

Anxious and Hostile: Consequences of Anxious Adult Attachment in Predicting Male- Perpetrated Sexual Assault

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Abstract

Attachment theory has increasingly been utilized to understand the etiology of sexual violence, and anxious attachment appears to be especially informative in this domain. We investigate the influence of general anxious attachment and specific anxious attachment on hostile masculine attitudes to predict male-perpetrated sexual assault. We hypothesize that hostile masculinity will mediate the relationship between general anxious attachment style and sexual assault perpetration (Hypothesis 1) and the relationship between specific anxious attachment to the assaulted woman and sexual assault perpetration (Hypothesis 2). Men ($N = 193$) completed the Sexual Experiences Survey (SES) to determine sexual assault history and completed measures of general attachment style, specific attachment to the woman involved in the sexual activity, and measures of hostile masculine attitudes. Results support the hypothesized mediation models, such that general anxious attachment and specific anxious attachment are significantly associated with hostile masculinity, which in turn, predicts the likelihood

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of male-perpetrated sexual assault. The findings suggest that the unique characteristics of anxious attachment may escalate into hostile masculinity, which then increases the likelihood of sexual assault perpetration. This research is the first to investigate attachment bonds to the woman involved in the sexual activity and likelihood of sexual assault perpetration against the same woman.

Keywords

anxious attachment, attachment style, hostile masculinity, sexual assault, interpersonal violence

Sexual assault against women is one of the most prevalent forms of violence against women (World Health Organization, 2012). Sexual assault encompasses any unwanted sexual acts, attempts to obtain sexual acts, and unwanted sexual advances. Female victims of sexual assault are at risk for experiencing injury (Andrews, Corry, Slade, Issakidis, & Swanston, 2004) and reproductive health consequences such as unwanted pregnancy and sexually transmitted diseases (World Health Organization, 2011). Reported rates of forced sexual intercourse by nonpartners vary between .3% and 12% internationally (World Health Organization, 2011), and reports of sexual aggression in college populations and community populations range between 14% and 64% (Abbey, Parkhill, BeShears, Clinton-Sherrod, & Zawacki, 2006; Loh, Orchowski, Gidycz, & Elizaga, 2007; Wheeler, George, & Dahl, 2002; Zawacki, Abbey, Buck, McAuslan, & Clinton-Sherrod, 2003). Current theorizing on the etiology of sexual assault perpetration against women includes the examination of and the consequences of adult attachment and its relationship with sexual assault (see Gromley, 2005, for review). The current study aims to extend previous research by investigating adult attachment from two perspectives—general attachment style and specific attachment to the woman involved in the sexual activity—and, in particular, the relationships between anxious attachment, hostile masculinity, and sexual assault perpetration.

Attachment theory (Ainsworth, Blehar, Waters, & Wall, 1978; Bowlby, 1969, 1973) is utilized as a useful theoretical tool to understand the psychological underpinnings of sexual violence (Gormley, 2005). Adult attachment (Bartholomew & Horowitz, 1991; Fraley & Shaver, 2000; Shaver & Hazan, 1987) is suggested to regulate the ways in which individuals respond to distressing situations and times of interpersonal conflict (Bowlby, 1982; Pietromonaco & Barrett, 2000; see also Simpson & Belsky, 2008). Secure attachment indicates that one's attachment figure is available and also might function as a way to maintain relationships (Hazan & Zeifman, 1999;

Kirkpatrick & Hazan, 1994). Insecure attachment (Bowlby, 1969, 1973) encompasses two dimensions: *anxiety* and *avoidance* (Brennan, Clark, & Shaver, 1998; Fraley & Shaver, 2000). Each dimension can result in differential characteristics and patterns within adult relationships (Shaver & Mikulincer, 2008). Insecure attachment is characterized by difficulties in responding to stressful interpersonal situations. Investigating the unique characteristics of each dimension of insecure adult attachment can aid in understanding interpersonal relationship dynamics (Brennan & Shaver, 1995; Shaver & Mikulincer, 2002) and garner insight to the interpersonal dynamics that contribute to sexual violence against women.

