ORIGINAL PAPER



Identification of Nonconsensual Sexual Experiences and the Sexual Self-Schemas of Women: Implications for Sexual Functioning

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Received: 16 August 2017 / Revised: 4 May 2018 / Accepted: 8 May 2018 / Published online: 29 May 2018 © Springer Science+Business Media, LLC, part of Springer Nature 2018

Abstract

Many individuals who experience nonconsensual sexual experiences (NSEs) do not identify their experiences with common sexual violence labels (e.g., sexual assault, rape, or abuse), and cognitive mechanisms of identification have yet to be examined. Identification may involve the integration of the experience into sexual self-schemas, which would have implications for sexual well-being. Women were recruited through Amazon's Mechanical Turk (N=818) to take part in an anonymous online study of sexual experiences. The current study assessed the relationship between textually derived sexual self-schemas and sexual function (measured by the Female Sexual Function Index) in women (M = 35.37 years, SD = 11.27) with NSEs who both did (identifiers, n = 305) and did not (non-identifiers, n = 176) identify with common sexual violence labels, in comparison with those with no NSEs (n = 337). Text analyses revealed nine sexual self-schema themes in participants' essays: Virginity, Openness, Erotophilia, NSEs, Romantic, Sexual Activity, Warmth, Relationships, and Reflection. Analyses demonstrated that identifiers reported significantly poorer sexual functioning and less use of both the Warmth and Openness themes than those with no NSEs. Identifiers also invoked the NSE theme more frequently than both those with no NSE histories and non-identifiers. While greater prominence of the Warmth theme was predictive of greater sexual functioning for both nonidentifiers and those with no NSEs, this was not true for identifiers. Instead, the NSE theme was significantly predictive of lower sexual functioning in identifiers. The results suggest that NSE identification may result in greater internalization of the NSE into one's sexual self-schema and, in turn, predict decrements in sexual functioning. The results are discussed in relation to identification interpretation and clinical intervention.

Keywords Rape · Sexual assault · Sexual abuse · Sexual self-schemas · Sexual functioning

Introduction

Nonconsensual sexual experiences (NSEs) are sexual activities that occur in childhood, adolescence, or adulthood and involve a lack of consent, the presence of coercion, the use of force, incapacitation, abuse of authority and power, and/ or a significant age differential. NSEs are a prevalent concern in North America; they are experienced by up to 35% of women (Cantor et al., 2015; Leonard & Follette, 2002).

Electronic supplementary material The online version of this article (https://doi.org/10.1007/s10508-018-1229-0) contains supplementary material, which is available to authorized users.

However, current prevalence rates are only rough estimates of true NSE frequency, as the language used to operationalize NSEs varies by study (e.g., Leonard & Follette, 2002) and is often inconsistent with the public's use and understanding of the language (Littleton, Rhatigan, & Axsom, 2007). A review of rape identification studies found that anywhere from 42 to 73% of women with NSE histories meeting the researchers' definitions of rape did not identify their NSEs as rape (Littleton et al., 2007).

NSE identification, also called "acknowledgement" (Cleere & Lynn, 2013) and "labeling" (Peterson & Muehlenhard, 2004), can be defined as an individual's likelihood to identify their NSEs with commonly used sexual violence labels (e.g., sexual assault, rape, abuse). Previous research has found that individuals who do not identify their experiences with these labels will often use alternative labels, such as "a miscommunication" (Cleere & Lynn, 2013; Layman, Gidycz, & Lynn, 1996) or "a mistake" (Peterson & Muehlenhard, 2011), suggesting



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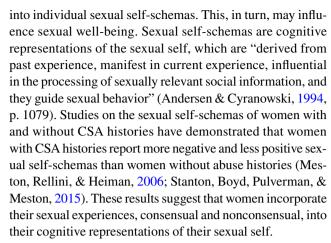
that these non-identifiers may have an alternate understanding of their experience. Peterson and Muehlenhard proposed that individuals construe the labels differently and then must integrate their experience into their previously established beliefs about rape and sex. It may be that the identification of NSEs coincides with a deeper integration of the experience into individuals' cognitive representations or schemas of their self and sexuality, which may in turn influence their sexual well-being.

While identification and its implications is not a new area of research, examinations into the meaning and interpretation of an individuals' identification of NSEs have been scarce. The majority of NSE identification literature has focused on characteristics of the NSEs (e.g., relationship to the perpetrator, chronicity of the abuse) that are related to the likelihood of NSE identification (e.g., Kahn, Jackson, Kully, Badger, & Halvorsen, 2003; Katerdahl, Burge, & Kellogg, 2006). Few researchers have examined the cognitive mechanisms that may help explain the identification process, and little is known about the indirect effects of identification (e.g., Littleton et al., 2007).

Research examining post-NSE psychological adjustment has yielded mixed results. Whereas some studies found that NSE identification was associated with more positive outcomes (e.g., Botta & Pingree, 1997), others (e.g., Holguin & Hansen, 2003) have suggested that the label itself may carry negative implications. Still other research has found that, regardless of identification, NSEs can have negative impacts on psychosocial outcomes (i.e., no observed differences between NSE identifiers and non-identifiers; Harned, 2004; Layman et al., 1996; Marx & Soler-Baillo, 2005). The role of identification in sexual well-being, however, has only been examined in a few studies.

