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The Influence of Sexual Assault History on Relationship Functioning

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THE INFLUENCE OF SEXUAL ASSAULT HISTORY ON RELATIONSHIP FUNCTIONING

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Though likely underreported, the rates of child sexual assault (CSA) and adult sexual assault (ASA) among women are staggering: CSA = 25.3%, ASA = 17%-22%. Women with a history of either CSA or ASA are at increased risk for mental health difficulties, as well as dysfunction in romantic relationships. However, existing research has yet to examine both types of sexual assault history within one model. Further, gaps in the current literature exist in understanding how sexual assault history impacts the woman's and her partner's current relationship functioning. Therefore, the goal of the current study was to examine the mechanisms through which a history of CSA and/or ASA is associated with relationship functioning. Women's mental health, emotional intimacy and sexual intimacy were examined as potential mechanisms through which CSA and ASA may impact relationship satisfaction. Results indicated that emotional intimacy, but not mental health or sexual intimacy, mediated the association of women's CSA and ASA with both women's and men's relationship satisfaction. Considerations and implications for the study of couple functioning among women with a history of sexual assault are discussed.

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Chapter 1: Introduction

Extant marital and couple research consistently demonstrates the prevalence of distress and dissatisfaction in relationships in the United States. Indeed, approximately one third of marriages are distressed at any point in time (Whisman, Beach, & Snyder, 2008). Moreover, more than 40% of first marriages are expected to end in divorce (Kreider, 2005), with this rate rising for second and third marriages (Brody, Neubaum, & Forehand, 1988; Cherlin, 1992).

Relationship Distress

Marriage can serve as a protective health factor – married individuals are at lower mortality risk than those not married (Johnson, Backlund, Sorlie, & Loveless, 2000) – however, the consequences of *distressed* relationships are severe. Individuals struggling in high conflict, distressed relationships are at higher risk for physical health consequences (see Kiecolt-Glaser & Newton, 2001). For example, marital conflict is associated with increased heart rate and blood pressure in men and women (Nealey-Moore, Smith, Uchino, Hawkins, & Olson-Cerny, 2007), and marital distress places women with cardiovascular disease at much higher risk of recurring coronary events compared to non-distressed married women (Orth-Gomer, et al., 2000). Further, couples demonstrating more hostile conflict are found to heal more slowly than couples with less hostile interactions (Kiecolt-Glaser, et al., 2005).

Additionally, marital discord puts individuals at increased risk for mental illness. Dissatisfied partners are at higher risk for major depressive disorder compared to partners satisfied in their relationships (Beach, Katz, Kim, & Brody, 2003). In fact, partners

dissatisfied with their relationships are nearly three times more likely to have an episode of major depression (Whisman & Bruce, 1999). In addition to major depression, a large population based study found that marital distress was also associated with specific phobia, social phobia, generalized anxiety disorder, post-traumatic stress disorder, dysthymia, bipolar disorder, and alcohol use disorders (Whisman, 2007).

The children of couples who are unhappy and highly discordant also suffer. Parental marital conflict places children at increased risk for depression and anxiety (Jekielek, 1998). This association is possibly explained by hostility between parents. Indeed, marital hostility between partners is found to "spillover" into hostility toward children and is predictive of current and long term internalizing symptoms in children (Harold, Fincham, Osborne, & Conger, 1997). As marital conflict increases, children also demonstrate symptoms of externalizing disorders (Ablow, Measelle, Cowan, & Cowan, 2009) and even sleeping problems (Mannering et al., 2011)

Causes of Relationship Distress

Given the negative effects of relationship distress, it is important to understand what leads to erosion in relationship quality. Relationship quality and stability can be conceptualized using Karney and Bradbury's Vulnerability-Stress-Adaptation (VSA, 1995) model. In the VSA model, three interacting constructs– adaptive processes, stressful events, and enduring vulnerabilities – are understood to underlie global relationship distress.

Adaptive processes are the behaviors and ways that partners interact with each other. Successful or unsuccessful communication between partners is a key example of

adaptive processes in the VSA model and its role in satisfaction and stability of relationships has been repeatedly demonstrated (e.g., Lavner & Bradbury, 2012, Rogge & Bradbury, 1999). According to the VSA model, couples' adaptive processes are directly influenced by the levels of *stressful events* in the couple's life. For example, a recent examination of this association found that both men's and women's marital communication were affected by levels of each partner's external and relationship stress (Ledermann, Bodenmann, Rudaz, & Bradbury, 2010).

Couples' adaptive processes are also directly affected by *enduring vulnerabilities*, which are the personal histories and individual characteristics of each partner. Enduring vulnerabilities encompass many facets, including family of origin, personality traits, and mental illness. For example, compared to dissatisfied couples, satisfied couples have better relationships with their families of origin (Bertoni & Bodenmann, 2010). Mental illness (e.g., depression and anxiety) also plays a large role in distressed relationships. One partner's anxiety symptoms are associated with lower levels of his/her own relationship satisfaction; one partner's depressive symptoms are associated with lower levels of his/her own *and* his/her partner's relationship satisfaction (Whisman, Uebelacker, & Weinstock, 2004). Similar cross-partner examinations show that externalizing psychopathology symptoms (e.g., antisocial behavior, alcohol misuse) are related to both partners' relationship satisfaction (Humbad, Donnellan, Iacono, & Burt, 2010). Finally, a large scale longitudinal study found that spouses high in neuroticism have a greater likelihood for marital dissatisfaction and divorce (Kelly & Conley, 1987).

Sexual Assault

Although not often discussed in terms of the VSA model, traumatic events in one or both partners' past can be conceptualized as either a *stressful event* (if it occurs during the relationship) or an *enduring vulnerability* (if it occurred prior to the relationship). Sexual assault affects individuals of all ages across the world. A recent meta-analysis of childhood sexual abuse (CSA) in 22 countries (Pereda, Guilera, Forns & Gomez-Benito, 2009) showed that nearly 8% of men and more than 19.5% of women were abused before the age of 18. For women in the United States, rates are even higher, with 25.3% reporting experiencing childhood sexual abuse (Pereda at al.). Though underreported (see Kilpatrick, Saunders, & Smith, 2003), sexual assault after the age of 18 – adult sexual assault (ASA) – is also a frequent crime. Definitions of sexual assault vary across studies, resulting in varying prevalence rates. However, current estimates suggest that rates of ASA ranges approximately from 9% – 22% in women and 1% – 4% in men (Elliot, Mok, & Briere, 2004; Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995; Koss, Gidycz, and Wisniewski, 1987; Tjaden & Thoennes, 2000).