The characteristics of anxious attachment have been proposed to be particularly important in predicting sexual violence against women. Anxious attachment reflects a strong desire for intimacy, relationship insecurity, and a persistent fear of rejection (Rholes & Simpson, 2004a). Anxious attachment has been associated with affect escalation, impulsivity, anger and resentment, displaced aggression, and low self-control (Alexander & Anderson, 1994; Bartholomew, 1990; Gormley, 2005; Mikulincer, 1998), which, in part, causes anxiously attached individuals to engage in controlling and coercive behaviors (Mikulincer & Shaver, 2007). Dutton (1998, 2007) theorized that anxious attachment, specifically, might result in violent behavior because anxious individuals have difficulty regulating emotional and behavioral responses resulting from experiences that trigger fears of rejection and abandonment (see also Bowlby, 1984).

Research comparing convicted sexual and nonsexual offenders found that sexual offenders were more likely to be insecurely attached, and specifically, men with fearful attachment—characterized by high anxiety—were 3 to 4 times more likely to have been convicted for a sexual offense (Lyn & Burton, 2004). Other research demonstrates significant relationships between attachment insecurity and sexual assault in adult men (Abbey, Parkhill, Clinton-Sherrod, & Zawacki, 2007; Nguyen & Parkhill, 2014; Smallbone & Dadds, 1998) and adolescent boys (Awad, Saunders, & Levene, 1984; Marshall, Hudson, & Hodgkinson, 1993). Related research investigating the relationship between adult attachment and intimate partner violence has consistently documented an association between anxious attachment, specifically, and physical and psychological violence against women (Babcock, Jacobson, Gottman, & Yerington, 2000; Bookwala & Zdaniuk, 1998; Dutton, Saunders, Starzomski, & Bartholomew, 1994; Mauricio, 2002; Roberts & Noller, 1998). It is possible that anxious attachment also underlies sexual violence against women, likely motivated by anxiety and fear of rejection.

The hypervigilance associated with anxious attachment (Cassidy & Berlin, 1994) may contribute to feelings of frustration and negative affect toward women. Research demonstrates that anxiously attached individuals are

hypervigilant to rejection cues and have a difficult time disengaging from these negative cues (Mikulincer, Gillath, & Shaver, 2002). Hypervigilance resulting from anxious attachment has been shown to increase negative affect (Mikulincer & Shaver, 2007), such as feelings of frustration and hostility. Corroborating research demonstrates that men convicted of perpetrating violence against their wives report greater anxiety about rejection and abandonment, dependency, and preoccupation with their wives (Holtzworth-Munroe, Stuart, & Hutchinson, 1997; see also Easton & Shackelford, 2009). This frustration and negative affect associated with anxious attachment in men, specifically, is analogous to aspects of hostile masculinity.

Hostile masculinity reflects insecure, defensive, and distrustful orientation toward women, which can motivate men to dominate and control women (Malamuth, Sockloskie, Koss, & Tanaka, 1991; Malamuth & Thornhill, 1994). It is suggested that hostile masculinity may arise from harsh childhood environments, poor parental attachment as a child, and the subsequent inability to maintain adult relationships (Feeney & Noller, 1990; Main, Kaplan, & Cassidy, 1985; Malamuth & Thornhill, 1994; Marshall, 1993; see also Simpson, Griskevicius, & Kim, 2011). Negative experiences with women and experiences of rejection may also activate hostile masculinity. Because anxiously attached men are hypervigilant to rejection cues (Mikulincer et al., 2002; Mikulincer & Shaver, 2007), and anxious attachment increases frustration, negative affect, and controlling behavior (Mikulincer & Shaver, 2007), it follows that anxious attachment may escalate into hostile masculinity. We suggest that anxiety within male–female relationships might escalate into hostility, which subsequently might increase the likelihood that a man will perpetrate sexual assault against a woman.