An early study assessing identification and sexual wellbeing examined differences in sexual functioning (measured via the Drive and Satisfaction subscales of the Derogatis Sexual Functioning Inventory; Derogatis & Melisaratos, 1979) between rape identifiers and non-identifiers (for experiences occurring after age 14), finding no significant differences between these two groups (Layman et al., 1996). Similarly, Kilimnik, Trapnell, and Humphreys (2016) found no significant differences between sexual assault identifiers and non-identifiers on levels of sexual satisfaction for women with adolescent and adult NSEs. Kelley and Gidycz (2015) examined the relationship between sexual assault identification and sexual functioning in women with adolescent/early adulthood NSEs. They determined that the indirect effect of identification through avoidant coping mechanisms significantly predicted decrements in sexual lubrication and satisfaction. Additionally, Rellini and Meston (2007) found that women who identified their NSEs as childhood sexual abuse had greater sexual distress than women who did not use that label. Evidently, the question of NSE identification's role in the sexual well-being of women remains unclear.

It may be that the process of identifying NSEs with sexual violence labels results in deeper integration of the experience



Though sexual self-schemas have traditionally been examined through self-report measures (e.g., Andersen and Cyranowski's Sexual Self-Schema Scale), researchers have recently begun examining individuals' sexual self-schemas through natural language analysis. Language is an indirect way of examining schemas (Chung & Pennebaker, 2008; Stanton et al., 2015), and newly developed automated text analysis procedures allow for an inductive approach to reliably and efficiently draw on schema-relevant themes present within natural language (e.g., Rodríguez-Auarez, Ramirez-Ezparza, Pérez-Brena, & Boyd, 2017). This novel approach to examining schemas can provide a deeper look into the nuances of individuals' self-perspectives through rich qualitative data, while applying the systematic rigor of quantitative techniques to extract relevant themes.

In a recent study, women with and without CSA histories wrote reflectively on their sexual experiences and their conceptualizations of their sexual selves (Stanton et al., 2015). To capture the sexual self-schemas of these women, these essays were analyzed using the Meaning Extraction Method (MEM; Chung & Pennebaker, 2008), an automated text analysis technique. Seven schema themes were uncovered: Family and Development, Virginity, Abuse, Relationships, Sexual Activity, Attraction, and Existentialism. After the women in this study completed a five-session expressive writing intervention to allow for the processing of their abuse and its relationship to their sexuality, their post-treatment essays were analyzed again for changes in schemas (Pulverman, Boyd, Stanton, & Meston, 2017). Among women with CSA histories, this analysis revealed a significant reduction in the Abuse theme by the end of the treatment, which coincided with improvements in their sexual functioning (Meston, Lorenz, & Stephenson, 2013). The prominence of the NSEs in the women's sexual self-schemas may have negatively affected the sexual well-being of women with NSE histories.

The language that women use to describe their sexual experiences and their sexuality provides a unique window into their understanding of their sexual selves. Similarly, the language that women use to identity and label their NSEs may also provide more nuanced insight into both their cognitive representations of these experiences and the impact of these



representations on their sexual well-being. If the identification of NSEs involves the integration of the experience into one's sexual self-schema, this process may have important implications for sexual well-being. The current study examined the role of NSE identification and textually derived sexual self-schemas in the sexual functioning of women with and without NSE histories. Three a priori hypotheses were made:

H1 The extant literature has documented that NSEs are related to decrements in sexual functioning (Leonard & Follette, 2002). Therefore, it was expected that women with no NSE histories would have significantly higher overall sexual functioning than both non-identifiers and identifiers, and that identifiers would have lower levels of overall sexual functioning than non-identifiers (Rellini & Meston, 2007).

H2 Given that our sample differs from those of previous research, we were unsure which schema themes would emerge from our analyses. However, the existing literature does indicate that sexual self-schemas are more negative in women with CSA histories than in women without those histories (Meston et al., 2006; Stanton et al., 2015). Thus, we expected that women with no NSE histories would have higher scores on more positively valanced sexual self-schema themes (e.g., romantic themes) and lower scores on negatively valanced schema themes (e.g., NSE themes) than those with NSE histories. No previous research has examined the sexual self-schemas of identifiers and nonidentifiers, so these analyses were primarily exploratory. Based on the theory that identifiers may have integrated the NSEs into their sexuality schemas more so than non-identifiers, we hypothesized that identifiers would have a greater presence of the NSEs in their sexual self-schemas than non-identifiers.

H3 Previous research has suggested that sexual self-schemas play a role in the relationship between NSE history and sexual functioning (Rellini & Meston, 2011). Therefore, it was expected that the sexual schema themes would significantly predict overall sexual function. However, as sexual self-schemas may have different impacts on the sexual function of identifiers, non-identifiers, and those with no NSEs, we hypothesized that different schema themes would predict sexual functioning differentially for the various groups.

Method

Participants

A total of 818 women were recruited to take part in an online study examining the role of women's consensual and nonconsensual sexual experiences in their overall sexual well-being. Recruitment was done through Amazon's Mechanical Turk (MTurk), an online crowd sourcing platform for compensated and anonymous research and task completion. The reliability of this data collection technique has been well established (Buhrmester, Kwang, & Gosling, 2011). Demographics of the current sample are shown in Table 1.

