Psychological Trauma: Theory, Research, Practice, and Policy

Sexual Dysfunction in Women With a History of Childhood Sexual Abuse: The Role of Sexual Shame

Carey S. Pulverman and Cindy M. Meston

Online First Publication, August 15, 2019. http://dx.doi.org/10.1037/tra0000506

CITATION

Pulverman, C. S., & Meston, C. M. (2019, August 15). Sexual Dysfunction in Women With a History of Childhood Sexual Abuse: The Role of Sexual Shame. *Psychological Trauma: Theory, Research, Practice, and Policy*. Advance online publication. http://dx.doi.org/10.1037/tra0000506



TRAUMA PSYCHOLOGY

http://dx.doi.org/10.1037/tra0000506

Sexual Dysfunction in Women With a History of Childhood Sexual Abuse: The Role of Sexual Shame

Carey S. Pulverman VA VISN 17 Center of Excellence for Research on Returning War Veterans and the Central Texas Veterans Health Care System, Waco, Texas, and Dell Medical School – The University of Texas at Austin Cindy M. Meston The University of Texas at Austin

Objective: Women with histories of childhood sexual abuse (CSA) are at a higher risk for sexual dysfunction, and show a differential response to sex therapy, than women without abuse histories. The factors underlying those differences have yet to be clearly articulated by the literature. This study examined potential mechanisms of action to account for the relationship between CSA and sexual function. *Method:* Participants were 120 adult women recruited from the local community. Women completed a single laboratory session in which they viewed a short erotic film and completed a battery of questionnaires on sexual health. Data were analyzed with structural equation modeling mediation, an approach that enables comparison between groups of women. *Results:* Sexual shame completely mediated the relationship between history of CSA and sexual function, and explained this relationship between the sexual function of women with and without histories of CSA. Results suggest that differences in sexual shame may contribute to differences in sexual function between these groups. For women with CSA histories treatments that aim to reduce sexual shame may improve sexual function.

Clinical Impact Statement

Women with histories of CSA are at a higher risk for sexual dysfunction than their peers without abuse histories. Findings suggest differences in sexual shame contribute to differences in sexual function between these groups. Treatment approaches that aim to reduce sexual shame may improve sexual function in women with CSA histories.

Keywords: sexual trauma, sexual abuse, sexual health, sexual dysfunction, women

According to studies in the United States, approximately 43% of women report sexual difficulties in one or more domains of sexual function including desire, arousal, orgasm, and pain (Laumann, Paik, & Rosen, 1999; Shifren, Monz, Russo, Segreti, & Johannes, 2008). Sexual dysfunction negatively impacts quality of life (Rosen & Bachmann, 2008; Stephenson & Meston, 2015), and has been associated with elevated rates of depression (Atlantis & Sullivan, 2012), and relationship diffi-

culties (Metz & Epstein, 2002). One of the most potent risk factors for sexual dysfunction is experiencing sexual abuse in childhood, defined here as unwanted sexual contact before the age of 16 (Kilimnik, Pulverman, & Meston, 2018). Notably, 65% to 85% of women with histories of CSA report sexual dysfunction, nearly twice the rate reported by the general population of women (Pulverman, Kilimnik, & Meston, 2018).

Department of Psychology. The writing of this article was partially supported by the Office of Academic Affiliations Advanced Fellowship Program in Mental Illness, Research, and Treatment, and the VISN 17 Center of Excellence for Research on Returning War Veterans. The views expressed in this article are those of the authors and do not necessarily reflect the position or policy of the Department of Veterans Affairs or the United States government.

Correspondence concerning this article should be addressed to Carey S. Pulverman, Department of Psychiatry, Dell Medical School – The University of Texas at Austin, Health Discovery Building, 1601 Trinity Street Building B, Austin, TX 78701. E-mail: pulverman@utexas.edu

Carey S. Pulverman, VA VISN 17 Center of Excellence for Research on Returning War Veterans and the Central Texas Veterans Health Care System, Waco, Texas, and Department of Psychiatry, Dell Medical School – The University of Texas at Austin; Cindy M. Meston, Department of Psychology, The University of Texas at Austin.

The authors have no conflicts of interest to report. This research was supported by the American Psychological Association, the American Psychological Association Society for the Psychology of Women, American Psychological Foundation, Austin Association of University Women, the Hogg Foundation for Mental Health, and the University of Texas at Austin

Differences have been noted between women with and without abuse histories in (a) the presentation of sexual dysfunction and (b) response to sex therapy. In the general population of women, low desire is the most common sexual complaint (Laumann et al., 1999; Shifren et al., 2008), however women with histories of abuse tend to report difficulties with both desire and arousal (Laumann et al., 1999; Leonard & Follette, 2002; van Berlo & Ensink, 2000). Two comprehensive reviews on the sexual sequelae of CSA found that desire dysfunction and arousal dysfunction were the sexual dysfunctions most commonly reported by women with histories of CSA (Leonard & Follette, 2002; Pulverman et al., 2018). In a national probability sample of 1,749 women, a history of sexual abuse was associated with a greater risk of arousal dysfunction than any other type of sexual dysfunction (Laumann et al., 1999). Notably, these studies failed to distinguish between physiological (genital) and psychological (mental/subjective) sexual arousal, thus it remains unknown whether women with CSA histories tend to suffer from genital sexual arousal difficulties, subjective arousal difficulties, or a combination of both.