Hostile masculinity has consistently been associated with sexual aggression and sexual assault of women (Dean & Malamuth, 1997; Hall, Sue, Narang, & Lilly, 2000; Lisak, 1991; Malamuth et al., 1991; Wheeler et al., 2002; see also Nguyen & Parkhill, 2014). It is suggested that men with hostile masculine attitudes are more likely to perpetrate sexual assault against women because this behavior is motivated by negative cognitions toward women and suspiciousness of women (Hall & Barongan, 1997). Sexual aggression is one way in which men attempt to correct or compensate for these hostile attitudes. However, there is less consensus regarding interpersonal factors that facilitate hostile masculine attitudes (see Murnen, Wright, & Kaluzny, 2002, for review). We suggest that anxious attachment and its consequent negative affect may escalate into hostility toward women. Therefore, anxious attachment may lead to hostile masculinity, which, in turn, may increase the likelihood of a man perpetrating sexual assault. Therefore, we hypothesize that hostile masculinity will mediate the relationship between anxious attachment style and likelihood of sexual assault perpetration (Hypothesis 1).

Although adult attachment is often conceptualized to reflect general attachment styles, attachment theorists and researchers have increasingly recognized the utility of assessing attachment bonds to specific individuals (Rholes & Simpson, 2004b). Recent research indicates that an attachment bond to a particular individual, rather than one's general attachment style, is more important (i.e., explained more variance) in predicting negative affect associated with that individual (Barry, Lakey, & Orehek, 2007; Cook, 2000). Individuals can have different attachment bonds in different relationships (Fraley & Brumbaugh, 2004; Fraley & Shaver, 2000; Pietromonaco & Barrett, 2000), and it may be informative to examine attachment bonds when investigating male–female relationships (Barry et al., 2007). Thus, we further hypothesize that hostile masculinity will mediate the relationship between specific anxious attachment to the woman involved in the sexual activity and likelihood of sexual assault perpetration against that same woman (Hypothesis 2).

The Current Research

The current research investigates the effect of hostile masculinity on the relationship between anxious attachment and male-perpetrated sexual assault. Specifically, we aim to extend previous research by examining both general anxious attachment style and specific anxious attachment bonds in relation to hostile masculinity and sexual assault perpetration. We first examine the relationships between general anxious attachment style, hostile masculinity, and male-perpetrated sexual assault. Second, we investigate the relationships between specific anxious attachment to the woman, hostile masculinity, and sexual assault of the same woman.

Method

Participants

We recruited 193 male college students (81% White) from the psychology department subject pool ($n = 126$) and from posted flyers on campus ($n = 67$), between 18 and 30 years of age. Participants' mean age was 20.8 years ($SD = 2.75$). Demographics of participants recruited from the psychology department subject pool and campus flyers did not significantly differ.

Procedures

Approval to conduct the current research was granted by the institutional review board for research on human subjects at the university at which the research was conducted. Participants were recruited from the psychology

department subject pool and from flyers posted around the campus at a large Midwestern university. Participants were required to be (a) male, (b) between the ages of 18 and 30 years, and (c) currently enrolled as a student at the university. The recruitment advertisement noted that men were needed to complete an online questionnaire concerning personality traits and sexual experiences. To avoid participant selection bias, no information about sexual assault was provided in the study advertisements.

Prospective participants were provided a web link to the online survey where an electronic informed consent form was provided. Participants who did not agree to participate were exited from the study. Participants who did agree to participate first completed the Attachment Style Questionnaire (ASQ), Hostile Masculinity measures, and the Sexual Experiences Survey (SES). Participants who indicated they had engaged in *at least one* of the sexually coercive acts described (*sexual assault* group, $n = 31$) completed the Experiences in Close Relationships (ECR)-Revised questionnaire as it related to the woman involved in their most recent nonconsensual sexual interaction. Participants who indicated they had *not* engaged in any of the sexually coercive acts described (*no sexual assault* group, $n = 162$) completed the ECR-Revised questionnaire as it related to the woman involved in their most recent consensual sexual interaction.

Upon completion of the survey, participants recruited from posted flyers ($n = 67$) were entered into a lottery drawing for a US\$25 Amazon.com electronic gift certificate, and participants from the psychology department subject pool ($n = 126$) received partial course credit.