Chi-square analyses and a multivariate analysis of variance (MANOVA) assessed differences in demographic variables among women with no NSE histories, NSE identifiers, and NSE non-identifiers. The analyses indicated that identifiers were significantly older than women with no NSE histories (d=0.21, 95% CI [0.05, 0.36]) and were significantly younger at the time of their first consensual sexual experience than both non-identifiers (d=-0.29, 95% CI [-0.48, -0.10]) and those with no NSE histories (d = -0.36, 95% CI [-0.51, -0.20]). Both identifiers (d=-0.24, 95% CI [-0.39, -0.08]) and nonidentifiers (d=-0.28, 95% CI [-0.46, -0.09]) were significantly younger than those with no NSE histories at their age of menarche. In terms of sexual orientation, identifiers reported higher levels of same-sex attraction than did those women with no NSE histories (d = -0.33, 95% CI [-0.48, -0.17]), while both non-identifiers (V=0.19) and identifiers (V=0.24) selfidentified as bisexual more frequently than did those women with no NSE histories. Identifiers reported more frequent use of therapy for sex-related concerns than both non-identifiers (V=0.22) and women with no NSE histories (V=0.23). Additionally, identifiers reported more mental health diagnoses than non-identifiers (V=0.18), and both identifiers (V=0.36) and non-identifiers (V=0.17) reported more mental health diagnoses than women without NSE histories.

Measures

Subjective Identification of NSEs

Three face-valid items assessed if participants self-identified as having ever experienced rape, sexual assault, or childhood sexual abuse ("Have you ever experienced sexual assault?", "Have you ever experienced rape?", "Have you experienced childhood sexual abuse?"). Descriptive information for these items is shown in Table 2.

Nonconsensual Sexual Experience Inventory (NSEI; see Appendix)

The NSEI measure was created for the current study to assess individuals' history of NSEs across the lifespan, various characteristics of the NSEs, and the individuals' perception of the NSEs. Four behaviorally descriptive items assessed various forms of NSEs, framed as "Has anyone ever ... against your will?" for experiences of vaginal or anal penetration, oral sex, genital or breast fondling or touching. Although not used in the current analyses, if participants reported "Yes" to any of



Table 1 Demographic information for the sample by group

Continuous variables (range)	No NSEs ((n=337)	Non-ident	ifiers $(n=176)$	Identifiers $(n=305)$	
	M	SD	M	SD	\overline{M}	SD
Age (18–78)	34.30	11.36	35.19	10.97	36.65	11.26
Age of first sex (10-39)	18.01	3.27	17.82	3.59	16.88	3.03
Age of menarche (8–27)	12.87	1.63	12.43	1.53	12.45	1.95
Same-sex attraction ^a	4.59	0.88	4.39	0.94	4.29	0.90
Same-sex behaviors ^a	4.69	0.85	4.57	0.94	4.52	0.90
FSFI total scores ^b	28.30	5.20	27.76	5.51	26.41	6.25
Categorical variables	n (%)		n (%)		n (%)	
Sexual orientation	,					·
Heterosexual	295 (87.5)		135 (76.7))	217 (71.1)	
Bisexual	26 (7.7)		20 (11.4)		57 (18.7)	
Lesbian/gay	11 (3.3)		13 (7.4)		10 (3.3)	
Pansexual	4 (1.2)		3 (1.7)		6 (2.0)	
Queer	1 (0.3)		0 (0.0)		2 (0.7)	
Asexual	0 (0.0)		3 (1.7)		5 (1.6)	
Did not disclose	0 (0.0)		2 (1.1)		8 (4.2)	
Relationship status						
Single	93 (27.6)		52 (29.5)		81 (26.5)	
Committed	74 (22.0)		43 (23.4)		66 (21.7)	
Cohabitating	38 (11.3)		20 (11.4)		38 (12.5)	
Married	132 (39.2)		61 (34.7)		120 (39.3)	
Divorce history	, ,		, ,		` ′	
No	280 (83.1)		137 (77.9)		216 (70.8)	
Yes	57 (16.9)		39 (22.2)		89 (29.2)	
Sexually active ^b						
No	67 (19.9)		26 (20.5)		52 (17.0)	
Yes	270 (80.1)		140 (79.5)		254 (83.0)	
Race	270 (00.17)		1.0 (75.0)		20 . (00.0)	
Caucasian/white	258 (76.6)		138 (78.4)		224 (73.4)	
African American/black	258 (76.6)		17 (9.7)	•	36 (11.8)	
Hispanic/Latin American	31 (9.2)		8 (4.5)		19 (6.2)	
Asian	20 (5.9)		9 (5.1)		19 (6.2) 10 (3.3)	
Native American	20 (5.9) 5 (1.5)					
P. Islander/Hawaiian Native	, ,		2 (1.1)		4 (1.3)	
	0 (0.0) 0 (0.0)		0 (0.0) 0 (0.0)		2 (0.7)	
Middle Eastern	3 (0.9)		2 (1.1)		1 (0.3) 9 (3.0)	
Other Education	3 (0.9)		2 (1.1)		9 (3.0)	
	24 (10.1)		10 (10 2)		42 (14 2)	
High school/GED/or less	34 (10.1) 121 (35.9)		18 (10.2) 65 (37.0)		43 (14.2)	
Some college	121 (35.9) 148 (43.9)		65 (37.0) 62 (35.2)		131 (43.0) 104 (34.7)	
College degree	148 (43.9) 34 (10.1)		62 (35.2)		104 (34.7)	
Advanced degree	34 (10.1)		31 (17.6)		26 (8.5)	
Mental health diagnosis	000 (=0.5)		05.54.5		100 :27 ::	
No	239 (70.9)		95 (54.0)		108 (35.4)	
Yes	98 (29.1)		81 (46.0)		197 (64.6)	
Sex treatment seeking						
No	306 (90.8)		160 (90.9)		222 (72.8)	
Yes	31 (9.2)		16 (9.1)		83 (27.2)	