Differences in sexual function between women with and without histories of CSA have also been noted in treatment response to sex therapy. Women with histories of CSA showed a lower treatment response to pharmacotherapies for sexual dysfunction than women without abuse histories (Berman, Berman, Bruck, Pawar, & Goldstein, 2001; van der Made et al., 2009). Clinical experts have suggested that pharmacotherapies designed to enhance genital sexual arousal directly may be overwhelming or inappropriate for this population (Hall, 2008; Maltz, 2012), yet this explanation has not been examined empirically. In contrast to these findings, women with histories of CSA showed a higher treatment response to mindfulness-based sex therapy than women without histories of CSA (Brotto, Basson, & Luria, 2008). When Brotto and colleagues compared CBT with mindfulness-based sex therapy among women with CSA histories, women in the mindfulness condition showed greater improvement in sexual function (Brotto, Seal, & Rellini, 2012). This series of studies suggests that mindfulnessbased sex therapy may be particularly effective for women with abuse histories, however the exact mechanism(s) of action remain unclear. In summary, women with and without histories of CSA show a differential response to sex therapy, which alludes to potential differences in sexual function between these two groups of women.

Inspired by the differences in sexual function between women with and without histories of CSA documented in the literature, the aim of the current study was to examine potential mechanisms of action to account for the relationship between CSA history and sexual function. Mechanisms that have been previously associated with CSA and/or women's sexual function were tested. One way of coping with hyperarousal and fear during CSA is dissociation, and research indicates that children who dissociate during sexual abuse may continue to use that coping method into adulthood (Boysan, Goldsmith, Cavuş, Kayri, & Keskin, 2009; Evans & Sullivan, 1995). Several authors posit that the dissociation response may negatively impact the sexual function of women with histories of abuse (Hansen, Brown, Tsatkin, Zelgowski, & Nightingale, 2012; Rellini, 2008). Dissociation in response to a sexual stimulus in the laboratory as well as self-report of dissociation during sexual activity with a partner were tested as potential mechanisms. CSA is often perpetrated by caregivers (Pereda,

Guilera, Forns, & Gómez-Benito, 2009), thus it has been associated with disruptions in attachment security (Aspelmeier, Elliott, & Smith, 2007; Roche, Runtz, & Hunter, 1999), which may also differ between women with and without abuse histories.

Distraction during sexual activity is a common cause of sexual dysfunction (Barlow, 1986). Barlow's cognitive-affective model of sexual function provides one of most parsimonious explanations for male and female sexual dysfunction (Barlow, 1986) and has strong empirical support (Cranston-Cuebas & Barlow, 1990; Wiegel, Scepkowski, & Barlow, 2007). This model posits that negative expectancies for sexual performance lead to distraction during sexual activity that impairs sexual performance. Little research has examined whether there are differences in the content of distracting thoughts that impair sexual function between women with and without histories of CSA. Among women in general, low body image has been identified as distracting during sexual activity and associated with sexual dysfunction (Meana & Nunnink, 2006; Purdon & Holdaway, 2006; Wiegel et al., 2007). The relationship between body image and sex may differ for women with and without abuse histories, therefore overall body image and genital self-image were tested as potential mechanisms. Shame about one's sexuality could also be distracting during sexual activity. Women with histories of CSA reporting high levels of shame tend to have greater difficulty recovering from psychological and sexual difficulties than women with less shame (Feiring & Taska, 2005; Feiring, Taska, & Chen, 2002). Shame specific to past sexual experiences and behaviors (i.e., sexual shame) was tested as an additional mediator. We tested the candidate mechanisms of dissociation during the erotic stimulus, dissociation during sexual activity, attachment security, body image, genital self-image, and sexual shame, to explain the relationship between a history of CSA and sexual function. It is also possible that some combination of these candidate mediators would best explain this relationship, thus any candidate mediators that showed completed mediation alone were then tested in a combined model to compare the strength of their predictive ability with the aim of determining the best fitting model.

Method

Participants

Participants were recruited from the local community via posted paper fliers, newspaper advertisements, and online advertisements. Advertisements targeted at women with and without sexual dysfunction, and women with histories of CSA respectively were utilized to recruit the different subgroups of women. All advertisements invited women to call the laboratory for a phone eligibility screening. Inclusion criteria included female sex, ages 18 to 49, fluent in English, a heterosexual or bisexual sexual orientation, and histories of CSA or no history of childhood or adulthood sexual abuse. We note that women with histories of CSA could also report histories of adulthood sexual abuse, but women in the nonabused sample were required to deny histories of both childhood and adulthood sexual abuse. The sexual orientation requirement was included because the stimulus film featured a heterosexual couple and in order to use the same stimulus film with all participants, participants were required to report at least some sexual attraction to men. If participants were currently taking

....

antidepressants, antipsychotics, antihypertensives, androgens, estrogens, or any medical treatments to enhance sexual response, they were required to be stabilized on the medication for at least 3 months, as these medications can impact sexual response. Exclusion criteria included currently experiencing menopause, currently being pregnant or breastfeeding, history of major pelvic surgery, currently taking anxiolytics such as benzodiazepines or beta blockers, and current psychosis, as all of these variables can affect sexual response.

The inclusion and exclusion criteria resulted in a final sample of 120 women, approximately split between women without a history of abuse (NSA; n = 57) and with a history of abuse (CSA; n =63). Participants' ages ranged from 18 to 49 with a mean age of 27.66 (SD = 7.31). There was no significant difference in age between groups, F(1, 119) = 3.17, p = .08. There were significantly more bisexual women in the CSA group than the NSA group, $\chi^2(2) = 6.63$, p < .05. Sexual orientation was tested as a potential covariate in the mediation analyses and did not impact results, therefore we present the results without this covariate included. There were no significant differences in race between groups, $\chi^2(4) = 3.76$, p = .43; Fisher's exact test = 3.66, p = .43; Cramer's V = .18, p = .44. There was no significant difference in ethnicity between groups, $\chi^2(1) = 1.40$, p = .24. There were no significant differences in education history between groups, $\chi^{2}(4) = 3.31, p = .53$; Fisher's exact test = 3.40, p = .51; Cramer's V = .17, p = .52. There was no significant difference in relationship status between groups, $\chi^2(1) = 2.18$, p = .14. Demographic characteristics by abuse group are reported in Table 1.

