressive children seem to make these attributions rapidly, a factor most likely conditioned through constant rehearsal of a flawed script. The speed by which they make their attributions may in fact contribute to the error in their interpretations. Dodge and Newman (1981) found that aggressive children who make hostile attribution errors responded more rapidly than their peers in doing so. However, if they were made to take time to consider the information more carefully, they made less hostile attributions. This result is compatible with the idea that hostile attribution bias is caused by utilizing more heuristic methods such as scripts in inferring the intent of ambiguous behavior. Given more time to consider the available information, more benign explanations are appropriately considered (Dodge & Newman, 1981).

An apparent and integral connection between hostile attribution bias and

aggression can be drawn based upon the current literature. Hostile attribution bias is involved in both the perception of aggression and the perpetration of aggression (Van Oostrum & Horvath, 1997). In order to properly understand this connection, the distinction in type of aggression being utilized must be considered as well. Dodge and Crick (1996) proposed that two forms of aggression are utilized based upon the social information-processing mechanism that is used. According to the results of their study, positive expectations of rewards from aggression predicted proactive aggression, in which aggression is used for instrumental reasons. Hostile attribution bias predicted reactive aggressive. Reactive aggression is an angry, retaliatory response meant as a defense against a provocation. The use of reactive aggression in children usually results in a reciprocal hostility cycle by which perceived hostility is reacted with hostility which in turns causes a counter-reaction of hostility back to them. The reactive aggression inadvertently causes a self-fulfilling prophecy (Dodge & Crick, 1996). This behavior usually leads to the rejection of aggressive children (Dodge & Crick, 1996).

Hostile Attribution Bias in Adults

Despite the abundance of studies performed on hostile attribution bias in aggressive children, the literature becomes incredibly sparse when extending the phenomenon to adults. Epps and Kendall (1995) provided some evidence for hostile attribution bias with relation to anger and aggression in adults. They found that aggressive adults showed higher attributions of hostility in ambiguous situations. They also found that the angrier the adult was the more likely the adult was to make hostile attributions, even in non-ambiguous conditions (clearly hostile). It would seem that the

perception of hostility and resulting anger in adults may be a self-perpetuating process, where the perception of hostility ignites the anger which consequently increases the perception of hostility (Epps & Kendall, 1995). Although this study provides interesting insight into the role of anger in hostile attribution bias in adults, there is very little corroborating evidence in the field.

In another rare line of evidence that looks into the criminal population, hostile attribution bias was found to be associated with reactive aggression (Walters, 2007). This study provides further groundwork for making the claim that hostile attribution bias that is found in children manifests itself in some familiar forms in adulthood. However, the processes and mechanisms that influence the development of the phenomenon into adulthood are not well understood at this point.

It is important to note that the presence of reactive aggression in children has been observed, at least tentatively, in adults. Based upon this information and various others provided in these last two sections, an argument connecting adult attachment and hostile attribution bias will be made in the subsequent sections.

Attachment Styles and Aggression

Unlike hostile attribution bias, attachment styles are not inherently tied to aggression and hostility. However, many studies have shown how insecure attachment styles are related to the engagement in aggression (Dutton et al., 1994). Holtzworth-Munroe et al. (1997), for instance, found that aggressive partners were much more likely to be preoccupied in their attachment versus secure attachments in non-aggressive counterparts. Bookwala and Zdanuik (1998) also found that individuals engaging in

reciprocal aggression in long terms relationships scored higher on preoccupied and fearful-dismissive attachment styles. Aggression is more commonly seen in preoccupied individuals than dismissive individuals because aggressive behaviors are often a reaction caused by jealousy. Dismissive individuals may also engage in aggressive behaviors to a lesser degree, but often the impetus for their aggression is due to the fear of vulnerability that occurs with closeness (Holtzworth-Munroe et al., 1997).

People with a more preoccupied attachment style have been known to display reactive aggression and anger (Dodge & Crick, 1996). This behavior, as observed in adults, can be seen as similar to the protest behaviors that children exhibit when separated from their caregiver. When the current state of their relationship feels threatened by separation, more preoccupied individuals react aggressively in protest as they have little trust in the availability of a reliable attachment figure (Mayseless, 1991). Thus, they exhibit protesting or jealous attachment behavior in order to maintain the relationship (Sharpsteen & Kirkpatrick, 1997). In ordinary circumstances, the usage of protests and intimacy anger in adults can help maintain the relationship. However, when these behaviors become exaggerated and inappropriate violence may result (Mayseless, 1991).

Furthermore, the preoccupied attachment style has also been associated with expression of anger and lack of anger control, which helps corroborate the idea that intimate partner violence is likely a result of over-reactive anger and aggression within these preoccupied individuals (Mikulincer, 1998). It is also well documented within the inter-partner violence literature that most instances of violence occur during episodes of anger which is more reflective of the preoccupied attachment style than dismissive styles

(Dutton et al, 1994).

Connecting Adult Attachment to Hostile Attribution Bias

Adult attachment and hostile attribution bias have both been associated with aggression. Evidence suggests that, with relation to attachment styles, physical aggression is used as an ineffectual means to maintain proximity to attachment partners in insecurely attached persons (Mayseless, 1991). They experience intense jealousy and anger, which are precursors of reactive aggression that may escalate to inter-partner violence (Sharpsteen & Kirkpatrick, 1997; Mikulincer, 1998).

A previously mentioned study describes how hostile attribution biases were prevalent in reactively aggressive criminal populations (Walters, 2007). This study is highly indicative of how hostile attributions can be linked to aggressive behaviors. Epps and Kendall (1995) also made the association between how the frequency of hostile attributions was related to the intensity of anger experienced. Well rehearsed aggression scripts make chronically reactive individuals predisposed towards detecting hostile cues rather than benign ones, increasing the likelihood of aggressive reactions and increased anger at a perceived unmitigated provocation (Epps & Kendall, 1995).

Thus, the uniting factor for both these phenomena may be the distinctive reactive aggression and anger associated with both. It is through aggressive tendencies that we may hypothesize a connection between the two concepts. However, it would not be as intuitive as we would believe to draw a direct connection between insecure attachment styles, hostile attribution bias and aggression. Not all preoccupied individuals exhibit overt aggression; Sharpsteen and Kirkpatrick (1997) have shown that dependent

preoccupied individuals are actually less likely to overtly display their anger despite feeling intensely angry. Therefore, it may be more appropriate to assume that while a preoccupied attachment style may predispose individuals to highly reactive and aggressive responses, it does not by itself predict such outcomes. Perhaps the presence of a skewed social information-processing mechanism, such as hostile attribution bias, moderates the level of aggression that a preoccupied individual exhibits as an over exaggerated reaction to perceived hostility.