A history of childhood sexual or physical abuse has repeatedly been found to be associated with marital quality and adjustment (e.g., Godbout, Sabourin, & Lussier, 2008; Nelson &Wampler, 2000; Whisman, 2006). Additionally, although the literature on ASA is less developed, experiencing a non-sexual physical attack as an adult is related to lower levels of relationship satisfaction and harmony (Broman, Riba, & Trahan, 1996). While the impact of several types of traumatic events have been studied, the impact of adult sexual assault (perpetrated by someone other than the current partner) on the current relationship is not well understood. Additionally, the mechanisms through which CSA

and ASA influence global relationship satisfaction have not been examined. However, a review of the literature suggests the possibility of several putative mechanisms: mental health, sexual intimacy, and emotional intimacy.

Impact of Sexual Assault on Mental Health

Major depressive disorder. Victims of both CSA and ASA are at risk for developing depressive symptoms and exhibiting suicidal ideation. Indeed, adult women who were victims of CSA were twice as likely to report a lifetime history of depression compared to women without a history of CSA (Saunders, Kilpatrick, Hansen, Resnick, & Walker, 1999). Further, these women were three times as likely to be currently experiencing symptoms of depression in adulthood compared to non-victimized women. Among victims of ASA, research suggests that within four weeks of the assault, 43% of women meet criteria for major depression (Frank & Stewart, 1984). Further, depressive symptoms are shown to persist for sexual assault victims; 20 years following ASA, survivors experience high rates of major depressive symptoms (Kilpatrick, Veronen, Saunders, Best, Amick-McMullen, & Paduhovich, 1987). Suicidal attempts and ideation are also frequent in sexual assault victims; one third of sexual assault victims has contemplated suicide and close to 13% attempt suicide (Kilpatrick et al., 1992).

Generalized Anxiety and Other Anxiety Disorders. Generalized anxiety symptoms are also higher among women with a history of sexual assault. Young adults with a history of CSA (Fergusson, Horwood, & Lynsky, 1996) and ASA (Kilpatrick, Resick, & Veronen 1981) are at increased risk for generalized anxiety symptoms**.** Research suggests that women who experienced ASA are at higher risk for not only

generalized anxiety disorder but also agoraphobia, obsessive compulsive disorder, and social anxiety (Bordreaux, Kilpatrick, Resnick, Best, & Saunders, 1998)

Stress disorders. Acute stress disorder (ASD) and Post-traumatic stress disorder (PSTD) are defined by the Diagnostic and Statistical Manual of Mental Disorders (DSMV, American Psychiatric Association, 2013) as stress disorders developing either within the month (ASD) or after one month (PTSD) following a traumatic event that involves actual or threatened death or serious injury. Of children sexually assaulted, more than half develop symptoms of PTSD (McLeer, Deblinger, Atkins, Foa, & Ralphe, 1988, McLeer, Deblinger, Henry, Orvashel, 1992). Often, the symptoms continue on into adulthood; women who have a history of CSA are more likely to report current PTSD symptoms compared to non-victims (Saunders et al., 1999). Among ASA victims, 65% report symptoms of ASD within two weeks following the assault; 59% meet criteria for diagnosis (Elklit & Christensen, 2010). Approximately 35-50% of ASA victims develop PTSD, (Elklit & Christensen, 2010), and a longitudinal study of child and adult sexual assault survivors showed that 58% met diagnostic criteria PTSD one year post-assault (Darves-Bornoz et al., 1998).

Impact on Interpersonal Intimacy

Sexual intimacy. It follows that the sexual relationships of women with sexual assault history would also be negatively affected by this traumatic event. Among female survivors of CSA, studies suggest that this population experiences more dysfunctional or dissatisfied sexual relationships in adulthood (Brown & Finkelhor, 1986; Briere, 1984). Specifically, this population tends to exhibit sexual dysfunction that centers around fear

of vulnerability or further assault, or to be overly dependent in new relationships (Courtois, 1988; Russel, 1985). Women who have experienced ASA also report more sexual dysfunction and dissatisfaction compared to non-victimized women (Bartoi & Kinder, 2008; Orlando & Koss, 1983). A longitudinal investigation demonstrated a 30% decrease in sexual satisfaction as well as decreases in sensuality following ASA (Norris & Feldman-Summers, 1981). There is also evidence of long-term sexual difficulties following sexual assault; in sample women with ASA history ranging from 2 months-40 years prior, 58% report experiencing at least one sexual problem (Becker, Skinner, Abel, & Cichon, 1986). In the general population, the percentage of any distressing sexual problem is 12% (Shifren, Monz, Russo, Segreti, & Johannes, 2008). More recently, efforts to uncover the association between a sexual assault and current sexual dissatisfaction show that women with an episode of ASA in the previous month feel more anxious during sexual activity and feel sexually unattractive and sexually misunderstood by their partner (Jozkowski & Sanders, 2012).

Emotional intimacy. Less studied is the extent to which women's levels of emotional intimacy with the current partner are affected by sexual assault history. Emotional intimacy is the extent to which one feels trust, security, and the ability to share and be vulnerable with one's partner. Among women with a history of CSA, greater mistrust within interpersonal relationships, as well as a lower level of satisfaction in relationships is often described (Briere & Runtz, 1990; Elliot, 1994). Additionally, compared to women with no history of sexual assault, victims of ASA reported more fear of intimacy and abandonment, less confidence in the dependability of others, and less comfort with closeness (Thelen, Sherman, & Borst, 1998). Therefore, the limited

available evidence suggests that both CSA and ASA negatively influence intimacy in subsequent romantic relationships.