Materials

Attachment. General attachment style was assessed using the ASQ (Feeney, Noller, & Hanrahan, 1994). The ASQ is a 40-item measure whereby men indicated the extent to which they agree with statements on a 6-point Likert-type scale ranging from 1 (*totally disagree*) to 6 (*totally agree*). The ASQ contains five subscales—all demonstrating adequate reliability in this sample: Confidence, Discomfort With Closeness, Need for Approval, Preoccupation With Relationships, and Relationships as Secondary ($\alpha = .75-.85$). Anxious attachment style ($\alpha = .82$) was determined by averaging each participant's responses to the Need for Approval and Preoccupation With Relationships subscale items. Avoidant attachment style ($\alpha = .66$) was determined by averaging each participant's responses to the Discomfort With Closeness and Relationships as Secondary subscale items.

Specific attachment to the woman involved in the sexual activity was measured using the ECR Scale-Revised (Fraley, Waller, & Brennan, 2000).

The ECR contains 36 items that measure attachment bonds along the dimensions of *anxiety* and *avoidance*. Men were instructed to respond to the statements as they relate to the woman involved in the unwanted (consensual) sexual activity. Men indicated the extent to which they agree with various items related to their relationship with the woman involved in the sexual activity (e.g., “I often worry that this person will not want to stay with me”) on a 7-point Likert-type scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Composite scores of specific anxious attachment ($\alpha = .96$) and specific avoidant attachment ($\alpha = .94$) were calculated for each participant by averaging their responses to the respective subscale items.

Hostile masculinity. Men completed assessments of their sexual dominance, hostility toward women, and adversarial sexual beliefs to assess men’s hostile masculinity. Sexual dominance was assessed using 16 items from Nelson (1979) whereby men reported the importance of their reasons for sex (e.g., “Because I like the feeling of having another person submit to me”) on a 7-point Likert-type scale ranging from 1 (*not important*) to 7 (*very important*). Composite scores for each participant were calculated by averaging their responses to the 16 items ($\alpha = .87$).

The Hostility Toward Women (HTW) scale (Lonsway & Fitzgerald, 1995) was used to measure men’s hostile attitudes toward women. The HTW is comprised of 10 items in which men rated the extent to which they agree with statements regarding their attitudes about women (e.g., “When it really comes down to it, a lot of women are deceitful”) on a 7-point Likert-type scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Composite scores for each participant were calculated by averaging their responses to the 10 items ($\alpha = .86$).

Men’s adversarial sexual beliefs were assessed using an eight-item measure (Burt, 1980) where men rated the extent to which they agree with statements regarding their perceptions of women’s sexual beliefs (e.g., “A woman will only respect a man who will lay down the law on her”) on a 7-point Likert-type scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Composite scores for each participant were calculated by averaging their responses to the eight items ($\alpha = .87$). Following Nguyen and Parkhill (2014), we created the variable *hostile masculinity* by averaging each participant’s composite scores on the measures of sexual dominance, HTW, and adversarial sexual beliefs ($\alpha = .72$).

Sexual assault perpetration. A modified version of the SES (Koss, Gidycz, & Wisniewski, 1987; Parkhill & Abbey, 2008; Zawacki et al., 2003) was used to determine men’s history of sexual assault perpetration. The SES contains

21 items to which men are provided with various examples of unwanted sexual contact, including verbal coercion, forced physical contact, and attempted/completed rape. Men read each statement and indicated whether they had ever committed the act described and, if yes, reported the number of times they had perpetrated the act.

Men were then categorized into one of two sexual assault groups based on their responses to the 21 sexually coercive acts. If the man indicated that he had not engaged in any of the sexually coercive acts described, he was placed in the *no sexual assault* group ($n = 162$, 84%). If the man indicated that he had engaged in *at least one* sexually coercive act, he was placed in the *sexual assault* group ($n = 31$, 16%). Of the men in the sexual assault group, 13% engaged in forced contact (e.g., touching, kissing) during the unwanted sexual activity, 71% used verbal coercion during the unwanted sexual activity, and 16% reported attempted or completed rape (e.g., anal or vaginal intercourse).