Table 1			
Sample Demographics for	Women	With and	Without
Abuse Histories			

		NSA		CSA	
	п	M (SD)	n	M (SD)	
Age	57	26.42 (6.0)	63	28.78 (8.21)	
Sexual orientation					
Heterosexual	52	91.2	46	73	
Bisexual	5	8.8	17	27	
Race					
Caucasian	36	63.2	44	69.8	
Asian	9	15.8	5	7.9	
Biracial/Multiracial	8	14	6	9.5	
African American/Black	4	7	7	11.1	
Native American/Alaska Native	0	.0	1	1.6	
Ethnicity					
Not Hispanic/Latina	46	80.7	45	71.4	
Hispanic/Latina	11	19.3	18	28.6	
Education Level					
Some high school	2	3.5	2	3.2	
Completed high school	2	3.5	4	6.3	
Some college	15	26.3	23	36.5	
Four years of college	18	31.6	21	33.3	
Advanced degree	19	33.3	13	20.6	
Declined to report	1	1.8	0	.0	
Relationship status					
In a committed relationship/married	43	75.4	39	61.9	
Single	14	24.6	23	36.5	
Declined to report	0	.0	1	1.6	

Measures

Demographics. Demographic characteristics were assessed with a questionnaire on age, educational history, race, ethnicity, country of heritage, relationship status, and sexual orientation.

Sexual function. Sexual function was assessed with the Female Sexual Function Index (FSFI), a widely used measure of female sexual function (Rosen et al., 2000). The FSFI includes 19-items composing six subscales: desire, arousal, lubrication, orgasm, satisfaction, and pain. The questionnaire was standardized on 131 sexually functional healthy control women and 128 agematched women diagnosed with Female Sexual Arousal Disorder, and demonstrated good internal consistency and test–retest reliabilities (Rosen et al., 2000). Scores range from 2–36 and higher scores indicate better sexual function. Internal consistency for the FSFI in the current sample was excellent ($\alpha = .91$).

Abuse history. Prior history of childhood and adulthood sexual abuse was assessed with the sexual abuse items from the Trauma History Questionnaire (THQ; Goodman, Corcoran, Turner, Yuan, & Green, 1998). The three sexual abuse items were used twice: once for experiences before 16-years-old (CSA), and once for experiences ages 16 and older (adult sexual assault). The THQ assesses for history of each type of abuse, age(s) at abuse, age(s) of perpetrator(s), nature of relationship with perpetrator(s), and whether abuse was repeated. This measure provided a method of dichotomously categorizing women into groups by abuse history. The age of onset for first CSA experience ranged from 0 to 15 years (M = 8.41, SD = 4.24), and 10 women declined to report the age of onset of their abuse. In terms of specific characteristics of the abuse, 44 women with CSA histories (69.8%) reported that abuse included penetration, 45 (71.4%) reported that abuse was repeated, 31 (49.2%) reported being abused by a family member, and 31 (49.2%) reported a history of adulthood sexual assault in addition to CSA.

Candidate Mediators

Dissociation during the erotic stimulus. Dissociation during the experimental session in the laboratory was assessed with the Clinician Administered Dissociative States Scale—Self-Report (Bremner et al., 1998). This 19-item scale assesses for state dissociation, including depersonalization, derealization, and altered perceptual experiences. This measure was adapted from a clinician-administered interview into a self-report measure and has been used in other laboratory studies to assess for state dissociation. This measured showed good internal consistency in the current sample ($\alpha = .86$).

Dissociation during sexual activity. Self-report of dissociation during sexual experiences with a partner was assessed with the Dissociative Experiences During Sexual Behavior Questionnaire (Hansen et al., 2012). The measure includes 15 items on dissociative feelings during sexual behavior that are reported via retrospective recall. This measure was evaluated in a sample of 57 CSA survivors, and showed good internal consistency ($\alpha = .85$). This measure has yet to be psychometrically validated. Internal consistency for this measure in the current sample was excellent ($\alpha = .93$).

Attachment security. Attachment security was assessed with the Experiences in Close Relationships—Revised (ECR-R) Questionnaire (Fraley, Waller, & Brennan, 2000), a 36-item self-report questionnaire on attachment security in emotionally intimate relationships. Participants are asked to provide a rating of agreement with a series of statements on the ways they generally experience intimate relationships. The measure consists of subscales for attachment-related anxiety and attachment-related avoidance. Higher scores on each of these domains indicate lower attachment security. Internal consistency, test–retest reliability over 3 weeks, and construct validity comparing the measure to self-report diary entries, was demonstrated for the ECR-R in a large sample of college students (Sibley, Fischer, & Liu, 2005). In the current sample internal consistency for this measure was good ($\alpha = .83$).

Body image. Body image was assessed with the Body Esteem Scale (BES; Franzoi & Shields, 1984), a 35-item self-report questionnaire that measures positive and negative feelings about body parts and functions in terms of sexual attractiveness, weight concern, and physical condition. The BES demonstrated good internally consistency ($\alpha = .78$) and test–retest reliability over a 3-month period (r = .75; Franzoi & Shields, 1984). Internal consistency for the BES in the current sample was excellent ($\alpha = .95$).