Present Study

The primary goal of the present study is to understand the mechanisms through which women's sexual assault history impacts global relationship satisfaction. As reviewed previously, the link between sexual assault history and mental health is demonstrated by previous research. In contrast, research uncovering the connection between both child and adult sexual assault with romantic relationship functioning (e.g., satisfaction, emotional and sexual intimacy) is not fully developed. Moreover, rarely have both assault types been included in a single statistical model in an effort to disentangle the relative contributions of CSA and ASA on relationship functioning. When one considers the association between relationship adjustment/satisfaction and mental health (e.g., Whisman & Bruce, 1999), emotional intimacy (Laurenceau, Barrett, & Rovine, 2005) and sexual intimacy (e.g., Fowers, 1991), it is difficult to understate the potential risk for the romantic relationships within this population. However, no studies to date have sought to examine a comprehensive understanding of the direct and indirect effects of sexual assault on relationship satisfaction.

This study had the following specific aims and hypotheses:

Aim 1: Replicate prevalence of CSA and ASA.

Hypothesis 1: This study will demonstrate rates of CSA and ASA in women comparable to previous research (i.e., CSA: 25%, ASA 10-20%).

Aim 2: Examine between-group differences among the associations between assault history and hypothesized intermediate and outcome variables.

Hypothesis 2: Compared to women without a history of sexual assault, women with a history of ASA and/or CSA will report more difficulties in mental health as measured by symptoms of depression and generalized anxiety.

Hypothesis 3: Couples in which the woman has a history of ASA and/or CSA will be more distressed in their relationships compared to couples in which the woman does not have a history of sexual assault.

Hypothesis 4: Couples in which the woman has a history of ASA and/or CSA will report more difficulties in current sexual intimacy compared to couples in which the woman does not have a history of sexual assault.

Hypothesis 5: Couples in which the woman has a history of ASA and/or CSA will report more difficulties in current emotional intimacy compared to couples without in which the woman does not have a history of sexual assault.

Aim 3: Understand the mediating mechanisms through which sexual assault history influences relationship satisfaction using structural equation modeling.

Hypothesis 6: The links from CSA and ASA to men's and women's relationship satisfaction will be simultaneously mediated by multiple indicator models of woman's mental health (comprised of woman's depression and generalized anxiety), couple level dysfunction in sexual intimacy (comprised of woman's and

man's ratings), and couple level dysfunction in emotional intimacy (comprised of woman's and man's ratings).

Hypotheses 7: The three mediators examined in the present study will only partially mediate the relation between ASA/CSA and relationship satisfaction. Therefore, after the hypothesized mediators are included in the model, a negative direct association between women's past incidence of CSA and ASA and her own and her partner's current relationship functioning will remain.

Chapter 2: Method

Procedure

Participants were couples recruited for a larger study evaluating the efficacy of an online, relationship focused, self-help program. Individuals were recruited through online Facebook and Google advertisements as well as organic (i.e., free) search results. Links sent participants to a website (www.OurRelationship.com), where information about the larger, web-based couple intervention study was provided. If individuals remained interested, a link to an online screening measure was provided. An informed consent document was displayed and individuals were asked to check a box indicating whether they agreed with the informed consent information. Upon consenting, participants gained access to the online screening questionnaire. Upon completion, participants were informed that their partners were required to also complete the screening measure before eligibility for the larger study could be determined. Partners within a couple were matched by a variety of couple specific variables (e.g., self and partner name, relationship status, date starting dating, date married).

Participants

A total of 438 heterosexual couples (876 individuals) consented and were matched to their partners. Of these couples, 75% were married, 10% engaged, and 15% cohabiting for at least six months. Couples were primarily Caucasian (71% of women, 68% of men) or African American (14% of women, 16% of men), with fewer Asian American (5% of women, 4% of men), Native Hawaiian/Pacific Islander (3% of women, 4% of men), American Indian/Alaskan Native (<1% of women, <1% of men), and multi-

ethnic (6% of women, 4.5% of men) individuals. Additionally, 14% of women and 13% men identified as Hispanic/Latino. The average age of the couples was in the thirties (Women M = 34.50; SD = 10.02; Men M = 39.91; SD = 10.92). Education level among the women and men was also diverse; 28% of women and 39% of men obtained a High School diploma or GED, another 24% of women and 21% of men obtained an Associate's Degree, and 27% of women and 24% of men earned a Bachelor's Degree. Fewer reached the Master's Degree (17% of women, 11% of men) or Doctoral Degree (4% of women, 6% of men) level of education. The median household income among the sample was $61,000 (M = 84,191, SD = 80,966), somewhat higher than the 2012 median household income in the United States ($51,371; U.S. Department of Commerce, 2013). Average relationship satisfaction as measured by the Couple Satisfaction Index – 4 Item (Funk & Rogge, 2007) was within the distressed range (<13) for both women (M = 8.02, SD = 4.70, *Median* = 8.00) and men (M = 9.89, SD = 4.80, *Median* = 10.00)

Sexual assault history was measured in both men and women; however only influence of women's sexual assault history was used in the present study as the rate among men is too low to fully examine. Indeed, only 10% (n = 44) of men reported a history of CSA, and 2.5% (n = 11) reported a history of ASA. In contrast, the prevalence of both assault types was considerably higher among women. CSA was reported by 32% (n = 141) and ASA was reported by nearly 14% (n = 60).

Measures

Sexual assault history. To assess sexual assault history, each woman was asked if she had forced or threatened sexual contact with someone. Women indicated whether a sexual assault occurred before age 18, after the age 18, or both. As a result, histories of

CSA and ASA were collected on each woman. Sexual assault was defined as unwanted forced or threatened touching of genitals, buttocks, breasts, or intercourse in which the individual felt at least "somewhat" fearful, horrified, or/and hopeless on one-item, seven-point likert scale (0 = *Not at all*; 1 = *A tiny bit*; 2 = *A little*; 3 = *Somewhat*; 4= *Mostly*; 5 = *Very*, 6 = *Extremely*). This item was adapted to measure criterion A of the DSM-IV-TR PTSD diagnosis (American Psychiatric Association, 2000) and has been previously used in the broader trauma literature to investigate the role of trauma severity on subsequent post-traumatic stress symptomology (e.g., Blanchard, Hickling, Mitnick, Taylor, Loos, & Buckley, 1995). Inconsistent with previous literature on re-victimization, rates of CSA and ASA were not highly correlated (r = .152, p = .001) in the present sample.