^aThese variables were measured on a 5-point Likert scale ranging from 1, exclusively same-sex partners, to 5, exclusively other-sex partners



^bFSFI scores were only calculated for those individuals who were sexually active as per FSFI scoring guidelines. Thus, all analyses involving the FSFI are on a sample of 663. The absolute range for the FSFI total scores for the current sample was 7–36. No NSEs=the women with no reported NSE histories; NSE history=the women with NSE histories reported on the NSEI

Table 2 Characteristics of the NSEs as measured by the NSEI and identification items

Variable	n (%)
Type of NSEs ^a	
Vaginal penetration	293 (60.9)
Anal penetration	120 (24.9)
Oral sex	140 (29.1)
Molestation/fondling	321 (66.7)
Other	56 (11.6)
Relationship to perpetrator ^a	
Family member	104 (21.6)
Partner/ex-partner	198 (41.2)
Authority figure ^b	10 (2.1)
Acquaintance ^c	251 (52.2)
Stranger	75 (15.6)
Other	8 (1.7)
Force, violence, or injury involved	
No	293 (60.9)
Yes	188 (39.1)
Developmental stage of onset ^d	
Childhood	150 (31.2)
Adolescence	138 (28.7)
Adulthood	191 (39.7)
Unknown	2 (0.4)
NSE identification ^a	
Sexual abuse identifiers	186 (38.7)
Sexual assault identifiers	243 (50.5)
Rape identifiers	166 (34.5)
Non-identifiers	176 (36.6)

N = 481

the four items, they were presented with a question assessing the age that the NSE occurred. For each age group (child-hood, 0–11; adolescent, 12–17; adulthood, 18 and over), the participants were provided a series of follow-up questions to assess various characteristics about the experiences (e.g., exact age of onset, relationship to the perpetrator). A fifth NSE item assessed if any other forms of nonconsensual sexual activity occurred that were not covered in the previous four items. If participants respond "Yes" to this item, they

were asked to describe the NSE and then prompted with the same follow-up questions given for the previous four items.

To group participants into their respective NSE status groups, women who responded "Yes" to any of the five NSE items of the NSEI were considered part of the NSE history group, and women who responded "No" to all of the five NSE items were considered part of the No NSE history group. Individuals who endorsed at least one of the subjective identification labels (i.e., having experienced rape, sexual assault, or childhood sexual abuse) and reported an NSE history on the NSEI were considered identifiers. Individuals who reported NSE histories but did not endorse any of the identification labels were considered non-identifiers. Descriptive information for the NSEI is shown in Table 2.

Female Sexual Function Index (FSFI; Rosen et al., 2000)

The FSFI is a 19-item self-report measure used to assess women's sexual functioning across six different domains: Desire (2 items), Arousal (4 items), Lubrication (4 items), Orgasm (3 items), Satisfaction (3 items), and Pain (3 items). In the current study, only the FSFI total score was used. The scale had overall internal consistency of α =0.97. The FSFI is the gold-standard instrument for clinically assessing sexual functioning in women. Scores falling below 26.55 are considered indicative of clinical sexual dysfunction. The instrument has been widely validated and has strong test–re-test reliability across 2- to 4-week intervals (Rosen et al., 2000).

The FSFI total scores were calculated only for those participants who were sexually active in the past 4 weeks (n = 663), as per the guidelines for recommended scoring (Meyer-Bahlburg & Dolezal, 2007; Rosen et al., 2000). Descriptive information for the FSFI is shown in Table 1.

Sexual Self-Schemas

The sexual schemas of women were obtained using an expressive writing prompt. Women were instructed to read the prompt and write continuously for 20 min, reflecting on their sexuality and their sexual experiences. This prompt has effectively been used in a previous randomized clinical trial as a baseline assessment of women's sexual self-schemas (Meston et al., 2013) and previous work on sexual self-schemas that have used the MEM (Pulverman et al., 2017; Stanton et al., 2015):

For the next 20 minutes, I would like you to write about your personal thoughts and feelings associated with sex and sexuality. In your writing, I'd like you to link your thoughts about sex to past, current, or future sexual experiences or relationships. You might also address more broadly how you view yourself as a sexual person. Please try to be as detailed as possible in your description. I'd like you to really let go and explore your very deepest emotions and thoughts.



^aThese categories are not mutually exclusive, as individuals with NSE histories may have had more than one type of NSE or perpetrator or identify with more than one NSE label

^bAuthority figures were non-familial non-partner perpetrators who were in a position of authority or power, including babysitters, teachers, bosses, etc.

^cAcquaintances were non-familial and non-partner perpetrators who the individual knew prior to the NSE, including neighbors, friends of friends, friends of the family, etc.