Genital self-image. Genital self-image was assessed with the Female Genital Self-Image Scale (FGSIS; Herbenick & Reece, 2010), a seven-item measure that assesses a woman's overall appraisal and satisfaction with her genitals, including comfort having both a sexual partner and physician view her genitals. This measure showed good internal consistency ($\alpha = .88$) in a sample of 1,937 women (Herbenick & Reece, 2010). Internal consistency for the FGSIS in the current sample was good ($\alpha = .85$).

Sexual shame. Sexual shame was assessed with the Kyle Inventory of Sexual Shame (KISS; Kyle, 2013), a 20-item measure to assess feelings about current and past sexual choices and behaviors. Excellent internal consistency ($\alpha = .92$) was demonstrated in a sample of 102 men and women. Construct validity was demonstrated in a pilot study of group sex therapy for women reporting sexual shame (Kyle, 2013). Internal consistency for the KISS in the current sample was good ($\alpha = .86$).

Procedure

Study procedures were approved by the Institutional Review Board of The University of Texas at Austin and complied with all require ethics for studies of human subjects.

Determining eligibility. Interested participants called the lab and spoke to a trained research administrator who provided standardized information on the study and answered questions. Participants were offered the opportunity to complete a confidential phone screen on inclusion and exclusion criteria and eligible women were invited to schedule a study session.

Experimental session. The research administrator oriented the participant to study procedures and the participant provided informed consent. The participant was seated in a private room and viewed the stimulus film on a large TV screen. The 10-min stimulus film featured a heterosexual couple engaging in foreplay, cunnilingus, and vaginal intercourse. After the film the participant completed the questionnaire on dissociation during the experimental session in paper and pencil format. Then the participant was escorted to another room in which she completed the battery of self-report questionnaires on a standard desktop computer. After the study session the participant was debriefed on the hypotheses

of the study. The entire study session lasted approximately 2 hr. Participants were compensated monetarily (\$50) for their time.

Data Analysis

Mediation hypotheses were tested with structural equation modeling (SEM), a statistical technique that enables comparison between groups of participants, comparison of the strength of the different candidate mechanisms, and accounts for relationships between all variables in a model. Abuse history (0 = NSA, and 1 = CSA) was entered as a dichotomous independent variable in order to compare groups, sexual function (total score on the FSFI) as a continuous dependent variable, and the candidate mediators as continuous scores on their respective questionnaires. Mediation models were tested by constructing a saturated model that included direct paths from abuse history to sexual function, abuse history to the mediator, and the mediator to sexual function, and an error/ residual path for each variable.

Mediation was tested by removing the mediator (setting the direct paths from abuse history to the mediator, and the mediator to sexual function both to 0) and comparing model fit between this new reduced model and the saturated model. When mediation occurs, these models should be significantly different from one another, indicating that removing the mediator worsened model fit, and suggesting the mediator should be retained in the model. Next the mediator was added back into the model (the direct paths from abuse history to the mediator and the mediator to sexual function were freely estimated) and the direct path from abuse history to sexual function was removed (i.e., set to 0). When mediation occurs, this final model should fit the data well and should *not* be significantly different from the saturated model; indicating that the direct path from abuse to sexual function can be removed because the mediator accounts for the relationship between abuse history and sexual function. Smaller chi-square (χ^2) statistics that are *not* significant, root mean square error of approximation (RMSEA) statistics less than .05, normed fit indices (NFI; range 0 to 1) closer to 1, normed comparative fit indices (CFI; range 0 to 1) closer to 1, and smaller Akaike information criterion (AIC) indicate better model fit (Bentler, 1990; MacCallum, Browne, & Sugawara, 1996). Mediation analyses were conducted in the open source R software environment (R Foundation, 2014).

Each candidate mediator was tested with the SEM method. The measures for attachment security and body image result in two and three subscale scores, respectively, therefore nine mediation models were tested for (a) dissociation during the erotic stimulus; (b) dissociation during sexual activity; (c) attachment security (attachment anxiety); (d) attachment security (attachment avoidance); (e) body image (sexual attractiveness); (f) body image (weight concern); (g) body image (physical condition); (h) genital self-image; and (i) sexual shame. A data summary and cleaning process was implemented and no outliers were identified. Participants provided complete data for abuse history, sexual function, and dissociation during the erotic film. There was missing data for dissociation during sexual activity (one participant), attachment-related anxiety (six), attachment-related avoidance (five), body image sexual attractiveness (three), body image weight concern (two), body image physical condition (two), genital self-image (one), and sexual shame (two). Analyses on variables with missing data excluded the participants with missing data. The data for dissociation during sexual activity, dissociation during the film, attachment anxiety, and attachment avoidance were *not* normally distributed, therefore a Spearman's rank-ordered correlation matrix was used as the input to the SEM mediation models for these variables.

Results

Per model fit indices, dissociation during the film, attachment anxiety, attachment avoidance, body image sexual attractiveness, body image weight concern, body image physical condition, and genital self-image did *not* mediate the relationship between CSA and sexual function. Dissociation during sexual activity showed complete mediation of the relationship between abuse history and sexual function, $\chi^2 = 2.27$, p = .13, RM-SEA = .10, AIC = 12.27. Sexual shame showed complete mediation of the relationship between abuse history and sexual function, $\chi^2 = .48$, p = .49, RMSEA = 0, AIC = 10.48 (see Table 2 for all fit indices).

Next a combined model was constructed with dissociation during sexual activity and sexual shame, to test if the combination of these two mediators led to a better model than either of the mediators alone (see Figure 1). The saturated version of the combined model fit the data perfectly, as would be expected with a saturated model, $\chi^2 = 0$, p = NA, RMSEA = 0, and AIC = 20. In this model b1 the path between dissociation during sexual activity and sexual function dropped to nonsignificance suggesting this path should be removed to improve model fit. The removal of this path led to a model with fit indices, $\chi^2 = 1.44$, p = 23, RMSEA = .06, and AIC = 19.44, that fit the data worse than the model with sexual shame alone, $\chi^2 = .48$, p = .49, RMSEA = 0, and AIC = 10.48. Therefore the data is best described by the model including sexual shame alone.