Current anxiety symptoms. To measure current symptoms of generalized anxiety, the Generalized Anxiety Disorder 7-item scale was used (GAD-7; Spitzer, Kroenke, Williams, & Lowe, 2006). Individuals rated how often they had been bothered by anxiety symptoms over the previous two weeks on a 4-point Likert scale (i.e., *Not at all, Several days, More than half the days, Nearly every day*). The GAD-7 has excellent internal consistency (Cornbach α = 0.92; Spitzer et al., 2006), and also demonstrates good test-retest reliability (intraclass correlation = 0.83; Spitzer et al., 2006). In the current sample, the reliability was consistent with previous studies (α = 0.92).

Current depressive symptoms. To measure current symptoms of depression, the Center for Epidemiologic Studies – Depression scale was used (CES-D; Cole, Rabin, Smith, & Kaufman, 2004). The original CES-D has been widely used to measure depression in non-clinical, community samples. The short form includes 10 items scored on a 0 – 3 Likert scale (i.e., *Rarely or none of the time - less than 1 day, Some or a little*

of the time - 1-2 days, Occasionally or a moderate amount 3-4 days, Most or all of the time - 5-7 days) measuring the frequency with which symptoms are experienced during the past week. Reliability for the 10-item CES-D in the present study was good (Cronbach α = .85). The 10-item CES-D is also highly correlated (r = .74) with the Beck Depression Inventory (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961), a well-established, longer measure of depression (Cole, Rabin, Smith, & Kaufman, 2004).

Emotional and Sexual Intimacy. Emotional intimacy and sexual intimacy were assessed by two subscales from the Personal Assessment of Intimacy in Relationships (PAIR; Schaefer & Olson, 1981). Both subscales demonstrated acceptable internal consistency in the present study (Cronbach α's: Emotional Intimacy = 0.83, Sexual Intimacy = 0.76). Using a 5-point Likert scale, participants indicated their agreement with items such as "I often feel distant from my partner" and "I feel neglected at times by my partner" (Emotional Intimacy) and Sexual Intimacy items such as "I am satisfied with our sex life" and "I am able to tell my partner when I want sexual intercourse". The authors added two additional items to the Sexual Intimacy subscale to assess anxiety and avoidance around sexual intimacy. Preliminary analyses indicated that addition of these items to the published scale slightly raised the internal reliability (Cronbach α = .79), and as a result these items were included in the overall scale.

Relationship satisfaction. Relationship satisfaction was measured using the Couple Satisfaction Index (4) (CSI-4 - Funk & Rogge, 2007). The CSI-4 demonstrated high internal consistency in the present study (Cronbach α = .93). Further, previous studies have demonstrated that it is highly correlated with longer measures of relationship

satisfaction, provides more precise information, and is able to detect subtle group difference in satisfaction (Funk & Rogge, 2007).

Chapter 3: Results

Prevalence of Sexual Assault

The current study replicated previously reported rates of ASA (i.e., 9-22%); the rate of women's ASA in the present study was 13.7%. Prevalence of CSA also replicated existing rates. Extant literature suggests a prevalence rate of CSA in women of approximately 25%; the rate of CSA in women in the current sample was 32% replicating and exceeding the rate found previous research.

Association of ASA and CSA with Relationship Satisfaction

It was hypothesized that women with a history of assault and their partner's would report more difficulties in current emotional and sexual intimacy, as well as overall relationship satisfaction. Preliminary analyses were conducted to test whether satisfaction and functioning in these areas were associated with relationship length. Results from the present study indicated that they were not (*Relationship Satisfaction*: Women b = 0.038 (*S.E.* = .027), t (432) = 1.418 p = .157, Men b = 0.015 (*S.E.* = .028), t (432) = .543 p = .587; *Sexual Intimacy*: Women b = 0.051 (*S.E.* = .030), t (431) = 1.680 p = .094, Men b = 0.006 (*S.E.* = .029), t (432) = 0.217 p = .828; *Emotional Intimacy*: Women b = 0.026 (*S.E.* = .029), t (432) = 0.894 p = .372, Men b = 0.031 (*S.E.* = .030), t (432) = 1.032 p = .303). Therefore, length of current romantic relationship was not controlled for in subsequent multiple regression analyses.

To examine the association between assault history and relationship functioning, multiple regression analyses were conducted. Results demonstrated that neither women's history of ASA nor CSA were significantly associated with women's relationship

satisfaction (ASA: b = -1.171 (*S.E.* = .659), t (435) = -1.776 p = .076; CSA: b = -0.070 (*S.E.* = .485), t (435) = -.145 p = .885) or men's relationship satisfaction (ASA: b = -0.627 (*S.E.* = .674), t (435) = -.931 p = .352; CSA: b = 0.741 (*S.E.* = .496), t (435) = 1.494 p = .136).

Association of ASA and CSA with Mental Health

It was hypothesized that both women with a history of ASA and/or CSA would report more symptoms of depression and anxiety compared to women without a history of sexual assault. To test this hypothesis, multiple regression analyses were used in order to examine the association of each assault type while controlling for the influence of the other. Results indicated that both ASA (b = 3.078 (*S.E.* = .926), t (435) = 3.324 p = .001) and CSA (b = 2.317 (*S.E.* = .681), t (435) = 3.400 p = .001) were significantly associated with depressive symptoms. A similar pattern emerged for symptoms of GAD, such that women with a history of ASA (b = 2.913 (*S.E.* = .846), t (435) = 3.442 p = .001) and CSA (b = 1.900 (*S.E.* = .623), t (435) = 3.050 p = .002) reported more anxiety symptoms compared to women without a history of sexual assault.