Furthermore, hostile attribution bias may be more greatly associated with preoccupied attachment more so than with avoidant attachment. Given that preoccupied individuals are hyper-vigilante in perceiving threat to their attachment system, a hostile attribution bias may incline them to perceive any behavior that seemingly threatens the attachment relationship as hostile. Thus, the individual's propensity towards reactive aggression may be exacerbated by the presence of a skewed social information process and associated aggression scripts that may cause them to react more extremely than they would otherwise. Aggression that results from dismissive attachment, however, is often caused by a reaction to closeness that creates vulnerability in the dismissive individual. Therefore, the utility of aggression in those attachments are qualitatively different from preoccupied attachments and may not be well explained by hostile attribution bias.

Therefore, I first hypothesize that more preoccupied individuals (those high in anxiety and low in avoidance) will exhibit higher levels of aggression than all other attachment types. Second, I hypothesize that this effect will be moderated by the level of hostile attribution bias.

CHAPTER III

METHODS

Participants

A power analysis indicated that the study required at least 118 individuals to obtain appropriate power. A college sample of 213 students from introductory psychology courses were used in this study. Due to an error in the first few sessions of the study, a demographics sheet was not included for roughly half the participants involved. However, demographic data were collected for the remaining 104 participants in the remaining sessions. From the available data, there were 34 males and 70 females involved in the study with 58.7% of the participants being Caucasian (the remaining primarily being African Americans and a very small percentage of other minorities). The average age of the participants was 19.4 years old. Over half of the participants (~54%) were currently involved in some type of dating or more serious relationship. The male-female ratio and other demographic data from this sample seemed congruent with currently known demographic data on the UNCG population, thus, there did not seem to be any apparent sampling concerns for this study.

Design and Measures

The participants were given a battery of measures to be completed in an hour long session. The majority of the measures utilized are widely considered to be reliable standards for measuring their respective constructs within the literature. Due to a lack of

research into adult hostile attribution bias, it was measured by specifically constructed vignettes that dealt with intimate partner situations following a procedure pioneered by Epps and Kendall (1995). The measures were distributed in counter-balanced order.

Measure for attachment: Experiences in Close Relationships-Revised (Fraley et al., 2000) was used to measure adult attachment styles. This 36-item scale measures individual attachment styles along dimensions of anxiety and avoidance and has been shown to have consistently high reliability (α= .94 to .95; α= .93 for this study). Although these dimensions can be used to create four categorical styles, a more dimensional approach to attachment styles was used to give a better picture of any subtle nuances that broad categories may overlook.

Measure for hostile attribution bias: A total of nine relationship-themed vignettes were used to measure hostile attribution bias. These vignettes were constructed using Epps and Kendall's procedure outlined in their seminal study (Epps & Kendall, 1995). For each vignette, participants were exposed to a preliminary core section that provided a hypothetical interaction between two partners. One of the partners engages in an ambiguous behavior that would be displeasing to the other partner. The participants were asked to assume the perspective of the displeased partner and to report their feelings accordingly. After the participants reported their initial level of anger experienced, they were then exposed to four valence statements that influenced their causal attribution of the partner's behavior. The valence statements offered additional information to the core section that indicated either a benign intent or a hostile intent by the perpetrating partner.

By varying the number of benign and hostile valence statements, three types of

conditions were constructed.   A Benign condition (three benign valence statements and one hostile statement) should elicit more benign attributions. A Hostile condition (three hostile valence statements and one benign) should elicit more hostile attributions while the Ambiguous condition (two benign valence statements and two hostile valence statements) should elicit either attribution with equal frequency. Overall, three of each type of condition was created. After the participants read the valence statements, they rated their reactions on a scale of 1-9 on anger, hostility and intentionality of the initiating partner's hypothetical behavior. While Epps and Kendall's procedure provided a self report of anger, hostility, and intention, we only focused upon the perception of hostility item for each vignette as a simple operational definition of hostile attribution.

The vignettes were piloted initially with a small group of participants ($N = 28$) and received moderate reliability between all the items ($\alpha = .77$). The mean score of the Hostile vignettes was 4.49 while the mean score of the Benign vignettes was 2.20. The Ambiguous condition had a mean score of 3.14 which was expected to be between the Hostile and Benign scores. The overall average hostility score for all vignette types was 3.31. To determine whether the three vignette conditions were significantly different from each other, three paired sample t-tests were run between their respective average scores. The Hostile condition and Benign condition were found to be significantly different from each other ($p < .000$). The Ambiguous condition was significantly different from both the Hostile and Benign conditions (mean difference= -1.34 with $p = .001$ and mean difference= .86 with $p = .005$, respectively). Descriptive statistics for the piloting study is presented in Table 1.

Epps and Kendall (1995) provided evidence that hostility perception would generally be consistent across all vignette types. Those who engage in higher levels of hostile attribution bias generally show higher levels across all conditions. Therefore, we looked at an overall average of all hostility items across all conditions as our hostile attribution variable. The individual conditions were also looked at individually in separate analyses. Due to the sheer volume of analyses ran, only the results for the overall hostile attribution variable were reported entirely. The individual conditions were reported only if there were significant outcomes. The overall reliability of hostility was higher when all the hostile scores were averaged into one overall score, while individually, the items ranged from low to moderate reliability ($\alpha= .79$; ranged from $\alpha= .59$ to $.71$ when vignette types were looked at individually).

Measure for aggression: The Buss Perry Aggression Questionnaire (BPAQ) was used as a general measure of aggression. The BPAQ contains 29 questions with four subscales measuring physical aggression, verbal aggression, hostility, and anger. For the purpose of this study, we focused primarily on the physical and verbal aggression subscales (Buss & Perry, 1992). The reliability of the BPAQ for this particular study was reasonably high ($\alpha= .91$)

Secondary Measures

Child abuse questions: This measure provides information on physical child abuse (Koss et al, 1987). Two items rank frequency of witnessing or experiencing physical blows within the family. It was included as an additional demographic variable for any possible exploratory analyses. The reliability of this scale is low due its small

number of items.

CHAPTER IV

RESULTS

Descriptive Statistics

Descriptive statistics were run for all variables used in the study. The means and standard deviations for the major variables are presented in Table 2. The means for physical aggression in our sample was higher than known norms for men and women (men norm M= 24.30 versus M= 30.90; women norm M= 17.90 versus M= 26.60, for this sample). The attachment items, Anxiety and Avoidance, had means that were similar to known norms (M = 3.54 and M= 2.93, respectively). Hostile attribution bias means (across all vignettes) yielded higher scores across all conditions when compared with the piloting data in Table 1.