Discussion

Although the sexual health literature has identified several differences in sexual health between women with and without abuse histories, little research has explored the exact mechanisms underlying those differences. We tested several candidate mechanisms previously linked to CSA and/or sexual function in women. Results indicated that *sexual shame*—shame related to one's past sexual experiences and behaviors—explained the relationship between CSA and sexual function and explained

this relationship better than all of the other candidate mechanisms. Dissociation during sexual activity with a partner showed promise as a potential mediator, but when combined with sexual shame failed to retain its predictive ability. Although dissociation has been connected to CSA in the literature for some time (Polusny & Follette, 1995), studies are just beginning to examine the role of dissociation in the sexual function of women with CSA histories. The results of those studies have been mixed with some studies identifying a role for dissociation (Hansen et al., 2012), and others failing to find an association (Bird, Seehuus, Clifton, & Rellini, 2013). It is possible that dissociation is more relevant to the general mental health of women with CSA histories, than their sexual health. It is also possible that dissociation is highly relevant for the sexual function of some women with histories of CSA, but not for others. Future research on dissociation during sexual activity is needed to clarify these findings. The current results have relevant implications for female sexual function theory, research, and clinical practice.

The association between sexual shame and sexual function can be explained by Barlow's (1986) cognitive-affective model of sexual function which posits that negative affect and maladaptive causal attributions lead to distraction during sexual activity that impairs sexual performance. Although this model was initially developed through research on men, there is evidence that distraction also impairs women's sexual function (Dove & Wiederman, 2000; Wiegel et al., 2007). Prior research has reported that among women in general, distraction tends to manifest as worries about pleasing one's partner, body image, and sexually transmitted infections or unwanted pregnancies. However, for women with histories of CSA, distraction may also include sexual shame-related thoughts such as "When I think of my sexual past, I feel defective as a person," and "I feel like I am never quite good enough when it comes to sexuality" (Kyle, 2013). The current results suggest that the cognitive affective model of sexual function is not just applicable to women in general, but to women with CSA histories in particular.

The importance of sexual shame in the current study suggests several avenues for future research. Sexual shame was measured with the Kyle Inventory of Sexual Shame (KISS; Kyle, 2013), a relatively new measure in the field of sexual health that has yet to be psychometrically validated and published. Future research

Table 2

Model Fit Indices for Individu	al Candidate Mediators	and Combined Model
--------------------------------	------------------------	--------------------

Candidate mediator	χ^2	χ^2 sig.	RMSEA	AIC	CFI	NFI
Dissociation during film	10.54	.001	.28	20.54	.68	.68
Dissociation during sex	2.27	.13	.10	12.27	.98	.97
Attachment security (attachment anxiety)	10.50	.001	.29	20.50	.67	.67
Attachment security (attachment avoidance)	8.97	.002	.26	18.97	.64	.65
Body image (sexual attractiveness)	3.91	.05	.16	13.92	.93	.91
Body image (weight concern)	9.88	.002	.27	19.88	.43	.46
Body image (physical condition)	8.05	.005	.24	18.05	.64	.65
Genital self-image	6.78	.009	.22	16.78	.83	.82
Sexual shame	.48	.49	0	10.48	1.0	.99
Combined model (dissociation during sex and sexual shame)	1.44	.23	.06	19.44	1.0	.99

Note. Statistics for the best fitting model (sexual shame) are in boldface.

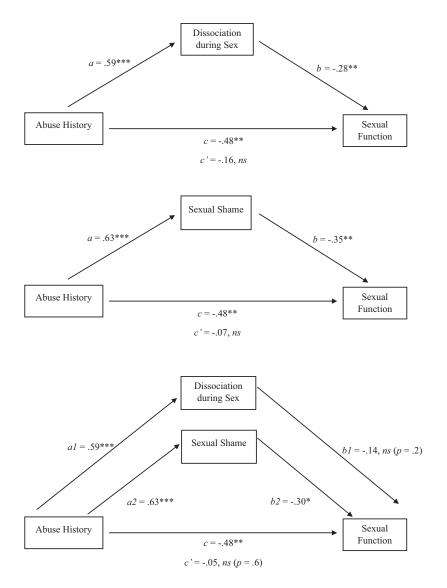


Figure 1. Mediation models for dissociation during sexual activity, sexual shame, and their combination. The model with sexual shame alone was the best fit to the data.

could provide a stringent test of the psychometrics of this measure on larger samples of women. Given that the current study was cross-sectional, it cannot explain the direction of relationships between CSA and sexual dysfunction. However, longitudinal studies in which women enroll in childhood before CSA occurs could help to determine the temporal relationships between CSA, sexual shame, and sexual dysfunction (Campbell, Sprague, Cottrill, & Sullivan, 2011). A better understanding of the temporal relationships between these constructs could greatly inform treatment approaches to help women heal from sexual dysfunction related to CSA.