Association of CSA and ASA with Sexual and Emotional Intimacy

It was also hypothesized that couples within which the woman had a history of sexual assault would report lower emotional intimacy. This hypothesis was supported for women (ASA: b = -1.790 (*S.E.* = .708), t (435) = -2.530 p = .012; CSA: b = -1.096 (*S.E.* = .521), t (435) = -2.104 p = .036), suggesting that, controlling for the influence of the other assault type, both ASA and CSA are significantly associated with poorer emotional intimacy for women. This hypothesis was not supported for men (ASA: b = -0.836 (*S.E.*

= .722), t (435) = -1.158 p = .247; CSA: b = -0.315 (*S.E.* = .531), t (435) = -0.592 p = .554), suggesting that a history of women's sexual assault is not associated with their partner's report of emotional intimacy. Finally, it was hypothesized that women's history of sexual assault would be associated with sexual intimacy. This hypothesis was not supported for either women (ASA: b = -0.449 (*S.E.* = .737), t (434) = -0.609 p = .543; CSA: b = -0.181 (*S.E.* = .542), t (434) = -0.334 p = .739) or men (ASA: b = -0.654 (*S.E.* = .705), t (435) = -.928 p = .354; CSA: b = 0.885 (*S.E.* = .518), t (435) = 1.707 p = .089).

Mediation Model

Though the Baron and Kenny (1986) approach for testing mediation requires a significant direct effect, others have demonstrated that this requirement has very low power to detect mediation effects (Fritz & MacKinnon, 2007; MacKinnon, Lockwood, Hoffman, West & Sheets, 2002). Subsequently, alternate methods with increased power compared to the Baron and Kenny approach have been suggested to test for mediation (i.e., bias-corrected bootstrap test, join significance test, PRODCLIN asymmetric confidence test; Fritz & Mackinnon). The current study utilized PRODCLIN asymmetric confidence-interval test.

In an SEM framework, a multiple indicator model was used to examine women's mental health, where mental health was measured as a latent variable combining depression (CES-D) and anxiety (GAD-7) symptom ratings (r = .778, p < .000) using Mplus (Muthén & Muthén, 1998-2010). The latent construct was scaled to depressive symptom indicator, and the anxiety estimate loading was significant (λ = 0.889, *SE* = 0.034, p < .000). Residual variances of the two indicators were constrained to be equal, as

they reflect similar metrics. Examining model fit in this analysis was not informative, as the model was fully identified.

Multiple indicator models for couple level emotional and sexual intimacy, which were originally planned, were not utilized for two reasons. Most importantly, the correlation between men and women's emotional intimacy and men's and women's sexual intimacy, as shown in *Table* 2, was not high enough to warrant combining the variables into couple level constructs. Second, findings indicated that sexual assault history was not related to men's emotional or sexual intimacy, suggesting that women's but not men's intimacy should be retained in the model.

As a result, the final structural model (*Figure 1*) simultaneously examined women's mental health, women's emotional intimacy, and women's sexual intimacy as mediating variables of the relationship between sexual assault history and men's and women's relationship satisfaction. As women's mental health, emotional intimacy, and sexual intimacy may covary with one another, the residual variance of the constrained indicators was allowed to correlate with the residual variance of emotional and sexual intimacy, and the residuals variances of the intimacy types were also allowed to correlate. Finally, as relationship satisfaction is correlated among partners, the residual variances of these variables were also allowed to correlate. The chi-square test of model fit was not significant indicating that the proposed model was a good fit for the data (χ^2 (6) = 2.657, p = .850; RMSEA = 0.000; CFI = 1.000; TLI = 1.014).

Standardized effects are shown in *Figure 1* and unstandardized effects are listed in *Table 3*. Results demonstrated that both CSA and ASA were significantly positively

associated with mental health symptoms as well as negatively related to emotional (but not sexual) intimacy in women. In examining the role of the hypothesized mediating variables on relationship satisfaction, emotional intimacy as reported by women was significantly negatively associated with both women's and men's relationship satisfaction. Sexual intimacy was also significantly associated negatively with women's relationship satisfaction; however, it was not associated with men's. The multiple indicator model of women's mental health was not associated with either men's or women's relationship satisfaction.

Mediation analyses were conducted to further clarify the role of emotional intimacy. Results indicated that emotional intimacy mediated the relationship between ASA (95% CI: 0.263 – 2.071) and women's relationship satisfaction as well as the relationship between CSA (95% CI: 0.051 – 1.378) and women's relationship satisfaction. Additionally, results suggested that emotional intimacy as reported by women mediated the association between women's ASA (95% CI: -1.373 – -0.166) and men's relationship satisfaction as well as women's CSA and men's relationship satisfaction (95% CI: -0.911 – -0.032).

While initial results indicated no direct effect between CSA and relationship satisfaction in either partner, including all variables simultaneously revealed a suppressor effect. A suppressor effect in regression analyses occurs when the strength of an effect increases upon the addition of a third variable. After accounting for the variance associated with women's mental health, ASA, and emotional and sexual intimacy, women's CSA was significantly associated with higher levels of both men's and

women's relationship satisfaction. Consistent with initial analyses, ASA remained unassociated with either man's or woman's relationship satisfaction.

Chapter 4: Discussion

Summary of Findings

The current study sought to examine the direct and mediated influences of women's child and adult sexual assault history on her own and her partner's relationship satisfaction.

Mental health. Results demonstrated that women with a history of CSA and/or ASA reported higher levels of mental health symptoms*;* however, this multiple indicator model demonstrated that women's mental health was unrelated to either men's or women's relationship satisfaction. This finding is inconsistent with previous research demonstrating strong and replicated links between mental health symptoms and marital distress in both partners (e.g., Whisman, 2007; Whisman & Bruce, 1999; Whisman, Uebelacker, & Weinstock, 2004). However, the couples assessed in previous research were recruited from the general community, and exhibited a wide range of relationship satisfaction. However in the present study, the majority of men and women were in the significantly distressed range of relationship satisfaction. As a result, the influence of women's mental health on relationship satisfaction may not have been detectable.

Sexual intimacy. Neither CSA nor ASA were associated with women's report of sexual intimacy. Further, women's report of sexual intimacy was unrelated to men's relationship satisfaction; however, sexual intimacy was positively associated with relationship satisfaction for women.

While inconsistent with previous literature, the measure used to tap dysfunctional sexual intimacy in the present study may actually represent potentially two distinct

constructs: dissatisfaction with sex (e.g., I am satisfied with our sex life, I feel our sex life is just routine) and discomfort with sex (e.g., I "hold back" my sexual interest because my partner makes me feel uncomfortable, I feel uncomfortable, uneasy, or anxious with sexual intimacy). Failing to tease apart these two pieces of sexual intimacy may have resulted in the lack of significant associations with sexual assault history.