To assess the degree to which participants knew the woman involved in the sexual activity prior to the interaction, participants were asked, "How well did you know the woman at the time of the interaction?" on a 7-point Likert-type scale ranging from 1 (*not very much*) to 7 (*very much*). Men that perpetrated sexual violence against a woman ($M = 6.56$, $SD = 1.28$) did not differ from nonperpetrators ($M = 6.05$, $SD = 1.60$) in the degree to which they knew the woman involved in the interaction ($p = .12$), and therefore, this variable is not included in subsequent analyses.

Results

Zero-order correlations and descriptive statistics for study variables are displayed in Table 1. We used the test of joint significance (Cohen & Cohen, 1983; James & Brett, 1984; see also MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002) to test Hypothesis 1, which states that hostile masculinity mediates the relationship between anxious attachment style and sexual assault perpetration, while statistically controlling for avoidant attachment style. A multiple regression analysis was conducted to determine whether anxious attachment style is associated with hostile masculinity. Avoidant attachment style and anxious attachment style were entered as predictor variables, with hostile masculinity as the dependent variable (see Table 2). As hypothesized, anxious attachment style is associated with hostile masculinity. A binomial logistic regression was conducted to determine whether hostile masculinity is associated with sexual assault perpetration. Anxious attachment style, avoidant attachment style, and hostile masculinity were entered as predictor variables with sexual assault perpetration as the dependent variable (see Table 3). The model was significant, $\chi^2(3, N = 193) = 14.02$, $p < .01$, and hostile masculinity is associated with sexual assault perpetration.

Table 1. Zero-Order Correlations, Means, and Standard Deviations of Study Variables.

Variable	1	2	3	4	5	6	7	8
1. Anxious attachment style	—							
2. Avoidant attachment style	.58***	—						
3. Specific anxious attachment	.42***	.23**	—					
4. Specific avoidant attachment	.12	.26***	.49***	—				
5. HTW	.35***	.29***	.24**	.16*	—			
6. Adversarial sexual beliefs	.37***	.30***	.26***	.10	.63***	—		
7. Sexual dominance	.37***	.12	.23***	-.02	.34***	.41***	—	
8. Hostile masculinity	.45***	.30***	.31***	.10	.82***	.87***	.70***	—
<i>M</i>	3.47	3.32	2.71	2.34	3.71	3.51	4.31	3.84
<i>SD</i>	0.82	0.72	1.55	1.39	1.07	1.22	1.00	0.88

Note. Hostile masculinity is comprised of the HTW, adversarial sexual beliefs, and sexual dominance measures. HTW = hostility toward women.

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

Table 2. Multiple Regression Analysis With Hostile Masculinity as the Dependent Variable (Hypothesis 1).

Predictor Variable	<i>B</i>	β	<i>t</i> -statistic	<i>p</i> -value
Avoidant attachment style	.06	.05	0.65	.52
Anxious attachment style	.45	.42	5.33	<.001

Note. Hostile masculinity is comprised of the HTW, adversarial sexual beliefs, and sexual dominance measures. HTW = hostility toward women.

We used the distribution of the product of coefficients method (Tofighi & MacKinnon, 2011) to confirm mediation. This method affords greater statistical power and more accurate Type 1 error rates than the traditional Baron and Kenny (1986) causal steps method (see also MacKinnon et al., 2002) and is less likely to result in undercoverage of the 95% confidence interval (CI) than traditional bootstrapping methods (Tofighi & MacKinnon, 2011; see also Good, 2006; MacKinnon, Lockwood, & Williams, 2004). The distribution of the product of coefficients method (Tofighi & MacKinnon, 2011) confirms that hostile masculinity mediates the relationship between anxious attachment style and sexual assault perpetration (indirect effect estimate *M* ab

Table 3. Logistic Regression Analysis With Sexual Assault Perpetration as the Dependent Variable (Hypothesis 1).