^dDevelopmental stage that NSE(s) first occurred: Childhood=NSE onset pre-age of menarche, Adolescence=NSE onset post-age of menarche and pre-age of first consensual sex, Adulthood=NSE onset post-age of menarche and post-age of first consensual sex

Procedure

Women who consented to participate proceeded to the online study. As part of a larger survey, the recruited women completed the measures described above in the order presented. After completing the study, participants were compensated \$1.50 USD to their *MTurk* accounts and provided with a debriefing form that offered more information about the purpose of the study and resources for online mental health and sexual violence supports. The average length of time it took for participants to complete the study was 45 min, with a range from 32 to 71 min.

To ensure adequate data quality, participants needed to respond correctly to at least four out of eight attention check items placed throughout the questionnaires (e.g., "For this item, please select strongly disagree"), complete a minimum of 50% of the study, and write a minimum of three sentences during the writing task for compensation to be awarded. These criteria were determined a priori, and only participants who met these criteria were retained for analysis. While 1153 participants took the survey, only 818 participants met these inclusion criteria (70.9% retained). Participants were made aware of the compensation and time to complete prior to consenting to participate. All study protocols and procedures were reviewed and approved by the academic institution's Institutional Review Board for research involving human beings.

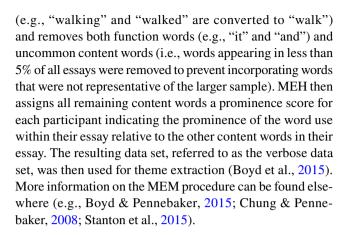
Data Analysis

Missing Data

A missing data analysis was performed on the NSEI, FSFI, and NSE identification items, and an arbitrary pattern of missing data was found for the FSFI with no observed relationships with missingness, suggesting that missing data were likely due to nonresponse or missed items. There were no missing data on the NSEI or identification items. The FSFI missing values only occurred in women who were sexually inactive, and FSFI total scores were only calculated for sexually active women. Therefore, the variables included in the analyses did not have any missing data.

Text Analysis

Women's essays were analyzed using the Meaning Extraction Method (MEM; Chung & Pennebaker, 2008), a language quantification procedure, in order to derive the latent themes of participants' sexual self-schemas. The median word count for the texts was 285 and ranged from 19 to 3251. We used the Meaning Extraction Helper (MEH; Boyd, 2017), a free software tool developed to automate the text analysis process. This program lemmatizes words to their basic inflections



Theme Extraction

The data set was subjected to a principal components analysis (PCA) with varimax rotation to determine how the words clustered together into sexual self-schema themes. Both Bartlett's sphericity test ($\chi^2[37,950] = 61,218.77, p < .001$) and the Kaiser–Meyer–Olkin metric (KMO=0.45) indicated that a PCA could appropriately be applied to the data. The components selected for inclusion had eigenvalues proximal to or above 1.0 (lowest eigenvalue = 0.99) and provided a significant increase to the variance in the data explained by the model (> 1%). Words with component loadings over 0.15 were retained for constructing/interpreting the overall themes. These standards and cut-points may seem lenient in comparison with traditional factor and component analytic practices and rules-of-thumb; however, this is routine practice with PCAs for essays and other natural language data (e.g., Chung & Pennebaker, 2008). As language is significantly more variable in the multiplicity of ways it can be expressed compared to scale or Likert-type data, lower explained variance and loadings are expected.

The extracted themes were then quantified within each essay by adding and subtracting words that loaded positively and negatively onto each theme. This process established unique theme scores for each participant, such that the scores reflected the percentage of words within each essay that were captured by the given schema theme. In other words, the theme scores reflected the prominence of that theme within the individuals' essays. These scores constituted bipolar constructs with a theoretical range from -100 to +100 (e.g., if a participant used 10% of words that loaded positively onto a theme and 10% of words that loaded negatively onto a theme, their resulting schema theme score would be 0, but still reflect a score higher than that of someone who used 10% of words that negatively loaded onto the theme and no positively loading words). We then labeled the themes based on the item composition of the themes. The appropriateness of the theme labels was manually assessed by examining the content of individual texts that scored high and low on the various themes. A Winsorizing



procedure was used to replace outliers above or below three SD of the total sample (Wilcox, 2010). The maximum number of observations replaced for a given theme was 14, with an average of 8 observation replacements across the themes. These themes were then used in the following between-group difference analyses and regression models.

Between-Group Mean Differences

In order to test H1, a univariate analysis of variance (ANOVA) was conducted to assess differences in sexual functioning (FSFI total scores of the sexually active subsample, n = 663) between those with no NSE histories, non-identifiers, and identifiers. To test H2, a MANOVA was conducted among women with no NSEs, identifiers, and non-identifiers on the derived sexual self-schema themes. Bonferroni corrections were used for post hoc multiple comparisons. If the Levene's test for inequality of variances across groups was significant for any of the variables, then the Games–Howell correction for multiple comparisons was applied.

Regression Analysis

To test H3, the sexual self-schema themes with significant bivariate relationships with FSFI scores were subjected to a regression analysis that included the schema themes, dummycoded variables for NSE group, and the interactions between the schema themes and the dummy-coded group variables. Groups were dummy-coded so that those with no NSEs were the reference group. The non-identifiers and identifiers variables were dummy-coded for the respective group with 1 s and both other groups with 0 s. Model constraints were used to calculate the differences in effects for the schema themes between identifiers and non-identifiers, as well as the main effects of the schema themes within each group separately. Due to the negatively skewed distribution of the FSFI total scores across the groups, the FSFI variable was reflected and log-transformed to normalize the distribution for regression analyses and then standardized for interpretability. Additionally, the FSFI scores were residualized for the effect of age as well as age of first sexual experience, which demonstrated significant bivariate relationships with FSFI total scores (r=-.10, p=.014; r=-.011, p=.004, respectively).