Emotional intimacy. Finally, results demonstrated that women with a history of CSA and/or ASA reported lower emotional intimacy. Dysfunction in this domain, in turn, was related to lower levels of both women's and men's relationship satisfaction. Though initial analyses of direct effects may have lacked sufficient power to identify a direct effect of sexual assault on relationship satisfaction, mediation analyses indicated that dysfunctional emotional intimacy mediated the association between both ASA and CSA and both partner's relationship satisfaction.

Existing literature may provide insight into how previous CSA or ASA events may impact a woman's emotional intimacy with her current romantic partner. Adult women with a history of CSA exhibit lower overall self-esteem compared to women without a history of CSA (Mullen, Martin, Anderson, Romans, & Herbison, 1996). Women with a history of ASA demonstrate similar symptoms of low self-esteem (Murphy, Amick-McMullen, Kilpatrick, Haskett, Veronen, Best, & Saunders, 1988; Resick, 1988), as well as defensive avoidance and fear of vulnerability (Elliot et al., 2004). Disruptions in core cognitive beliefs are also shown in survivors of ASA; perceptions of personal safety and invulnerability are contradicted (Koss & Burkhart, 1989).

These emotional and cognitive constructs may be key components in the ability to self-disclose with one's partner and thus enhance emotional intimacy. Reis and Shaver (1988) described emotional intimacy as a transaction among a dyad which contains self-revealing disclosure and responsiveness. As one partner reveals information the other reflects and displays understanding, validation, and caring. Intimacy results when the revealing partner perceives the listening partner's responsiveness. The lack of emotional intimacy among intimate partners often results in maladaptive relationship functioning (Fruzetti, 1996). The negative association to relationship functioning may result from more frequent invalidation of self-revealing disclosures in dissatisfied couples (Clements, Markman, Cordova, & Laurenceau, 1997). Cordova and colleagues (2005) showed that deficits in emotional skillfulness (i.e., the ability to identify and communicate emotions) is associated with lower dyadic comfort, vulnerable self-disclosure, and results in marital maladjustment.

Moreover, gender differences in perceived emotional intimacy provides an additional avenue for understanding the mediating role of dysfunctional emotional intimacy on the influence of sexual assault history on current relationship functioning. Research suggests that men's level of intimacy is predicted more by *his own* disclosures, while women's intimacy is predicted by *her partner's* empathic response to her disclosure (Mitchell et al., 2008). Among couples in which the woman has experienced CSA and/or ASA, it may be that women's emotional intimacy is negatively impacted due to the fact that she is unable to self-disclose. This, in turn, results in inability for her partner to empathically respond.

Treatment Implications

Results from the present study support the inclusion of emotional intimacy as a target for improvement, and highlight that improvement in this area may be especially important for couples in which the woman has endured a history of CSA or ASA. Couple therapy has consistently been shown to improve relationship satisfaction (Shadish & Baldwin, 2003, 2005; Christensen et al., 2004). Further, many approaches to improving relationship satisfaction specifically target emotional intimacy among partners as an important therapy mechanism (e.g., emotion focused therapy, integrative behavioral couple therapy); however it is not included in all couple focused interventions (e.g., behavioral couple therapy; Jacobson & Christensen, 1996).

Additionally, results from this study indicate that it may be important to specifically assess for a history of sexual assault during the assessment phase of therapy. As this study demonstrates, women's history of either CSA or ASA may place their intimate relationship at risk for difficulties in emotional intimacy and, as a result, difficulties in relationship satisfaction. Therefore, it may be helpful to assess and understand the role that previous sexual assault may be playing in a particular client's relationship – either in an effort to map the sources of the distress or to increase acceptance of it.

Strengths, Limitations, and Future Directions

The present study has many strengths worth noting. First, it was the first of its kind to simultaneously examine the role of both CSA and ASA on multiple intrapersonal and interpersonal domains of functioning. Extant literature has often examined only one

type of sexual assault history. By combining multiple consequences of sexual assault into one cohesive model, it was possible to disentangle important influences. Second, this study took an important step forward in understanding the influence of women's sexual assault history on not only their own functioning, but also that of their romantic partners. This methodological advancement has not been utilized in previous research. Third, no study to date has taken a mediational approach to investigating multiple assault types on both partner's relationship functioning. Finally, an advanced statistical approach was taken to most effectively elucidate the potential associations of sexual assault history on current functioning.

However, the current study is not without limitations. The present study utilized only self-report data, and as a result responses may have been biased. Participants may have over- or under-reported individual and couple functioning. Observational measures may provide a more accurate assessment. Second, participants in the present study were in the process of seeking outside assistance for relationship problems and were more distressed in their relationship than average couples. Therefore, the results from this study may not generalize to couples who are non-distressed in their relationships. Third, though the percentage of women with sexual assault history was consistent with existing prevalence rates, the number may have been too small to detect the hypothesized effects. Future research attempts in this domain should recruit a larger number of couples in which the woman has a history of child sexual assault or adult sexual assault in order to replicate and extend the current study's findings. In line with this limitation, the present study only investigated the influence of women's sexual assault history. It would be wise for future research to simultaneously investigate the influence of sexual assault history in

men on relationship functioning. Finally, though both CSA and ASA events occurred prior to couples' reports of current functioning giving the study the ability to consider the direction of effects, causal inferences cannot be made. Future research should employ a longitudinal design in order to make these conclusions as well as to extend and further clarify the results of the present study.