Treatments for sexual dysfunction in women with abuse histories may benefit from attempting to reduce sexual shame through specific strategies. Psychoeducation on common reactions to CSA is an empirically supported and straightforward method of conveying information to patients in a factual and nonjudgmental manner (Carpetto, 2008). Normalizing both the experience of CSA, and common reactions including sexual dysfunction, is a potent clinical strategy that might reduce shame and help women to feel less isolated in their experience (Carpetto, 2008), and is especially useful with survivors of childhood trauma (Coates & Gaensbauer, 2009). Cognitive restructuring and Socratic questioning could help to address shame-related dysfunctional beliefs about sex, such as "I think people would look down on me if they knew about my sexual experiences" (Kyle, 2013). Mindfulness-based sex therapy has been particularly effective for women with CSA histories (Brotto et al., 2012), and it is possible that the skills of present moment awareness and acceptance of thoughts could also reduce sexual shame in this population. Group therapy may be another approach to reduce sexual shame (Yalom, 1995). Evidence suggests that group therapy for CSA reduces shame related to these unwanted sexual experiences (Ginzburg et al., 2009). The process of emotionally connecting with others who share their experiences may help women to feel less isolated.

In addition to the many clinical approaches to reducing sexual shame, there may also be a part for society to play in women's healing from sexual dysfunction related to CSA. Despite decades of research on the negative impacts of CSA on women's mental and sexual health (Campbell & Wasco, 2005), CSA continues to be viewed as a defect of victims rather than perpetrators; of children who are abused rather than their abusers (Campbell, 2008). "Victim blaming" refers to faulting victims for the actions of perpetrators who chose to commit crimes against them (Ryan, 1976), and has been associated with "secondary victimization" or a retraumatizing of the victim through others' responses to their disclosure (Campbell & Raja, 1999). Secretiveness and taboo continue to surround CSA and contribute to the negative experiences of victims. Women's individual experiences of sexual shame may not decrease until the way their society portrays them, their sexuality, and their worth, changes drastically. Political movements such as #MeToo may help contribute to this type of societal change (Kunst, Bailey, Prendergast, & Gundersen, 2018).

This study has several limitations that warrant mention. First, this was a correlational study which limits our ability to draw conclusions about the direction of the effects identified. The current findings cannot explain whether sexual shame contributes to sexual dysfunction or whether sexual dysfunction leads to sexual shame. Potential third variables, such as mental health symptoms, additional trauma history, and attitudes toward sexual trauma (often termed rape myth acceptance) that were not assessed, might also affect the relationship between sexual shame and sexual function. Ideally future research will identify and explore potential third variables to help researchers and clinicians better understand the relationship between CSA and sexual function. As mentioned previously, sexual shame was measured with the KISS, a relatively new questionnaire that showed construct validity and internal consistency in a dissertation study (Kyle, 2013), but has yet to be psychometrically validated on large samples of women. Additionally, although the groups of women with and without histories of abuse were fairly well-matched in background demographics, the full sample was primarily Caucasian and highly educated compared with the general population of women, which limits the generalizability of results to women of color, and women with less education.

Women with histories of CSA are at an increased risk of sexual dysfunction, and are underserved by the current sex therapy treatment approaches that were primarily developed for and tested on women without abuse histories. Effective treatment for sexual dysfunction after CSA will require further investigation of the factors that link early unwanted sexual experiences to sexual health and well-being in adulthood. The current study identified sexual shame as one of those mechanisms, thereby inviting future researchers to propose and evaluate innovative clinical approaches to reducing sexual shame among women with histories of abuse.

References

- Aspelmeier, J. E., Elliott, A. N., & Smith, C. H. (2007). Childhood sexual abuse, attachment, and trauma symptoms in college females: The moderating role of attachment. *Child Abuse & Neglect*, 31, 549–566. http:// dx.doi.org/10.1016/j.chiabu.2006.12.002
- Atlantis, E., & Sullivan, T. (2012). Bidirectional association between depression and sexual dysfunction: A systematic review and metaanalysis. *Journal of Sexual Medicine*, 9, 1497–1507. http://dx.doi.org/ 10.1111/j.1743-6109.2012.02709.x
- Barlow, D. H. (1986). Causes of sexual dysfunction: The role of anxiety and cognitive interference. *Journal of Consulting and Clinical Psychol*ogy, 54, 140–148. http://dx.doi.org/10.1037/0022-006X.54.2.140
- Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psy-chological Bulletin*, 107, 238–246. http://dx.doi.org/10.1037/0033-2909 .107.2.238
- Berman, L. A., Berman, J. R., Bruck, D., Pawar, R. V., & Goldstein, I. (2001). Pharmacotherapy or psychotherapy?: Effective treatment for FSD related to unresolved childhood sexual abuse. *Journal of Sex & Marital Therapy*, 27, 421–425. http://dx.doi.org/10.1080/713846808
- Bird, E. R., Seehuus, M., Clifton, J., & Rellini, A. H. (2013). Dissociation during sex and sexual arousal in women with and without a history of childhood sexual abuse. *Archives of Sexual Behavior*, 43, 953–964. http://dx.doi.org/10.1007/s10508-013-0191-0
- Boysan, M., Goldsmith, R. E., Cavuş, H., Kayri, M., & Keskin, S. (2009). Relations among anxiety, depression, and dissociative symptoms: The influence of abuse subtype. *Journal of Trauma & Dissociation*, 10, 83–101. http://dx.doi.org/10.1080/15299730802485185
- Bremner, J. D., Krystal, J. H., Putnam, F. W., Southwick, S. M., Marmar, C., Charney, D. S., & Mazure, C. M. (1998). Measurement of dissociative states with the Clinician-Administered Dissociative States Scale (CADSS). *Journal of Traumatic Stress*, 11, 125–136. http://dx.doi.org/ 10.1023/A:1024465317902
- Brotto, L. A., Basson, R., & Luria, M. (2008). A mindfulness-based group psychoeducational intervention targeting sexual arousal disorder in women. *Journal of Sexual Medicine*, 5, 1646–1659. http://dx.doi.org/10 .1111/j.1743-6109.2008.00850.x
- Brotto, L. A., Seal, B. N., & Rellini, A. (2012). Pilot study of a brief cognitive behavioral versus mindfulness-based intervention for women with sexual distress and a history of childhood sexual abuse. *Journal of Sex & Marital Therapy, 38*, 1–27. http://dx.doi.org/10.1080/0092623X .2011.569636
- Campbell, R. (2008). The psychological impact of rape victims. *American Psychologist, 63,* 702–717. http://dx.doi.org/10.1037/0003-066X.63.8 .702
- Campbell, R., & Raja, S. (1999). Secondary victimization of rape victims: Insights from mental health professionals who treat survivors of violence. *Violence and Victims*, 14, 261–275. http://dx.doi.org/10.1891/ 0886-6708.14.3.261
- Campbell, R., Sprague, H. B., Cottrill, S., & Sullivan, C. M. (2011). Longitudinal research with sexual assault survivors: A methodological review. *Journal of Interpersonal Violence*, 26, 433–461. http://dx.doi .org/10.1177/0886260510363424
- Campbell, R., & Wasco, S. M. (2005). Understanding rape and sexual assault: 20 years of progress and future directions. *Journal of Interpersonal Violence*, 20, 127–131. http://dx.doi.org/10.1177/08862605 04268604
- Carpetto, G. (2008). Interviewing and brief therapy strategies: An integrative approach. New York, NY: Allyn & Bacon, Inc.
- Coates, S., & Gaensbauer, T. J. (2009). Event trauma in early childhood: Symptoms, assessment, intervention. *Child and Adolescent Psychiatric Clinics of North America*, 18, 611–626. http://dx.doi.org/10.1016/j.chc .2009.03.005