Zero-order correlations were performed between all major variables. There were many significant correlations between the variables. All hostile attribution variables were correlated with each other. Overall hostile attribution average was significantly correlated with both types of aggression variables. The overall hostile attribution bias average was also significantly correlated with anxiety, ethnicity, and physical child abuse. The attachment variables of anxiety and avoidance were significantly correlated as expected. Both aggression variables are also significantly correlated with each other. Of the demographic variables, sex was only significantly correlated with physical aggression while relationship status was significantly correlated with both attachment variables.

The child abuse variable was significantly correlated with overall hostile attribution and physical aggression. The correlations between the major variables are presented in Table 3.

Moderation

Since demographic data were available for only half the participants, we first performed a linear regression with all major variables while excluding demographics to test for moderation with the larger available sample size. Following Baron and Kenny's (1986) procedure outlined for moderation with two continuous variables in their influential article, the data were centered by subtracting the mean values of each major variable from every instance of the independent variables. Interaction terms were then created from the centered data between anxiety and avoidance, anxiety and hostile attribution, and avoidance and hostile attribution. A standard linear regression was run from these terms using physical or verbal aggression as the dependent variable in order to test both hypotheses of the study.

The overall regression model came out significant (R^2=.13, F= 5.17, df= 6 and p < .00) for the physical aggression. According to the first hypothesis, high attachment anxiety scores and low attachment avoidance scores should be associated with a significantly higher aggression score. For physical aggression, anxiety had significant positive relation to physical aggression, but avoidance was not related. However, the interaction term between avoidance and hostile attribution was significantly related with physical aggression. Overall hostile attribution came out significantly related to physical aggression (Beta= .06, p< .01). Similar results were found with the individual hostile

attribution conditions as well, with $p < .01$ for all conditions.

With verbal aggression, the model came out significant as well ($R^2 = .09$ and $p < .01$). Attachment anxiety had a significant positive relation to verbal aggression (Beta= .15, p= .04) while, attachment avoidance had a significant negative relation to verbal aggression (Beta= -.16, p= .03). Their interaction, however, was not significant. Overall hostile attribution also came out significant for verbal aggression as well (Beta= .18, p= .01), but only for the benign condition was a similar pattern of results found with a Beta=.18 and a p< .01. The regression analysis is presented in Table 4.

Given the lack of any significant result for the interaction term between anxiety and avoidance, the first hypothesis was not supported. High levels of anxiety in conjunction with low levels of avoidance were not significantly related to aggression in this sample. The second hypothesis posited that any effect between preoccupied (high anxiety and low avoidant) attachment and aggression would be moderated by hostile attribution bias. Given that there was no significant relation between preoccupied attachment and aggression in this study, the second hypothesis was not supported by the data.

Following these results, a stepwise regression was used to control for any demographic effects that may have influenced the results. Demographic data were available for 104 participants which comprised less than half the total participants ran. Given the disproportionately large Caucasian representation and the marginal minority representation in the sample, the ethnicity variable was dichotomized into Caucasian and Other to allow a large enough minority sample size to be meaningfully interpreted.

Relationship status was also dichotomized into Single or Dating/Engaged/Married. A dichotomized physical child abuse variable was included as a grouping variable as well. The demographic variables (sex, dichotomized ethnicity, dichotomized relationship status and dichotomized physical child abuse) were entered in the first step of the stepwise regression. The rest of the centered independent variables (attachment anxiety, attachment avoidance, hostile attribution bias, and their interactions) were entered into the next step.

When physical aggression was the dependent variable, the demographic variables in the first step of the model were significant (R^2= .14, p < .01). Dichotomized ethnicity showed a significant positive relation with physical aggression in the model indicating that minorities engaged in significantly more physical aggression than their Caucasian counterparts (Minorities = 31.38 and Caucasian = 25.75; Beta= .29, p< .01). There was a significant negative relation with physical aggression for sex, which indicated that males reported significantly more physical aggression than females in this sample (Males = 30.97 and Females = 26.60; p= .02). Physical abuse and relationship status were not significant in the first step.

In the second step of the regression, all other major independent variables were included. The second model came out significant with more variance accounted explained (R^2=.29, p< .01). Sex and ethnicity were still significant (p = .02 for both). Physical abuse also came out significant (p= .01). Hostile attribution came out significant (for individual conditions, only benign came out significant with p< .01), but all other variables did not. The stepwise regression with physical aggression as a

dependent variable is presented in Table 5.

When verbal aggression was the dependent variable, the demographic variables in the first step approached significance, but did not come out significant for the model (R^2= .09, p = .06). Similarly to physical aggression, males seemed to engage in more verbal aggression than females (Males = 20.58 and Female = 17.54; p = .03). In the second step of the regression model, the inclusion of the other independent variables did not produce an overall significance for the model at p = .05. However, sex was still significantly related to verbal aggression (p = .03). It is also notable that overall hostile attribution approached significance at p= .057, but did not meet the threshold. When the hostile, benign, and ambiguous vignettes were looked at separately, hostile attribution only came out significant under the benign condition for physical aggression (p= .04). The stepwise regression for verbal aggression is presented in Table 6.

Stepwise regression analyses were also run separately for men and women, for physical and verbal aggression in order to parse out any sex differences between. For men, the overall model did not come out significant in either step for physical aggression, however, dichotomized ethnicity did come out significant in both steps (Beta = .47, p= .02). This result suggests that male minorities in this sample engaged in higher physical aggression. For women, the overall model did not come out significant in either step for physical aggression, however, dichotomized ethnicity did come out significant in the first step (Beta= .26, p= .05). This result further suggests that there may be higher aggression in minorities. In the second step, hostile attribution also came out significant (Beta= .29, p= .03). The stepwise regressions for physical aggression for men and women are

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presented in Tables 7 and 8, respectively.

For men, the overall model did not come out significant in either step for verbal aggression. However, physical abuse came out significant for verbal aggression in the second step of the model (Beta= .38, p= .05). For women, the overall model did not come out significant in the first step with other demographics variables for verbal aggression. In both steps of the model, dichotomized relationship status came out significant (Beta= .27, p= .05). This result suggests that women in relationships engage in more verbal aggression than single women. In the second step, significantly more variance was explained by the inclusion of the other major variables into the model (R^2= .28, p= .02). Hostile attribution bias came out significant in the second step for verbal aggression (Beta= .35, p<.01). The stepwise regressions for verbal aggression for men and women are presented in Tables 9 and 10, respectively.

CHAPTER V

GENERAL DISCUSSION

The data analyses revealed interesting relations between the variables analyzed. While a robust argument for a moderation relation between the hostile attribution bias, attachment style and aggression concepts cannot be made, there are still informative connections that can be drawn.