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Tables and Figures

Table 1
Descriptive Statistics

	Women	Men
	Mean (SD)	Mean (SD)
Relationship Satisfaction	8.02 (4.69)	9.89 (4.90)
Emotional Intimacy Dysfunction	21.71 (5.09)	18.54 (5.14)
Sexual Intimacy Dysfunction	23.30 (5.23)	22.21 (5.02)
Depressive Symptoms	11.61 (6.77)	--
Anxious Symptoms	9.88 (6.17)	--

Table 2
Within and between partner bivariate correlations

	1. Relationship Satisfaction	2. Emotional Intimacy	3. Sexual Intimacy	4. Anxiety Symptoms	5. Depressive Symptoms	6. CSA	7. ASA
1.	**.565****	.692**	.493**	--	--	--	--
2.	.745**	**.341****	.519**	--	--	--	--
3.	.377**	.380**	**.348****	--	--	--	--
4.	-.236**	-.316**	-.132**	--	--	--	--
5.	-.286**	-.350**	-.168**	.778**	--	--	--
6.	-.020	-.199*	-.021	.169**	.184**	--	--
7.	-.087	-.136**	-.032	.184**	.181**	.152**	--

Correlations among women's values are below the diagonal, correlations among men's values are above the diagonal, between-partner correlations are on the diagonal. Certain correlations are not available as men mental health and assault history was not assessed.
* $p < .05$; ** $p < .01$; *** $p < .001$

Table 3

Summary of Multiple Indicator Mediation Model[a]

Predictor	Outcome	Coeff.	Standard Error	*p* value
Adult Sexual Assault	W Mental Health	**3.169**	**0.881**	**.000**
	W Emotional Intimacy	**-1.790**	**0.705**	**.011**
	W Sexual Intimacy	-0.451	0.734	.539
	W Relationship Satisfaction	0.103	0.442	.815
	M Relationship Satisfaction	0.198	0.614	.747
Child Sexual Assault	W Mental Health	**2.240**	**0.648**	**.001**
	W Emotional Intimacy	**-1.096**	**0.519**	**.035**
	W Sexual Intimacy	-0.184	0.840	.733
	W Relationship Satisfaction	**0.707**	**0.324**	**.029**
	M Relationship Satisfaction	**1.255**	**0.451**	**.005**
W Mental Health	W Relationship Satisfaction	-0.023	0.029	.439
W Emotional Intimacy		**0.647**	**0.034**	**.000**
W Sexual Intimacy		**0.096**	**0.030**	**.002**
W Mental Health	M Relationship Satisfaction	-0.027	0.041	.504
W Emotional Intimacy		**0.416**	**0.047**	**.000**
W Sexual Intimacy		-0.014	0.042	.749

[a]Direct effects reported as unstandardized coefficients

Figure 1
Final Structural Model

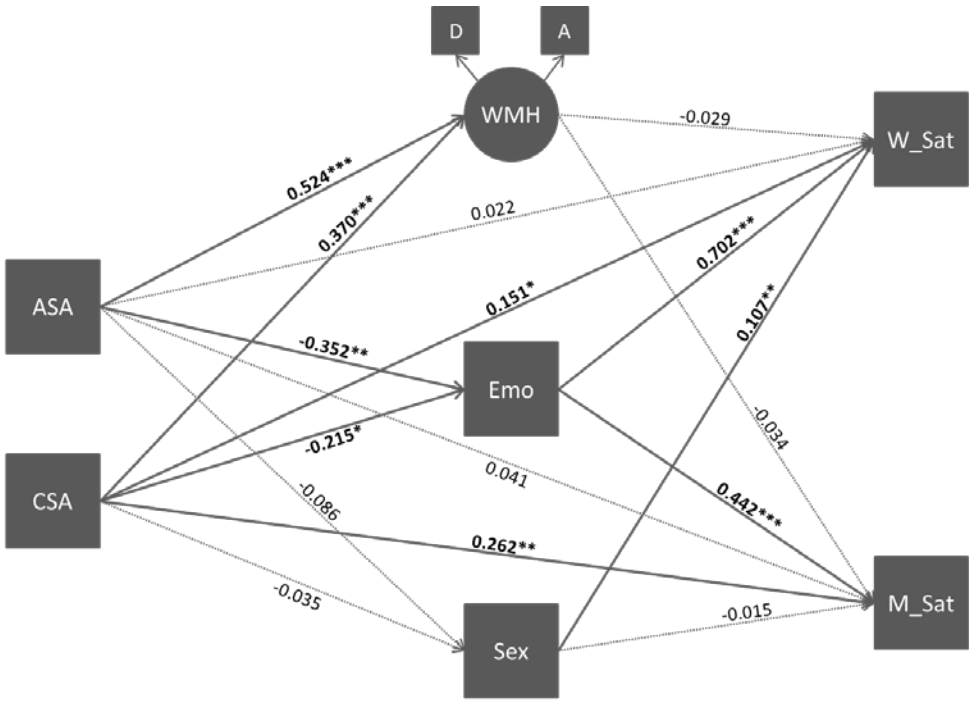

Figure 1. Standardized coefficients from structural model of woman's sexual assault history predicting own mental health symptom, sexual intimacy, emotional intimacy, and own and partner relationship satisfaction. WMH = women's mental health, D = woman's depressive symptoms, A = woman's anxiety symptoms, Emo = woman's rating of dysfunction in emotional intimacy, Sex = woman's rating of dysfunction in exual Intimacy, W_Sat = woman's relationship satisfaction, M_Sat = man's relationship satisfaction

Appendix

Sexual Assault History

Did you ever have unwanted sexual contact with someone (e.g., touching their or your genitals, buttocks, breasts, or having intercourse) because you were threatened or physically forced? (Mark as many as apply.)	☐ Yes, as an adult (> age 18) ☐ Yes, as a child (< age 18) ☐ No
In relation to your experience of forced or threatened sexual contact as an adult, how ***afraid***, ***helpless***, and/or ***horrified*** were you during this incident? If more than one incidence, how ***afraid***, ***helpless***, and/or ***horrified*** were you typically or on average during the incidents?	o Not at all o A tiny bit o A little o Somewhat o Mostly o Very o Extremely

Anxious Symptoms

Over the last 2 weeks, how often have you been bothered by the following problems?	
1. Feeling nervous, anxious or on edge	0 – Not at all 1 – Several days 2 – More than half the days 3 – Nearly every day
2. Not being able to stop or control worrying	0 – Not at all 1 – Several days 2 – More than half the days 3 – Nearly every day
3. Worrying too much about different things	0 – Not at all 1 – Several days 2 – More than half the days 3 – Nearly every day
4. Trouble relaxing	0 – Not at all 1 – Several days 2 – More than half the days 3 – Nearly every day
5. Being so restless that it is hard to sit still	0 – Not at all 1 – Several days 2 – More than half the days 3 – Nearly every day
6. Becoming easily annoyed or irritable	0 – Not at all 1 – Several days 2 – More than half the days 3 – Nearly every day