Results

Sexual Self-Schema Themes

Table 3 shows the nine sexual self-schema themes extracted from participants' expressive writing essays, along with information on the composition of the themes. The nine observed themes captured 10.4% of the total variance in the natural language of these women's essays.

H1: Group Differences in Sexual Function

A multivariate effect was demonstrated for the between-group differences on the FSFI, F(2,660)=7.44, p=.003, Cohen's d=0.30. Analyses revealed that identifiers reported significantly lower levels of sexual functioning than those with no NSE histories ($M_{\rm Diff}=-1.89$, SE=0.050, p=.001, 95% CI [-3.08, -0.70]), with no significant differences between non-identifiers and identifiers ($M_{\rm Diff}=-1.34$, SE=0.061, p=.072, 95% CI [-2.78, 0.09]) or non-identifiers and those with no NSEs ($M_{\rm Diff}=-0.55$, SE=0.056, p=.596, 95% CI [-1.87, 0.78]). Additionally, identifiers were the only group whose mean met the FSFI clinical cutoff (below 26.55) for sexual dysfunction (Table 1).

H2: Group Differences in Sexual Self-Schemas

Results from this analysis are shown in Table 4. The MANOVA revealed that the NSE themes were significantly more prominent in the essays of identifiers compared to the essays of non-identifiers and those with no NSEs, whereas non-identifiers did not significantly differ from those with no NSEs. Identifiers were significantly less likely to use the Warmth and Openness themes in their essays than were those with no NSEs, whereas non-identifiers did not significantly differ from either of the two other groups on these schema themes. Descriptive information for the themes for the whole sample and by the various NSE groups is shown in Table 5.

H3: Regression Models

Pearson's correlation analyses across the nine sexual selfschema themes and the FSFI scores demonstrated that two of the nine schema themes were significantly related to FSFI total scores at the bivariate level, specifically the NSE theme (r=.11, p=.004) and the Warmth theme (r=-.17, p<.001). The regression model that examined the differential schema theme predictors of sexual function for the three groups indicated a significant main effect of the Warmth theme for those with no NSEs ($\beta = -0.16$, SE = 0.05, p = .001) and non-identifiers ($\beta = -0.15$, SE = 0.07, p = .024), but not for identifiers. There was also a significant main effect of the NSE theme for identifiers ($\beta = 0.44$, SE = 0.12, p < .001), but no main effects of the NSE theme for non-identifiers or those with no NSEs. The effect of the NSE theme on FSFI total scores was also significantly larger for identifiers in comparison with both those with no NSEs ($\beta = 0.05$, SE = 0.09, p = .028) and non-identifiers ($\beta = -0.07$, SE = 0.03, p = .016). Full results from the regression analysis are shown in Table 6. Visual representations of the main effects of the themes within each of the three groups are shown in Fig. 1 for the NSE theme and Fig. 2 for the Warmth theme.



Table 3 Nine extracted themes from the sexual schema essays with example words that constructed each theme and example quotes from participants high and low in each theme

Schema theme	n^{a}	Example theme words	Example quotes (Age, NSE status)	
			High in theme	Low in theme
1. Virginity loss	40	40 (+) virginity, (+) high school, (+) lost, (+) ready, (+) drink, (-) adult, (-) enjoy	"All throughout my teen life, I wanted to wait until marriage to have sex I wasn't ready to deal with the pressures to have sex. I started dating my current boyfriend when I was 18. We dated for almost 5 months when we first had sex." (20, NSE Hx)	"I am very happy and satisfied with my sex life now. I am where I want to be. I wouldn't change it for anything. When you have two people who care about each other deeplyit just makes everything easier and better." (48, NSE Hx)
2. Openness	7	7 (+) connect, (+) open, (+) mind, (+) control, (+) normal, (+) safe, (+) shy	"I have an open mind about sex. I like to do "normal" things and enjoy to do them frequently." (27, No NSEs)	"I don't like sex. It doesn't appeal to me. It feels dirty and grossThere's nothing enjoyable about it." (22, NSE Hx)
3. Erotophilia	24	24 (+) attract, (+) masturbate, (+) play, (+) porn, (-) worry, (-) personal, (-) ashamed	"I am a very sexual person. I desire sex a lot. I think about sex many times a dayI masturbate and watch porn multiple times a day. I usually orgasm every time." (23, No NSEs)	"Sexuality is a private and intimate matter and should be valued as such. There is a lot of responsibility that comes with sexuality." (36, No NSEs)
4. NSEs	48	48 (+) rape, (+) abuse, (+) problem, (+) stop, (+) afraid, (-) arouse, (-) satisfy,	"The first time I had sex, it was forced on meSexually, looking back over my life, I have felt used and abused, due to my own acts and those of other men." (50, NSE Hx)	"I enjoy sex with the right personI like to be aroused during sex, which means I enjoy foreplay. I often climax with foreplay, but not with the actual sex experience." (38, No NSEs)
5. Romantic	32	32 (+) trust, (+) romantic, (+) intimacy, (+) explore, (+) fulfill, (-) relax, (-) oral	"As I've gotten older being in love has become more important and I realized being in love with someone and completely trusting them leads to better more enjoyable and memorable sex." (29, No NSEs)	"I find that I tend to want sex more than my male partners, which can sometimes cause conflictI also orgasm much faster than average, which can be either a blessing or a curse depending on who I'm with." (22, No NSEs)
6. Sexual Activity	12	 Sexual Activity 12 (+) orgasm, (+) masturbation, (+) job, (+) activity, (+) want, (+) quick, (-) type, 	"I am happy with the level of sexual activity I experience at this point in my life. I find masturbation to be the only form of activity I want." (39, No NSEs)	"Someone's sex does not determine my ability to become attracted to or care about that person. Sex is something that is chosen for us when we are created, who we are attracted to is not." (43, NSE Hx)
7. Warmth	20	20 (+) partner, (+) deeply, (+) share, (+) grow, (+) free, (+) respect, (-) wrong	"I am very comfortable who I am, and the connection I share with my partner. I feel connected on multiple levels and I'm glad to share what we have together. I think sex is a deep connection." (25, No NSEs)	"It is the end result of brain chemistry and chemicals being released in order to maintain the longevity of the human race if done with the wrong individual one might contract an STD." (29, No NSEs)
8. Relationships	31	31 (+) husband, (+) marry, (+) frustrate, (+) drive, (+) enjoyable, (-) love, (-) care	"Even after being married for 28 years my husband and I have sex multiple times a weekBefore my husband and I met, I did not know how wonderful sex could be." (55, NSE Hx)	I used to fear that I love sex too much, but my love for sex hasn't really gotten in the way of my living lifeI'm more likely to masturbate than to find a new sexual partner. (27, NSE Hx)
9. Reflection	24	24 (+) change, (+) bore, (+) turn, (+) long, (-) easy, (-) continue, (-) body	"As I have matured my wants and needs are changing My desires are changing a lot and my sexual attractions are changing." (26, NSE Hx)	"Sex is a great feeling for me. It gives me a chance to be me. It makes me feel I can release my inhibitions. It is a great stress reliever." (45, No NSEs)