In terms of demographics, the data seem to support the current literature. There are significant associations between sex and levels of aggression. Males seem to engage in both forms of aggression more than females. Ethnicity also seems to be associated with the physical form of aggression. Minorities seem to engage in higher levels of physical aggression than Caucasian counterparts. Childhood physical abuse was significantly correlated with physical aggression and hostile attribution bias although it was not found to be significant in the regression analyses. These findings are generally consistent with the current literature on aggression in relationships.

For hostile attribution bias in adults, the data draw an important connection between the key constructs. Physical aggression and verbal aggression were both associated with hostile attribution bias, which provides evidence for the theoretical involvement of aggression and hostile attribution bias in descriptions of adult intimate partner relationships. While aggression and hostile attribution bias have a well established connection in the literature, few studies have provided a clear connection

between them within the intimate partner context. By drawing this connection, a basic foundation for hostile attribution in the intimate partner literature may be established and built upon.

Furthermore, the data provide a compelling argument for the use of Epps and Kendall's vignette paradigm for hostile attribution bias (Epps & Kendall, 1995). Once piloted and established to be reasonably reliable in their measure of hostile attributions, their procedure did exhibit a significant relation between both types of aggression and hostile attribution bias. By molding the vignettes into more intimate partner contexts, the malleability of Epps and Kendall's procedure was displayed and offers support for their instrument to measure hostile attribution in different areas of the literature. The study showed that Epps and Kendall's procedure could be applied to more intimately themed scenarios as opposed to just general social situations.

According to the data, anxiety and hostile attribution were also significantly related. This result is important because it establishes a connection between attachment and hostile attribution bias. These two constructs have generally not been explicitly associated in the literature. Therefore, this line of evidence does provide some support for the idea that attachment style and hostile biases influence aggressive outcomes to some degree.

The evidence for an association between attachment styles and aggression was not incredibly robust. Attachment anxiety seemed to have a significant positive relation with both physical and verbal aggression. However, attachment avoidance was only significantly negatively associated with verbal aggression. The interaction between

anxiety and avoidance was not significantly related to either form of aggression. Given

that attachment as a whole is observed along both dimensions, it becomes much harder to

make any generalizations based upon significant results along one dimension. But, the

significant relation between anxiety, hostile attribution and aggression, at least tenuously,

supports the idea that hostile attribution and aggression have a stronger link to the anxiety

dimension of attachment than the avoidance dimension. A majority of the intimate

partner violence research does implicate reactive-type aggression to be more commonly

observed in the perpetrating individuals

The primary hypotheses were not supported by the data. These weak results were

surprising given the breadth of studies that have linked attachment styles to aggression.

A significant relation between attachment and aggression has been hypothesized and

supported by multiple studies to date (Dutton et al., 1994; Holtzworth-Munroe et al.,

1997; Mikulincer, 1998). Therefore, the lack of significant results may possibly be

attributed to the limitations of the measures used. However, given that the ECR-R is the

de facto standard measure for attachment in adults in the literature, the type of aggression

measured may have affected the results more greatly than the limitations of the adult

attachment measure. The BPAQ is a general aggression measure that is not specific to

adult intimate relationships and due to the mismatch in the level of specificity, the overall

results may have been affected.

The results may also be explained by a lack of consideration of typologies of

aggressors in relationships. In the intimate partner violence literature, there has been

some evidence to suggest that there are distinct differences between males who are

generally aggressive and males who only aggress towards their partners (Holtzworth-Munroe et al., 2000). Some males display general aggression to others, but are not aggressive to their partners. Some males aggress towards everyone while others only aggress towards their partners. This distinction in typology of aggressors is important as it pertains to the need for specific measures to differentiate between intimate partner aggression and general aggression. This theoretical consideration again reinforces the need for a more specific measure (possibly multiple measures) in order to parse the subtle differences out.

A final alternative explanation may also include the possibility of sample population effects. While much intimate partner research is conducted on a college population, aggression studies in adult samples have generally implicated perpetration by males. Therefore, the higher proportion of women in this college sample may have led to more skewed results. When looking at sex differences in this study, the regression models for men did not come out significant for either physical or verbal aggression. This result seems counter to what the literature to indicates. For women, however, hostile attribution came out significant for at least verbal aggression (Beta= .35, p<.01). Given the low number of male participants in the study (N= 34), it does seem reasonable that more significant relationships could be parsed from the higher female sample (N= 70). Therefore, while there seems to be some sort of difference between men and women in this study, the disproportionately low male numbers may hinder any meaningful interpretation of these results. However, by examining the results of the separate regressions, we can tentatively assume that minority status may affect men's level of

physical and verbal aggression. This result is fairly congruent with current the current

literature on intimate partner violence. Women also appear to engage in more verbal

aggression when in a relationship, which can be attributed to typical conflicts that may

occur in relationships.

CHAPTER VI

LIMITATIONS AND FUTURE CONSIDERATIONS

There has been significant evidence for a relation between attachment styles and aggression within the literature. However, much of the evidence centers on reactive aggression in males and resulting intimate partner violence. Given such tendencies, aggression for this study may have be bettered measured by behavioral outcomes and frequency data (such as the Conflict Tactics Scale) than through the subjective endorsements used by the BPAQ. Utilizing multiple operational definitions of aggression may have yielded a better holistic view of aggression. Also, by limiting the participant pool to men, a stronger association may be found between attachment and aggression.

Another consideration may be that reactive aggression is typically expressed in conjunction with anger and analyses looking into the anger items of this study's measures might be worth investigating. However, due to the broad goals of this study, we did not directly analyze anger due to its qualitative difference from aggression.

In consideration of future studies, the inherent strengths and faults of this study should help guide any future foray into this topic of research. First, adult hostile attribution bias may be measured reliably in intimate partner contexts by Epps and Kendall's procedure. While the support for their procedure is far from conclusive in establishing any standard for hostile attribution bias in adults, it does provide enough support to be a worthwhile starting point for any future investigation into this same area

of interest. Second, multiple measures of the same construct would be beneficial in parsing out the differences between variations in levels of specificity and between qualitative differences between different types of the same broad construct.

In conclusion, while the results of this study did not provide a compelling argument for integrating adult attachment, hostile attribution bias and aggression into a viable model, the driving theory does warrant a more focused look at these constructs with more appropriate measures. Despite the broad scope of this study, it was intended to provide a basic theory that may help explain mechanisms that would be involved in intimate partner violence.