7. Feeling as if something awful might happen	0 – Not at all 1 – Several days 2 – More than half the days 3 – Nearly every day

Depressive Symptoms

Below is a list of the ways you might have felt or behaved. Please rate how often you have felt this way ***during the past week.***	
1. I was bothered by things that usually don't bother me	0 – Rarely or none of the time (less than 1 day) 1 – Some or a little of the time (1-2 days) 2 – Occasionally or a moderate amount (3-4 days) 3 – Most or all of the time (5-7 days)
2. I felt that I could not shake off the blues even with the help from my friend or family	0 – Rarely or none of the time (less than 1 day) 1 – Some or a little of the time (1-2 days) 2 – Occasionally or a moderate amount (3-4 days) 3 – Most or all of the time (5-7 days)
3. I felt that I was just as good as other people	3 – Rarely or none of the time (less than 1 day) 2 – Some or a little of the time (1-2 days) 1 – Occasionally or a moderate amount (3-4 days) 0 – Most or all of the time (5-7 days)
4. I had trouble keeping my mind on what I was doing	0 – Rarely or none of the time (less than 1 day) 1 – Some or a little of the time (1-2 days) 2 – Occasionally or a moderate amount (3-4 days) 3 – Most or all of the time (5-7 days)
5. I felt that everything I did was an effort	0 – Rarely or none of the time (less than 1 day) 1 – Some or a little of the time (1-2 days) 2 – Occasionally or a moderate amount (3-4 days) 3 – Most or all of the time (5-7 days)
6. I felt hopeful for the future	3 – Rarely or none of the time (less than 1 day) 2 – Some or a little of the time (1-2 days) 1 – Occasionally or a moderate amount (3-4 days) 0 – Most or all of the time (5-7 days)
7. I felt my life had been a failure	0 – Rarely or none of the time (less than 1 day) 1 – Some or a little of the time (1-2 days) 2 – Occasionally or a moderate amount (3-4 days) 3 – Most or all of the time (5-7 days)
8. I felt fearful	0 – Rarely or none of the time (less than 1 day) 1 – Some or a little of the time (1-2 days) 2 – Occasionally or a moderate amount (3-4 days) 3 – Most or all of the time (5-7 days)
9. I felt lonely	0 – Rarely or none of the time (less than 1 day) 1 – Some or a little of the time (1-2 days) 2 – Occasionally or a moderate amount (3-4 days) 3 – Most or all of the time (5-7 days)

10. People were unfriendly	0 – Rarely or none of the time (less than 1 day) 1 – Some or a little of the time (1-2 days) 2 – Occasionally or a moderate amount (3-4 days) 3 – Most or all of the time (5-7 days)

Dysfunction in Emotional Intimacy

The following statements describe your relationship. Please rate your agreement with each item.	
1. I often feel distant from my partner	1 – Strongly Disagree 2 – Disagree 3 – Neither Agree nor Disagree 4 – Agree 5 – Strongly Agree
2. My partner can really understand my hurts and joys.	5 – Strongly Disagree 4 – Disagree 3 – Neither Agree nor Disagree 2 – Agree 1 – Strongly Agree
3. My partner listens to me when I need someone to talk to.	5 – Strongly Disagree 4 – Disagree 3 – Neither Agree nor Disagree 2 – Agree 1 – Strongly Agree
4. I can state my feelings without him/her getting defensive.	5 – Strongly Disagree 4 – Disagree 3 – Neither Agree nor Disagree 2 – Agree 1 – Strongly Agree
5. I feel neglected at times by my partner	1 – Strongly Disagree 2 – Disagree 3 – Neither Agree nor Disagree 4 – Agree 5 – Strongly Agree
6. I sometimes feel lonely when we're together.	1 – Strongly Disagree 2 – Disagree 3 – Neither Agree nor Disagree 4 – Agree 5 – Strongly Agree

Dysfunction in Sexual Intimacy

The following statements describe your relationship. Please rate your agreement with each item.	
1. I am satisfied with our sex life	5 – Strongly Disagree 4 – Disagree 3 – Neither Agree nor Disagree 2 – Agree 1 – Strongly Agree
2. I feel our sexual activity is just routine	1 – Strongly Disagree 2 – Disagree 3 – Neither Agree nor Disagree 4 – Agree 5 – Strongly Agree
3. I am able to tell my partner when I want sexual intercourse	5 – Strongly Disagree 4 – Disagree 3 – Neither Agree nor Disagree 2 – Agree 1 – Strongly Agree
4. I "hold back" my sexual interest because my partner makes me feel uncomfortable	1 – Strongly Disagree 2 – Disagree 3 – Neither Agree nor Disagree 4 – Agree 5 – Strongly Agree
5. Sexual expression is an essential part of our relationship	5 – Strongly Disagree 4 – Disagree 3 – Neither Agree nor Disagree 2 – Agree 1 – Strongly Agree
6. My partner seems disinterested in sex	1 – Strongly Disagree 2 – Disagree 3 – Neither Agree nor Disagree 4 – Agree 5 – Strongly Agree
7. I feel uncomfortable, uneasy, or anxious with sexual intimacy	1 – Strongly Disagree 2 – Disagree 3 – Neither Agree nor Disagree 4 – Agree 5 – Strongly Agree
8. I avoid situations involving sexual intimacy with my partner.	1 – Strongly Disagree 2 – Disagree 3 – Neither Agree nor Disagree 4 – Agree 5 – Strongly Agree

Relationship Satisfaction

Please indicate the degree of happiness, all things considered, of your relationship.	0-Extremely Unhappy 1-Fairly Unhappy 2-A Little Unhappy 3-Happy 4-Very Happy 5-Extremely Happy 6-Perfect
I have a warm and comfortable relationship with my partner	0-Not at all True 1-A little True 2-Somewhat True 3-Mostly True 4-Almost Completely True 5-Completely True
How rewarding is your relationship with your partner?	0-Not at all 1-A little 2-Somewhat 3-Mostly 4-Almost Completely 5-Completely
In general, how satisfied are you with your relationship?	0-Not at all 1-A little 2-Somewhat 3-Mostly 4-Almost Completely 5-Completely