N = 817

 ${}^{\mathrm{a}}$ Where n is the number of words in each schema theme

(+) = words that loaded positively onto the theme and (-) = words that loaded negatively onto the theme. Those high and low in themes were determined by their scores on each of the nine components. NSE Hx = Woman with NSE histories, No NSEs = Woman with no history of NSEs



Table 4 Results of the multivariate analysis of variance (MANOVA) for the between-group differences in the nine sexual self-schema theme scores

	$l_{ m Wilks'}$	F	df	p Value	Cohen's d
Multivariate test	0.95	2.20	18, 1612	.003	0.31
Outcome: schema					
Virginity		2.32	2, 814	.099	0.16
Openness		3.67	2, 814	.026	0.19
Erotophilia		0.23	2, 814	.797	0.06
NSE		8.71	2, 814	<.001	0.30
Romantic		0.97	2, 814	.382	0.09
Sexual activity		0.49	2, 814	.613	0.06
Warmth		4.80	2, 814	.008	0.22
Relationships		1.47	2, 814	.210	0.13
Reflection		1.08	2, 814	.339	0.11
Comparisons ^a		MD (SE)	p Value	95% CIs	
				LL	UL
Openness					
Identifiers	No NSEs	-0.12(0.04)	.013	-0.21	-0.06
Non-identifiers	No NSEs	-0.08(0.06)	.380	-0.22	0.06
Identifiers	Non-identifiers	-0.04(0.05)	.741	-0.17	0.09
NSE					
Identifiers	No NSEs	1.30 (0.34)	<.001	0.50	2.09
Non-identifiers	No NSEs	0.14 (0.36)	.924	-0.72	0.99
Identifiers	Non-identifiers	1.16 (0.34)	.002	0.36	1.95
Warmth					
Identifiers	No NSEs	-0.28(0.09)	.004	-0.49	-0.07
Non-identifiers	No NSEs	-0.08 (0.12)	.761	-0.36	0.20
Identifiers	Non-identifiers	-0.20(0.11)	.188	-0.47	0.07

N = 818

Table 5 Descriptive information for the nine sexual self-schema themes for the sample by NSE and identification status

Schema theme	No NSE	history (n = 337)		NSE nor	n-identifie	ers $(n = 176)$)	NSE identifiers ($n = 305$)			
	M	SD	95% CIs		\overline{M}	SD	95% CIs		\overline{M}	SD	95% CIs	
			LL	UL			LL	UL			LL	UL
Virginity	0.70	1.62	0.52	0.87	0.93	1.76	0.66	1.19	0.96	1.52	0.79	1.13
Openness	0.39	0.62	0.33	0.46	0.32	0.64	0.22	0.41	0.28	0.42	0.23	0.33
Erotophilia	-1.61	1.59	-1.78	-1.44	-1.57	1.52	-1.79	-1.34	-1.53	1.41	-1.69	-1.37
NSEs	-4.14	4.74	-4.65	-3.63	-4.00	3.40	-4.51	-3.49	-2.84	3.84	-3.27	-2.41
Romantic	1.76	2.33	1.51	2.01	1.47	2.15	1.15	1.79	1.63	2.27	1.37	1.88
Sexual activity	1.95	2.29	1.70	2.20	1.76	2.01	1.46	2.06	1.93	2.09	1.69	2.16
Warmth	0.64	1.24	0.51	0.77	0.56	1.30	0.36	0.75	0.36	1.00	0.24	0.47
Relationships	2.27	2.43	2.01	2.53	1.96	2.22	1.63	2.29	2.33	2.37	2.06	2.59
Reflection	0.09	1.31	-0.05	0.23	0.18	1.01	0.03	0.33	0.23	1.01	0.11	0.34