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Appendix A: Tables

Table 1
Piloting Descriptive Statistics

	N	Mean	Std.	Skewness	Kurtosis
Ambiguous 1	28	3.29	2.23	.87	.05
Ambiguous 2	28	2.39	2.22	1.94	3.18
Ambiguous 3	28	3.75	2.35	.63	-.56
Hostile 1	28	4.6	2.45	.15	-.74
Hostile 2	28	4.21	2.51	.26	-1.23
Hostile 3	28	4.64	2.54	.18	-1.48
Benign 1	28	2.00	2.22	2.64	6.17
Benign 2	28	2.07	1.48	1.54	1.25
Benign 3	28	2.78	2.51	1.60	1.48
Amb. Avg	28	3.14	1.29	.42	-.99
Host. Avg	28	4.48	1.53	-.19	-.17
Ben. Avg	28	2.20	1.36	1.45	1.44
HAB[1] Overall	28	3.31	.96	1.3	.01

[1]Hostile Attribution Bias is labeled as HAB

Table 2
Means and Standard Deviations for Major Variables

Variables	Means (N=213)	Std. Dev.	Means (Men) N =34	Std. Dev.	Means (Women) N = 70	Std. Dev.	Skewness	Kurtosis
Physical Aggression	28.95	11.39	30.97	10.20	26.60	10.22	.38	-.52
Verbal Aggression	18.37	6.71	20.58	5.22	17.54	7.63	.29	-.47
Anxiety*	3.23	1.27	2.96	1.27	3.01	1.19	.24	-.89
Avoidance*	2.98	1.13	2.79	.90	2.98	1.34	.56	-.33
Overall HAB[1] Average**	3.86	1.42	3.64	1.33	3.81	1.48	.33	-.24
Hostile HAB[1]	4.80	1.84	4.76	1.88	4.54	1.93	.02	-.55
Benign HAB[1]	2.77	1.59	2.55	1.53	2.81	1.64	1.00	.30
Ambiguous HAB[1]	4.01	1.76	3.61	1.67	4.05	1.79	.31	-.49
Child Abuse***	.33	.47	.26	.44	.30	.46	.71	-1.5
Dichotomized Rel. Status***	.54	.50	.50	.50	.55	.50	-.16	-2.01
Dichotomized Ethnicity***	.41	.49	.32	.47	.46	.50	.36	-1.91

*On a 1-7 scale
**On a 1-9 scale
***Dichotomized on 0-1 scale
[1]Hostile Attribution Bias is labeled as HAB

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Table 3
Correlations Between Major Variables

	HAB Overall	HAB Amb.	HAB Host.	HAB Ben.	Anxiety	Avoidance	Phyiscal Aggr.	Verbal Aggr.	Sex	Eth	Child Abuse	Rel. Status
HAB[1] overall	1	-	-	-	-	-	-	-	-	-	-	-
HAB[1] Amb.	.87**	1	-	-	-	-	-	-	-	-	-	-
HAB[1] Host.	.81**	.57**	1	-	-	-	-	-	-	-	-	-
HAB[1] Ben.	.77**	.58**	.39**	1	-	-	-	-	-	-	-	-
Anxiety	.15*	.14*	.22**	-.01	1	-	-	-	-	-	-	-
Avoidance	.09	.02	.15*	.04	.36**	1	-	-	-	-	-	-
Physical Aggression	.29**	.23**	.26**	.23**	.19**	.04	1	-	-	-	-	-
Verbal Aggression	.20**	.19**	.12	.19**	.12	-.10	.38**	1	-	-	-	-
Sex	.06	.12	-.06	.07	.02	.08	-.2*	-.20	1	-	-	-
Ethnicity	.29**	.18	.29**	.24*	-.03	.17	.27**	.02	.13	1	-	-
Child Abuse	.28**	.23**	.22**	.24**	.10	.08	.25**	.08	.04	.15	1	-
Rel. Status	-.071	-.01	-.09	-.05	-.33**	-.36**	.01	.17	.05	-.20*	.07	1

*Significant at 0.05 level (2-tailed)
**Significant at 0.01 level (2-tailed)
[1]Hostile Attribution Bias is labeled as HAB

Table 4
Regression with Non-demographic Variables

Model	R-square	Variables	Unstandardized Coefficients		Std. Coeff.	t	Sig.
			B	Std. Error	Beta		
Physical Aggression	.13	Anxiety	1.47	.63	.17	2.35	.02
		Avoidance	-.31	.70	-.03	-.44	.66
		Anxiety-Avoidance Interaction	.32	.51	.04	.62	.53
		HAB[1]	1.99	.54	.25	3.71	.00
		Anxiety-HAB[1] Interaction	.39	.46	.06	.84	.40
		Avoidance-HAB[1] Interaction	-1.29	.48	-.19	-2.71	.01
Verbal Aggression	.09	Anxiety	.78	.38	.15	2.09	.04
		Avoidance	-.89	.42	-.15	-2.12	.03
		Anxiety-Avoidance Interaction	-.39	.3	-.09	-1.3	.19
		HAB[1]	.84	.32	.18	2.6	.01
		Anx-HAB[1] Interaction	-.39	.28	-.09	-1.39	.17
		Avoid-HAB[1] Interaction	-.19	.29	-.05	-.68	.49

[1]Hostile Attribution Bias is labeled as HAB

Table 5

Stepwise Regression with Physical Aggression as Dependent Variable

Model	R-square	Variables	Unstandardized Coeff.		Std. Coeff.	t	Sig.
			B	Std. Error	Beta		
1	.14	Sex	-5.2	2.09	-.24	-2.48	.02
		Ethnicity	6.1	2.07	.29	2.95	.00
		Rel. Status	1.25	2.03	.06	.62	.54
		Child Abuse	2.31	2.19	.10	1.05	.29
2	.29	Sex	.78	.38	.15	2.09	.04
		Ethnicity	-.89	.42	-.15	-2.12	.03
		Rel. Status	-.39	.3	-.09	-1.3	.19
		Child Abuse	.84	.32	.18	2.6	.01
		HAB[1]	1.77	.73	.24	2.41	.02
		Anxiety	1.62	.88	.19	.18	.07
		Avoidance	-.38	.87	-.04	-.44	.66
		Anxiety-Avoidance Interaction	.76	.61	.12	1.24	.22
		Anxiety-HAB[1] Interaction	-.14	.59	-.02	-.24	.82
		Avoidance-HAB[1] Interaction	-.93	.54	-.17	-1.74	.09