- Cranston-Cuebas, M. A., & Barlow, D. H. (1990). Cognitive and affective contributions to sexual functioning. *Annual Review of Sex Research*, 1, 119–161.
- Dove, N. L., & Wiederman, M. W. (2000). Cognitive distraction and women's sexual functioning. *Journal of Sex & Marital Therapy*, 26, 67–78. http://dx.doi.org/10.1080/009262300278650
- Evans, K., & Sullivan, J. M. (1995). Treating addicted survivors of trauma. New York, NY: Guilford Press.
- Feiring, C., & Taska, L. S. (2005). The persistence of shame following sexual abuse: A longitudinal look at risk and recovery. *Child Maltreatment*, 10, 337–349. http://dx.doi.org/10.1177/1077559505276686
- Feiring, C., Taska, L., & Chen, K. (2002). Trying to understand why horrible things happen: Attribution, shame, and symptom development following sexual abuse. *Child Maltreatment*, 7, 26–41. http://dx.doi.org/ 10.1177/1077559502007001003
- Fraley, R. C., Waller, N. G., & Brennan, K. A. (2000). An item response theory analysis of self-report measures of adult attachment. *Journal of Personality and Social Psychology*, 78, 350–365. http://dx.doi.org/10 .1037/0022-3514.78.2.350
- Franzoi, S. L., & Shields, S. A. (1984). The Body Esteem Scale: Multidimensional structure and sex differences in a college population. *Journal* of Personality Assessment, 48, 173–178. http://dx.doi.org/10.1207/ s15327752jpa4802_12
- Ginzburg, K., Butler, L. D., Giese-Davis, J., Cavanaugh, C. E., Neri, E., Koopman, C., . . . Spiegel, D. (2009). Shame, guilt, and posttraumatic stress disorder in adult survivors of childhood sexual abuse at risk for human immunodeficiency virus: Outcomes of a randomized clinical trial of group psychotherapy treatment. *Journal of Nervous and Mental Disease*, 197, 536–542. http://dx.doi.org/10.1097/NMD.0b013e3181 ab2ebd
- Goodman, L. A., Corcoran, C., Turner, K., Yuan, N., & Green, B. L. (1998). Assessing traumatic event exposure: General issues and preliminary findings for the Stressful Life Events Screening Questionnaire. *Journal of Traumatic Stress, 11*, 521–542. http://dx.doi.org/10.1023/A: 1024456713321
- Hall, K. (2008). Childhood sexual abuse and adult sexual problems: A new view of assessment and treatment. *Feminism & Psychology*, 18, 546– 556. http://dx.doi.org/10.1177/0959353508095536
- Hansen, N. B., Brown, L. J., Tsatkin, E., Zelgowski, B., & Nightingale, V. (2012). Dissociative experiences during sexual behavior among a sample of adults living with HIV infection and a history of childhood sexual abuse. *Journal of Trauma & Dissociation*, 13, 345–360. http://dx.doi .org/10.1080/15299732.2011.641710
- Herbenick, D., & Reece, M. (2010). Development and validation of the female genital self-image scale. *Journal of Sexual Medicine*, 7, 1822– 1830. http://dx.doi.org/10.1111/j.1743-6109.2010.01728.x
- Kilimnik, C. D., Pulverman, C. S., & Meston, C. M. (2018). Methodologic considerations for the study of childhood sexual abuse in sexual health outcome research: A comprehensive review. *Sexual Medicine Reviews*, *6*, 176–187. http://dx.doi.org/10.1016/j.sxmr.2017.11.006
- Kunst, J. R., Bailey, A., Prendergast, C., & Gundersen, A. (2018). Sexism, rape myths and feminist identification explain gender differences in attitudes toward the #metoo social media campaign in two countries. *Media Psychology*. Advance online publication. http://dx.doi.org/10 .1080/15213269.2018.1532300
- Kyle, S. E. (2013). Identification and treatment of sexual shame: Development of a measurement tool and group therapy protocol. *Dissertation Abstracts International*, 1–83.
- Laumann, E. O., Paik, A., & Rosen, R. C. (1999). Sexual dysfunction in the United States: Prevalence and predictors. *Journal of the American Medical Association*, 281, 537–544. http://dx.doi.org/10.1001/jama.281.6 .537
- Leonard, L. M., & Follette, V. M. (2002). Sexual functioning in women reporting a history of child sexual abuse: Review of the empirical

literature and clinical implications. *Annual Review of Sex Research, 13,* 346–388.