Predictor Variable	<i>B</i>	<i>SE</i>	Wald	<i>p</i> -value	Odds Ratio
Avoidant attachment style	-.31	.34	0.83	.36	0.74
Anxious attachment style	.49	.34	2.07	.15	1.63
Hostile masculinity	.71	.27	6.80	<.01	2.04

Note. Hostile masculinity is comprised of the HTW, adversarial sexual beliefs, and sexual dominance measures. HTW = hostility toward women.

= .32, standard error of the indirect effect estimate $SE_{ab} = .14$, 95% CI = [0.08, 0.63]), supporting Hypothesis 1.

We again used the test of joint significance (Cohen & Cohen, 1983; James & Brett, 1984; see also MacKinnon et al., 2002) to test Hypothesis 2,¹ which states that hostile masculinity mediates the relationship between specific anxious attachment and sexual assault perpetration, while statistically controlling for specific avoidant attachment. A multiple regression analysis was conducted to determine whether specific anxious attachment is associated with hostile masculinity. Specific avoidant attachment and specific anxious attachment were entered as predictor variables, with hostile masculinity as the dependent variable (see Table 4). As hypothesized, specific anxious attachment is associated with hostile masculinity. A binomial logistic regression was conducted to determine whether hostile masculinity is associated with sexual assault perpetration. Specific anxious attachment, specific avoidant attachment, and hostile masculinity were entered as predictor variables, with sexual assault perpetration as the dependent variable (see Table 5). The model was significant, $\chi^2(3, N = 193) = 14.39, p < .01$, and hostile masculinity is associated with sexual assault perpetration.

The distribution of the product of coefficients method (Tofighi & MacKinnon, 2011) confirms that hostile masculinity mediates the relationship between specific anxious attachment and sexual assault perpetration (indirect effect estimate, $M_{ab} = .18$, $SE_{ab} = .07$, 95% CI = [0.07, 0.33]), supporting Hypothesis 2.

Discussion

The current research investigated the effect of hostile masculinity on the relationship between anxious attachment and sexual assault perpetration against women. We examined two types of anxious attachment: general anxious attachment style and specific anxious attachment to the woman involved in the sexual activity. Results support Hypothesis 1 in that hostile masculinity

Table 4. Multiple Regression Analysis With Hostile Masculinity as the Dependent Variable (Hypothesis 2).

Predictor Variable	<i>B</i>	β	<i>t</i> -statistic	<i>p</i> -value
Specific avoidant attachment	-.04	-.07	-0.82	.41
Specific anxious attachment	.19	.34	4.27	<.001

Note. Hostile masculinity is comprised of the HTW, adversarial sexual beliefs, and sexual dominance measures. HTW = hostility toward women.

Table 5. Logistic Regression Analysis With Sexual Assault Perpetration as the Dependent Variable (Hypothesis 2).

Predictor Variable	<i>B</i>	<i>SE</i>	Wald	<i>p</i> -value	Odds Ratio
Specific avoidant attachment	-.03	.17	0.04	.84	0.97
Specific anxious attachment	-.19	.16	1.50	.22	0.82
Hostile masculinity	.95	.27	12.11	<.01	2.58

Note. Hostile masculinity is comprised of the HTW, adversarial sexual beliefs, and sexual dominance measures. HTW = hostility toward women.

mediates the relationship between general anxious attachment style and sexual assault perpetration, while statistically controlling for general avoidant attachment style. Results also support Hypothesis 2 such that hostile masculinity mediates the relationship between specific anxious attachment to the woman involved in the sexual activity and perpetrating sexual assault against that same woman, while statistically controlling for specific avoidant attachment.

Tests of Hypothesis 1 document a positive linear relationship between anxious attachment style and hostile masculinity. The unique characteristics of an anxious attachment style (e.g., affect escalation, frustration, and hypervigilance) appear to be particularly informative for future research investigating the interpersonal factors that may facilitate hostile masculinity. We propose that the negative affect and hypervigilance to rejection cues that uniquely characterize anxious attachment (Holtzworth-Munroe et al., 1997) account for the significant relationship between anxious attachment and hostile masculinity. This relationship also corroborates previous research, which found that male perpetrators of sexual assault were more likely to report being frequently rejected by women than do nonperpetrators, as indexed by items from Hostile Masculinity measures (Lisak & Roth, 1988). This suggests that frequent rejection, or perceptions of rejection, by women can escalate into hostility and subsequent violence against women.