[1]Hostile Attribution Bias is labeled as HAB

Table 6
Stepwise Regression with Verbal Aggression as Dependent Variable

Model	R-square	Variables	Unstandardized Coefficients		Std.Coeff.	t	Sig.
			B	Std. Error	Beta		
1	.09	Sex	-3.2	1.45	-.22	-2.22	.03
		Ethnicity	.67	1.43	.05	.47	.64
		Rel. Status	2.33	1.40	.17	1.67	.09
		Child Abuse	2.03	1.51	.13	1.35	.18
2	.17	Sex	-3.19	1.46	-.22	-2.2	.03
		Ethnicity	.05	1.49	.01	.03	.97
		Rel. Status	1.85	1.57	.13	1.18	.24
		Child Abuse	1.52	1.53	.10	.99	.32
		HAB[1]	1.01	.53	.21	1.93	.06
		Anxiety	.52	.64	.09	.81	.42
		Avoidance	-1.02	.63	-.18	-1.61	.11
		Anxiety-Avoidance Interaction	-.14	.45	-.03	-.32	.75
		Anxiety-HAB[1] Interaction	-.40	.43	-.09	-.92	.36
		Avoidance-HAB[1] Interaction	.06	.39	.01	.14	.89

[1]Hostile Attribution Bias is labeled as HAB

Table 7

Stepwise Regression with Physical Aggression (Men)

Model	R-Squared	Variables	Unstandardized Coefficients		Std. Coeff.	t	Sig.
			B	Std. Error	Beta		
1	.15	Ethnicity	8.15	3.67	.38	2.22	.03
		Rel. Stat.	.94	3.47	.05	.27	.79
		Child Abuse	1.06	3.97	.05	.27	.79
2	.43	Ethnicity	10.06	3.91	.47	2.57	.02
		Rel. Status	1.88	3.72	.09	.51	.62
		Child Abuse	.86	3.64	.04	.24	.82
		HAB[1]	1.18	1.39	.15	.85	.41
		Anxiety	2.21	2.12	.28	1.04	.31
		Avoidance	.54	2.75	.05	.19	.85
		Anxiety-Avoidance Interaction	1.36	1.35	.17	1.00	.32
		Anxiety-HAB[1] Interaction	-1.83	1.83	-.32	-1.00	.33
		Avoidance-HAB[1] Interaction	1.74	2.36	.22	.74	.47

[1]Hostile Attribution Bias is labeled as HAB

Table 8

Stepwise Regression with Physical Aggression (Women)

Model	R-Squared	Variables	Unstandardized Coefficients		Std. Coeff.	t	Sig.
			B	Std. Error	Beta		
1	.09	Ethnicity	5.22	2.57	.26	2.03	.05
		Rel. Stat.	1.31	2.57	.06	.51	.61
		Child Abuse	2.89	2.69	.13	1.07	.29
2	.24	Ethnicity	3.94	2.62	.19	1.50	.14
		Rel. Status	1.57	2.82	.08	.56	.58
		Child Abuse	1.67	2.75	.08	.61	.55
		HAB[1]	2.02	.92	.29	2.20	.03
		Anxiety	.92	1.12	.11	.82	.42
		Avoidance	-.55	1.00	-.07	-.55	.59
		Anxiety-Avoidance Interaction	.58	.76	.10	.77	.45
		Anxiety-HAB[1] Interaction	.09	.76	.02	.12	.90
		Avoidance-HAB[1] Interaction	-1.02	.60	-.21	-1.71	.09

[1]Hostile Attribution Bias is labeled as HAB

Table 9

Stepwise Regression with Verbal Aggression (Men)

Model	R-Squared	Variables	Unstandardized Coefficients		Stand. Coeff.	t	Sig.
			B	Std. Error	Beta		
1	.14	Ethnicity	.99	1.89	.09	.52	.60
		Rel. Stat.	-1.48	1.79	-.14	-.83	.41
		Child Abuse	4.06	2.04	.35	1.99	.06
2	.26	Ethnicity	.58	2.28	.05	.26	.80
		Rel. Status	-2.16	2.17	-.21	-.99	.33
		Child Abuse	4.41	2.13	.38	2.07	.05
		HAB[1]	-1.12	.81	-.29	-1.38	.18
		Anxiety	.33	1.24	.08	.26	.79
		Avoidance	-.72	1.61	-.13	-.45	.66
		Anxiety-Avoidance Interaction	.51	.79	.13	.65	.53
		Anxiety-HAB[1] Interaction	.95	1.07	.32	.89	.38
		Avoidance-HAB[1] Interaction	-2.00	1.38	-.49	-1.46	.16

[1]Hostile Attribution Bias is labeled as HAB

Table 10

Stepwise Regression with Verbal Aggression (Women)

Model	R-Squared	Variables	Unstandardized Coefficients		Stand. Coeff.	t	Sig.
			B	Std.Error	Beta		
1	.08	Ethnicity	.91	1.90	.06	.48	.64
		Rel. Stat.	4.15	1.90	.27	2.19	.03
		Child Abuse	1.42	1.97	.09	.72	.47
2	.28	Ethnicity	.01	1.87	.01	.01	.99
		Rel. Status	4.03	2.00	.27	2.01	.05
		Child Abuse	-.04	1.92	-.01	-.02	.98
		HAB[1]	1.80	.64	.35	2.81	.01
		Anxiety	1.07	.81	.17	1.33	.19
		Avoidance	-1.20	.72	-.21	-1.67	.10
		Anxiety-Avoidance Interaction	-.20	.54	-.05	-.37	.72
		Anxiety-HAB[1] Interaction	-.70	.54	-.16	-1.29	.20
		Avoidance-HAB[1] Interaction	.12	.43	.03	.27	.79

[1]Hostile Attribution Bias is labeled as HAB

Appendix B: Measures

Demographics
1) How old are you? ___
2) What is your gender? Male___ Female___
3) What is your ethnicity?
    __ Caucasian __Black/ African American __ Hispanic/Latino
    __Asian __Other
4) What is your current relationship status?
    __ Single
    __ Dating/Non-exclusive
    __ Dating/Exclusive
    __ Engaged
    __ Married
4) Length of current or most recent relationship?
    __ Less than one month
    __ 1 to 3 months
    __ 3 to 6 months
    __6 months to 1 year
    __ 1 to 2 years
    __ More than 2 years
5) Since fourteen years of age, how many total relationships (dating/ exclusive) have you been involved in?
    __None
    __ 1-2
    __2-3
    __3-5
    __More than 5

HAB3. Hunter and Morgan have been dating seriously for 3 months.   They seem very happy with each other. One night, Hunter tells Morgan he would call her later that evening. He doesn't call.

Imagine that you are Morgan.
On a scale of 1-9:
How angry would you be if this happened to you? (1 = not at all to 9 = extremely angry)
_____

HAB3. The following statements provide more information about the scenario:
- Hunter forgot his phone at home.
- Hunter was out partying with his friends who Morgan does not like.
- Hunter didn't think Morgan would mind.
- Hunter was upset with Morgan the night before.