- MacCallum, R. C., Browne, M. W., & Sugawara, H. M. (1996). Power analysis and determination of sample size for covariance structure modeling. *Psychological Methods*, *1*, 130–149. http://dx.doi.org/10.1037/ 1082-989X.1.2.130
- Maltz, W. (2012). *The sexual healing journey*. New York, NY: Harper Collins.
- Meana, M., & Nunnink, S. E. (2006). Gender differences in the content of cognitive distraction during sex. *Journal of Sex Research*, 43, 59–67. http://dx.doi.org/10.1080/00224490609552299
- Metz, M. E., & Epstein, N. (2002). Assessing the role of relationship conflict in sexual dysfunction. *Journal of Sex & Marital Therapy*, 28, 139–164. http://dx.doi.org/10.1080/00926230252851889
- Pereda, N., Guilera, G., Forns, M., & Gómez-Benito, J. (2009). The international epidemiology of child sexual abuse: A continuation of Finkelhor (1994). *Child Abuse & Neglect*, 33, 331–342. http://dx.doi .org/10.1016/j.chiabu.2008.07.007
- Polusny, M. A., & Follette, V. M. (1995). Long-term correlates of child sexual abuse: Theory and review of the empirical literature. *Applied & Preventive Psychology*, *4*, 143–166. http://dx.doi.org/10.1016/S0962-1849(05)80055-1
- Pulverman, C. S., Kilimnik, C. D., & Meston, C. M. (2018). The impact of childhood sexual abuse on women's sexual health: A comprehensive review. *Sexual Medicine Reviews*, 6, 188–200. http://dx.doi.org/10 .1016/j.sxmr.2017.12.002
- Purdon, C., & Holdaway, L. (2006). Non-erotic thoughts: Content and relation to sexual functioning and sexual satisfaction. *Journal of Sex Research*, 43, 154–162. http://dx.doi.org/10.1080/00224490609552310
- Rellini, A. (2008). Review of the empirical evidence for a theoretical model to understand the sexual problems of women with a history of CSA. *Journal of Sexual Medicine*, 5, 31–46. http://dx.doi.org/10.1111/ j.1743-6109.2007.00652.x
- R Foundation. (2014). *R: A Language and Environment for Statistical Computing*. Vienna, Austria: R Foundation for Statistical Computing. Retrieved from http://www.r-project.org/
- Roche, D. N., Runtz, M. G., & Hunter, M. A. (1999). Adult attachment: A mediator between child sexual abuse and later psychological adjustment. *Journal of Interpersonal Violence*, 14, 184–207. http://dx.doi.org/10 .1177/088626099014002006
- Rosen, R. C., & Bachmann, G. A. (2008). Sexual well-being, happiness, and satisfaction, in women: The case for a new conceptual paradigm. *Journal of Sex & Marital Therapy*, 34, 291–297. http://dx.doi.org/10 .1080/00926230802096234
- Rosen, R., Brown, C., Heiman, J., Leiblum, S., Meston, C., Shabsigh, R., . . . D'Agostino, R., Jr. (2000). The Female Sexual Function Index (FSFI): A multidimensional self-report instrument for the assessment of female sexual function. *Journal of Sex & Marital Therapy*, 26, 191–208. http://dx.doi.org/10.1080/009262300278597

Ryan, W. (1976). Blaming the victim (2nd ed.). New York, NY: Vintage.

- Shifren, J. L., Monz, B. U., Russo, P. A., Segreti, A., & Johannes, C. B. (2008). Sexual problems and distress in United States women: Prevalence and correlates. *Obstetrics and Gynecology*, *112*, 970–978. http:// dx.doi.org/10.1097/AOG.0b013e3181898cdb
- Sibley, C. G., Fischer, R., & Liu, J. H. (2005). Reliability and validity of the revised experiences in close relationships (ECR-R) self-report measure of adult romantic attachment. *Personality and Social Psychology Bulletin, 31*, 1524–1536. http://dx.doi.org/10.1177/0146167205276865
- Stephenson, K. R., & Meston, C. M. (2015). The conditional importance of sex: Exploring the association between sexual well-being and life satisfaction. *Journal of Sex & Marital Therapy*, 41, 25–38. http://dx.doi .org/10.1080/0092623X.2013.811450

- van Berlo, W., & Ensink, B. (2000). Problems with sexuality after sexual assault. *Annual Review of Sex Research*, 11, 235–257. http://www.ncbi .nlm.nih.gov/pubmed/11351833
- van der Made, F., Bloemers, J., van Ham, D., El Yassem, W., Kleiverda, G., Everaerd, W., . . . Tuiten, A. (2009). Childhood sexual abuse, selective attention for sexual cues and the effects of testosterone with or without vardenafil on physiological sexual arousal in women with sexual dysfunction: A pilot study. *Journal of Sexual Medicine, 6*, 429–439. http://dx.doi.org/10.1111/j.1743-6109.2008.01103.x

Wiegel, M., Scepkowski, L. A., & Barlow, D. H. (2007). Cognitive-

affective processes in sexual arousal and sexual dysfunction. In E. Janssen (Ed.), *The psychophysiology of sex* (pp. 143–165). Bloomington, IN: Indiana University Press.

Yalom, I. D. (1995). *Theory and practice of group psychotherapy* (4th ed.). New York, NY: Basic Books.

> Received November 29, 2018 Revision received June 20, 2019 Accepted July 12, 2019 ■