Tests of Hypothesis 2 reveal that specific anxious attachment to the woman involved in the sexual activity is associated with hostile masculinity, consistent with the results of Hypothesis 1. Attachment research has increasingly focused on attachment bonds to specific individuals (Barry et al., 2007; Cook, 2000; Rholes & Simpson, 2004b), rather than general attachment style, in relation to relationship outcomes. Research demonstrates that the attachment bond to a particular individual is informative in predicting negative affect associated with the individual (Barry et al., 2007; Cook, 2000), which is likely to be a relevant precursor to perpetrating violence against a woman. The current research is the first empirical examination of attachment bonds in the domain of sexual violence against women. The significant findings highlight a novel avenue of future research for those investigating the etiology of sexual assault. Our results demonstrate that specific anxious attachment to a woman is significantly associated with increases in hostile masculinity and subsequent sexual assault of the same woman.

The findings of the current research suggest that anxious attachment may escalate into hostile masculinity within male–female relationships through the processes of increased negative affect and displaced aggression (Gormley, 2005; Shaver & Mikulincer, 2008). In accordance with previous theory (Dutton, 1998, 2007), we suggest that anxious attachment might lead to violent behavior due to difficulties regulating emotional and behavioral responses in response to rejection by women (see also, Lisak & Roth, 1988). We suggest that the same underlying mechanisms motivating physical aggression resulting from anxiety (Gromley, 2005) may also take the form of sexual violence within male–female relationships. Researchers suggest that hostile masculinity arises from poor parent–child relationships and the inability to maintain adult relationships (Feeney & Noller, 1990; Main et al., 1985; Malamuth & Thornhill, 1994; Marshall, 1993). However, there is less consensus concerning interpersonal factors that may escalate into hostile masculinity (Murnen et al., 2002). Our findings provide initial support for one such factor: interpersonal attachment dynamics.

The findings of the current research indicate that anxious attachment—style and bond—may be particularly important to researchers investigating sexual violence. Research addressing violence against women provides unequivocal support for the importance of anxious attachment in understanding and predicting physical and psychological violence against women (Babcock et al., 2000; Bookwala & Zdaniuk, 1998; Dutton et al., 1994; Mauricio, 2002; Roberts & Noller, 1998). Unfortunately, the relationship between anxious attachment and sexual violence against women by nonpartners is less understood. The current research expands upon previous theory (Dutton, 1998, 2007) that emphasizes the importance of anxious attachment

predicting physical violence against women, and we suggest that research in this domain could benefit by investigating whether the mechanisms underlying physical violence also underlie sexual violence.

Limitations and Future Directions

There are limitations to the current research that should be taken into consideration when interpreting the results. It is especially important to note that the results of the current research are correlational and cross-sectional in nature, and the data cannot support causal relationships. Thus, strict causal claims are not defensible, and directional interpretation of the proposed relationships should be interpreted with caution. It is possible that men who possess hostile masculine attitudes are more likely to be anxiously attached—more generally and within specific relationships. However, we argue that anxiety within male–female relationships can escalate into hostility, which, in turn, increases the likelihood of male-perpetrated sexual assault. Future research could use an experimental design to manipulate attachment orientations (e.g., via writing paradigms) and measure subsequent negative affect, aggression, and hostility toward women to demonstrate a causal relationship between anxious attachment and hostile masculinity. In addition, researchers could use a longitudinal study design to evaluate whether anxious attachment leads to subsequent increases in hostile masculinity over time in male–female relationships.