Consider that ALL of this information applies to the scenario. <u>Reread</u> the scenario given the new information. On a scale of 1-9:

How angry would you be if this happened to you? (1 = not at all to 9 = extremely angry)

_____

How certain are you that the initiator's actions were intentional? (1 = completely unintentional to 9 = completely intentional)

_____

How certain are you that the initiator's actions were hostile? (1 = completely nonhostile to 9 = completely hostile)

_____

HAB1. Reagan and Tyler are on a vacation at the beach together. While preparing their boat on the pier, Tyler feels a bump from behind and falls into the water. Reagan is laughing.

Imagine that you are Tyler.
On a scale of 1-9:
How angry would you be if this happened to you? (1 = not at all to 9 = extremely angry)
_____

HAB1. The following statements provide more information about the scenario:

- Reagan has been known to be a prankster.
- Reagan was not looking where she was stepping.
- Reagan has been annoyed with Tyler on this trip.
- Reagan is a klutz.

Consider that ALL of this information applies to the scenario. <u>Reread</u> the scenario given the new information. On a scale of 1-9:
How angry would you be if this happened to you? (1 = not at all to 9 = extremely angry)
_____
How certain are you that the initiator's actions were intentional? (1 = completely unintentional to 9 = completely intentional)
_____
How certain are you that the initiator's actions were hostile? (1 = completely nonhostile to 9 = completely hostile)
_____

HAB2. Ali and Casey have been dating for over a year. Ali is cooking breakfast for Casey one morning and adds hot sauce onto the omelet. Ali knows that Casey hates hot sauce.

Imagine that you are Casey.
On a scale of 1-9:
How angry would you be if this happened to you? (1 = not at all to 9 = extremely angry)

_____

HAB2. The following statements provide more information about the scenario:

- Ali normally eats her omelets with hot sauce.
- Ali was upset with Casey last week.
- Ali was busy watching the morning news as she was cooking.
- Ali thinks Casey should stop whining about spicy foods.

Consider that ALL of this information applies to the scenario. Reread the scenario given the new information. On a scale of 1-9:

How angry would you be if this happened to you? (1 = not at all to 9 = extremely angry)

_____

How certain are you that the initiator's actions were intentional? (1 = completely unintentional to 9 = completely intentional)

_____

How certain are you that the initiator's actions were hostile? (1 = completely nonhostile to 9 = completely hostile)

_____

HAB6. Ashton and Bailey are watching their favorite television show together when they get into a heated debate. After a brief exchange between the two, Bailey's drink is spilled all over Ashton.

Imagine that you are Ashton.
On a scale of 1-9:
How angry would you be if this happened to you? (1 = not at all to 9 = extremely angry)

_____

HAB6. The following statements provide more information about the scenario:
- Bailey did not like the tone of Ashton's voice.
- Bailey is usually pretty bad about spilling drinks.
- Bailey thought Ashton was being unreasonable.
- Bailey hates it when Ashton doesn't listen.

Consider that ALL of this information applies to the scenario. <u>Reread</u> the scenario given the new information. On a scale of 1-9:

How angry would you be if this happened to you? (1 = not at all to 9 = extremely angry)

_____

How certain are you that the initiator's actions were intentional? (1 = completely unintentional to 9 = completely intentional)

_____

How certain are you that the initiator's actions were hostile? (1 = completely nonhostile to 9 = completely hostile)

_____

HAB4. Alex and Cameron are eating at their favorite restaurant together on their one year anniversary.   The evening is going well until Cameron makes an off-handed comment about Alex's mother. Alex leaves to go to the restroom, but when he returns he tells Cameron that he has to go and quickly leaves.

Imagine that you are Cameron.
On a scale of 1-9:
How angry would you be if this happened to you? (1 = not at all to 9 = extremely angry)
_____

HAB4. The following statements provide more information about the scenario:
- Alex does not like what Cameron thinks of his mother.

- Alex thinks Cameron can be bratty.

- Alex got a call from a friend who needed help.

- Alex wanted Cameron to be upset.

Consider that ALL of this information applies to the scenario. Reread the scenario given the new information. On a scale of 1-9:
How angry would you be if this happened to you? (1 = not at all to 9 = extremely angry)
_____

How certain are you that the initiator's actions were intentional? (1 = completely unintentional to 9 = completely intentional)
_____

How certain are you that the initiator's actions were hostile? (1 = completely nonhostile to 9 = completely hostile)
_____

HAB5. Ashley and A.J. have been dating for about 3 months. Due to a recent winter storm, they are home playing in the snow together outside. Ashley builds an elaborate snowman as A.J. is sledding. Ashley tells A.J. to be careful not to hit the snowman. Suddenly, Ashley's snowman is destroyed as A.J. sleds straight into it.

Imagine that you are Ashley.
On a scale of 1-9:
How angry would you be if this happened to you? (1 = not at all to 9 = extremely angry)
_____

HAB5. The following statements provide more information about the scenario:

- A.J. is not very good at sledding.
- A.J. thinks making snowmen are stupid.
- A.J. likes teasing Ashley.
- A.J. thought the snowman was ugly.

Consider that ALL of this information applies to the scenario. <u>Reread</u> the scenario given the new information. On a scale of 1-9:
How angry would you be if this happened to you? (1 = not at all to 9 = extremely angry)
_____

How certain are you that the initiator's actions were intentional? (1 = completely unintentional to 9 = completely intentional)
_____

How certain are you that the initiator's actions were hostile? (1 = completely nonhostile to 9 = completely hostile)
_____

HAB9. Eli and Chase have been dating steady for over 3 months. They are getting ready to leave to a club when Chase shuts the door hitting Eli in the face.

> **Imagine that you are Eli.**
> **On a scale of 1-9:**
> How angry would you be if this happened to you? (1 = not at all to 9 = extremely angry)
>
> _____

HAB9. The following statements provide more information about the scenario:

- Chase was annoyed with how long it was taking Eli to prepare.

- Chase was not paying attention to door when he stepped out.

- Chase did not realize how gusty it was outside.

- Chase got distracted by a phone call just as he stepped out.

> **Consider that ALL of this information applies to the scenario. <u>Reread</u> the scenario given the new information. On a scale of 1-9:**
> How angry would you be if this happened to you? (1 = not at all to 9 = extremely angry)
>
> _____
>
> How certain are you that the initiator's actions were intentional? (1 = completely unintentional to 9 = completely intentional)
>
> _____
>
> How certain are you that the initiator's actions were hostile? (1 = completely nonhostile to 9 = completely hostile)
>
> _____

HAB7. Drew and Reese are chatting online through instant messaging. During their conversation Reese sends Drew a link that leads to a particularly offensive pornographic website.