Another limitation of the current research is the discrepancy of specificity in the measures of specific attachment to the woman involved in the sexual activity and the measure of hostile masculinity. The ECR was used to measure the man's attachment to the woman involved in the sexual activity, whereas the measures of hostile masculinity measured general attitudes toward sexual dominance, sexual beliefs, and HTW. However, results of Hypothesis 1 offer support for the directional relationships we propose, such that the correlation between the general attachment style (measured with the ASQ) and the hostile masculinity measures was significant, and both measures assessed general attitudes. Moreover, the correlation between anxious attachment style and specific attachment was significant and, thus, provides initial support that specific anxious attachment is associated with hostile masculine attitudes. Future research could use correlational and experimental designs to investigate whether specific anxious attachment to a woman is significantly related to hostile masculine attitudes directed toward that same woman.

The SES provides information regarding various types of coercive sexual acts, including attempted *and* completed sexual coercion, with varying degree

of severity. However, because our sample of men who reported engaging in at least one of the acts described on the SES was relatively small ($n = 31$), we had to dichotomize the sexual assault variable. For instance, a man who indicated he attempted to kiss a woman when she did not want to be kissed was placed in the same group as a man who committed rape. The small sample size of men in the *sexual assault* group did not afford enough statistical power to look at individual differences between the men who perpetrated sexual assault. It may be the case that the type of sexual assault perpetrated could be linearly related with anxious attachment, such that the greater the attachment anxiety toward a specific woman, the more severe the sexual assault. Future research could profitably investigate the relationship between attachment anxiety and hostile masculinity as it relates to perpetration severity.

The results of the current study are limited in the generalizability to other populations. Because we recruited males from a college campus, replication of the current research is especially warranted to determine whether the relationships generalize to a nationally representative sample of males. Future research could also profitably peruse replication of this model in romantic relationships. The negative consequences of anxious attachment may be particularly strong within romantic relationships where there are more opportunities for sexual violence (e.g., marital rape, sexual coercion) to occur. Indeed, numerous studies report a relationship between anxious attachment and intimate partner violence (Babcock et al., 2000; Bookwala & Zdaniuk, 1998; Dutton et al., 1994; Mauricio, 2002; Roberts & Noller, 1998). It is likely that the mechanisms underlying psychological and physical violence against women by partners in response to anxiety will also be useful for researchers to identify the psychological mechanisms underlying sexual violence against women by nonpartners.

Conclusion

The findings of the current research provide unique insight to the attachment related dynamics of sexual assault perpetration against women. Two forms of anxious attachment were investigated: general anxious attachment style and specific anxious attachment bond to the woman involved in the sexual activity. Both general anxious attachment and specific anxious attachment were associated with increases in hostile masculinity. In turn, hostile masculinity predicted the likelihood of sexual assault perpetration. These findings highlight the importance of anxious attachment by which interpersonal stress can escalate into hostility and potentially sexual violence. This research contributes to the broader literature on sexual violence against women in that it is the first to investigate men's attachment to the woman involved in the sexual

activity, providing profitable avenues of research investigating specific attachment bonds in relation to hostility and sexual aggression.

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Note

1. Statistical analyses were also conducted to test an exploratory moderated-mediation hypothesis of whether the degree to which the man knew the woman involved in the sexual activity moderated the relationship between specific anxious attachment and hostile masculinity. Following the recommendations of Preacher, Rucker, and Hayes (2007), we conducted moderation analyses testing the statistical interaction between specific anxious attachment and the degree to which the man knew the woman involved in the sexual activity. All variables were standardized prior to analyses. Main effects of specific avoidant attachment, specific anxious attachment, and the degree to which the man knew the woman were statistically controlled for in analyses. Results indicate a nonsignificant moderating effect (i.e., interaction) of the degree of relationship with the woman on the relationship between specific anxious attachment and hostile masculinity ($\beta = .04$, $t = 0.53$, $p = .60$).

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David Nguyen is a doctoral student at the University of Toronto in Toronto, Ontario. He completed his BA in psychology at Oakland University while working as a research assistant in the lab of Michele Parkhill. His current research investigates the neuronal basis of basic motivational processes, with a specific focus on the effects of cocaine exposure on neuronal communication within cortico-limbic-striatal systems and how such neuroadaptations are translated into behavioral output in rat paradigms of motivational conflict.