Imagine that you are Drew.
On a scale of 1-9:
How angry would you be if this happened to you? (1 = not at all to 9 = extremely angry)
_____

HAB7. The following statements provide more information about the scenario:
- Reese had recently gotten a virus that sent things through his instant messenger.
- Reese frequently plays jokes on Drew online.
- Reese was not paying attention to what was being sent to Drew.
- Reese was trying to link Drew to a new music site.

Consider that ALL of this information applies to the scenario. <u>Reread</u> the scenario given the new information. On a scale of 1-9:
How angry would you be if this happened to you? (1 = not at all to 9 = extremely angry)
_____

How certain are you that the initiator's actions were intentional? (1 = completely unintentional to 9 = completely intentional)
_____

How certain are you that the initiator's actions were hostile? (1 = completely nonhostile to 9 = completely hostile)
_____

HAB8. Riley and Taylor have been dating for over a year. They are walking on campus together near the fountain when Riley trips over Taylor's foot and falls in the water.

> **Imagine that you are Riley.**
> **On a scale of 1-9:**
> How angry would you be if this happened to you? (1 = not at all to 9 = extremely angry)
>
> _____

HAB8. The following statements provide more information about the scenario:

- Taylor was text messaging on his phone as he was walking.

- Taylor has really big feet.

- Taylor was trying to avoid a person coming from the opposite direction.

- Taylor has tripped Riley before.

> **Consider that ALL of this information applies to the scenario. Reread the scenario given the new information. On a scale of 1-9:**
> How angry would you be if this happened to you? (1 = not at all to 9 = extremely angry)
>
> _____
>
> How certain are you that the initiator's actions were intentional? (1 = completely unintentional to 9 = completely intentional)
>
> _____
>
> How certain are you that the initiator's actions were hostile? (1 = completely nonhostile to 9 = completely hostile)
>
> _____

BP. Please rate each of the following items in terms of how characteristic they are of you. Use the following scale for answering these items.

	1	2	3	4	5	6	7	

Extremely uncharacteristic of me   **Extremely characteristic of me**

___ 1) Once in a while I can't control the urge to strike another person.

___ 2) Given enough provocation, I may hit another person.

___ 3) If somebody hits me, I hit back.

___ 4) I get into fights a little more than the average person.

___ 5) If I have to resort to violence to protect my rights, I will.

___ 6) There are people who pushed me so far that we came to blows.

___ 7) I can think of no good reason for ever hitting a person.

___ 8) I have threatened people I know.

___ 9) I have become so mad that I have broken things.

___ 10) I tell my friends openly when I disagree with them.

___ 11) I often find myself disagreeing with people.

___ 12) When people annoy me, I may tell them what I think of them.

___ 13) I can't help getting into arguments when people disagree with me.

___ 14) My friends say that I'm somewhat argumentative.

___ 15) I flare up quickly but get over it quickly.

___ 16) When frustrated, I let my irritation show.

___ 17) I sometimes feel like a powder keg ready to explode.

___ 18) I am an even-tempered person.

___ 19) Some of my friends think I'm a hothead.

___ 20) Sometimes I fly off the handle for no good reason.

___ 21) I have trouble controlling my temper.

___ 22) I am sometimes eaten up with jealousy.

___ 23) At times I feel I have gotten a raw deal out of life.

___ 24) Other people always seem to get the breaks.

___ 25) I wonder why sometimes I feel so bitter about things.

___ 26) I know that "friends" talk about me behind my back.

___ 27) I am suspicious of overly friendly strangers.

___ 28) I sometimes feel that people are laughing at me behind me back.

___ 29) When people are especially nice, I wonder what they want.

F.

Answer the following questions:

_____ **1)** Physical blows (like hitting, kicking, throwing someone down) sometimes occur between family members. For an average month, when you were growing up (i.e., ages 8 to 14 years), indicate how often one of your parents did this to you.
A = Never
B = One to five times
C = Six to ten times
D = 11 to 20 times
E = Over 20 times

_____ **2)** For an average month, indicate how often one of your parents or stepparents delivered physical blows to the other.
A = Never
B = One to five times
C = Six to ten times
D = 11 to 20 times
E = Over 20 times

AA. The statements below concern how you feel in emotionally intimate 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 **writing a number** to indicate how much you agree or disagree with the statement.

Strong Disagree   <- 1 - 2 - 3 - 4 - 5 - 6 - 7 -> Strongly Agree

____ 1. I'm afraid that I will lose my partner's love.

____ 2. I often worry that my partner will not want to stay with me.

____ 3. I often worry that my partner doesn't really love me.

____ 4. I worry that romantic partners won't care about me as much as I care about them.

____ 5. I often wish that my partner's feelings for me were as strong as my feelings for him or her.

____ 6. I worry a lot about my relationships.

____ 7. When my partner is out of sight, I worry that he or she might become interested in someone else.

____ 8. When I show my feelings for romantic partners, I'm afraid they will not feel the same about me.

____ 9. I rarely worry about my partner leaving me.

____ 10. My romantic partner makes me doubt myself.

____ 11. I do not often worry about being abandoned.

____ 12. I find that my partner(s) don't want to get as close as I would like.

____ 13. Sometimes romantic partners change their feelings about me for no apparent reason.

____ 14. My desire to be very close sometimes scares people away.

____ 15. I'm afraid that once a romantic partner gets to know me, he or she won't like who I really am.

____ 16. It makes me mad that I don't get the affection and support I need from my partner.

____ 17. I worry that I won't measure up to other people.

____ 18. My partner only seems to notice me when I'm angry.

____ 19. I prefer not to show a partner how I feel deep down.

____ 20. I feel comfortable sharing my private thoughts and feelings with my partner.

____ 21. I find it difficult to allow myself to depend on romantic partners.

____ 22. I am very comfortable being close to romantic partners.

____ 23. I don't feel comfortable opening up to romantic partners.

____ 24. I prefer not to be too close to romantic partners.

____ 25. I get uncomfortable when a romantic partner wants to be very close.

____ 26. I find it relatively easy to get close to my partner.

____ 27. It's not difficult for me to get close to my partner.

____ 28. I usually discuss my problems and concerns with my partner.

____ 29. It helps to turn to my romantic partner in times of need.

____ 30. I tell my partner just about everything.

____ 31. I talk things over with my partner.

____ 32. I am nervous when partners get too close to me.

____ 33. I feel comfortable depending on romantic partners.

____ 34. I find it easy to depend on romantic partners.

____ 35. It's easy for me to be affectionate with my partner.

____ 36. My partner really understands me and my needs.