This descriptive information is based on the Winsorized schema theme scores



^aMultiple comparisons only reported for those schemas that demonstrated significant univariate tests of between-group differences

Discussion

The current study aimed to elucidate the role of sexual selfschemas and NSE identification in the sexual functioning of women with and without NSE histories. In line with H1, identifiers reported significantly lower sexual functioning than those with no NSE histories; however, non-identifiers did not significantly differ in sexual functioning from those with no NSE histories. Consistent with H2, identifiers invoked the NSE theme in their essays more than both nonidentifiers and those with no NSEs. Additionally, identifiers invoked the Warmth and Openness themes significantly less than did women with no NSE histories. While the Warmth theme was predictive of greater sexual functioning in those with no NSE histories and non-identifiers, it was not a significant predictor of sexual functioning in identifiers. Rather, the NSE theme was predictive of lower sexual functioning in identifiers, but was not a significant predictor for those with no NSEs or non-identifiers, and this effect was significantly greater for identifiers than the other two groups. The differential functioning of the predictors in the regression analysis provided support for H3. The results suggest that the prominence of NSEs within sexual self-schemas plays a role in the observed decrements in sexual functioning of women who identify their NSEs as sexual abuse, sexual assault, or rape.

The MEM procedure revealed nine themes that explained over 10% of the variance in written texts. This amount of explained variance is similar to amounts of explained variance in unstructured, natural language data in previous research (e.g., Chung & Pennebaker, 2008; Stanton et al., 2015). The nine extracted themes included: Virginity, Openness, Erotophilia, NSEs, Romantic, Sexual Activity, Warmth, Relationships, and Reflection. Andersen and Cyranowski (1994) first measured sexual self-schemas with a self-report tool that instructed participants to rate the degree to which a given adjective (e.g., romantic) was descriptive of themselves. The scale has three dimensions: Romantic-Passionate, Open-Direct, and Embarrassed-Conservative. The quantitative text analysis of women's natural language allows for a more nuanced examination of the themes of women's sexual self-schemas. While these two methods for assessing the sexual self-schema of women are dramatically different, some of our derived themes appear to overlap with Andersen and Cyranowski's conceptualization of sexual self-schemas; for example, our Romantic theme is similar to their Romantic-Passionate dimension. Our themes also provided some new insights on the sexual self-schemas of

Table 6 Regression results for FSFI total scores on the NSE and Warmth schemas, the dummy-coded group variables, and their interaction terms

Dependent variable: FSFI				
Independent variable ^b	β (SE)	95% CI	p Value	
		LL	UL	
Intercept	-0.04 (0.10)	-0.23	0.12	.686
Warmth theme	-0.16 (0.05)	-0.26	-0.07	.001
NSE theme	0.00 (0.01)	-0.03	0.03	.819
Non-identifiers	-0.22 (0.16)	-0.34	0.29	.890
Identifiers	0.44 (0.13)	0.19	0.69	.001
$Warmth \! \times \! non\text{-identifiers}$	0.02 (0.08)	-0.14	0.17	.856
NSE×non-identifiers	-0.02(0.03)	-0.08	0.03	.418
Warmth×identifiers	0.07 (0.08)	-0.09	0.22	.401
NSE×identifiers	0.05 (0.02)	-0.01	0.09	.028
Difference in effects between	en non-identifie	rs and id	entifiersc	
Warmth theme	-0.05 (0.09)	-0.23	0.12	.567
NSE theme	-0.07 (0.03)	-0.13	-0.01	.016
Main effects within non-id	lentifiers and ide	ntifiersc		
Non-identifiers				
Warmth theme	-0.15 (0.07)	-0.27	-0.02	.024
NSE theme	-0.02(0.02)	-0.07	0.03	.420
Identifiers				
Warmth theme	-0.09 (0.06)	-0.22	0.03	.125
NSE theme	0.05 (0.02)	0.02	0.09	.003
Total $R^2 = 0.067$				
Equation: $FSFI' = -0.04$	+ Warmth(-0.1	6) + NSE	E(0.00)	
+ Non	- identifiers(-0.	22) + Ide	entifiers(0	.44)
+ Warr	nth * Non - ider	tifiers(0.	02)	
+ NSE	* Non - identifi	ers(-0.02	2)	
	nth*Identifiers((

N = 663

^aFSFI total scores are only calculated for those who were sexually active in the past 4 weeks. The FSFI total scores are the reflected and log-transformed FSFI scores; therefore, negative betas suggest a positive relationship with true FSFI scores. FSFI total scores have also been residualized for age and age of first consensual sex

+ NSE*Identifiers(0.05)

^bThe group status variables were dummy-coded with those with no NSE histories as the reference group, so the main effects of Warmth and NSE presented in the table should be interpreted as the main effects of those variables within the no NSEs group. The non-identifiers and identifiers variables were dummy-coded for the respective group with 1 s and both other groups with 0 s such that the interaction of the schema themes and non-identifiers or identifiers is the difference in the effect between that group and those with no NSEs

^cThe difference in effects between identifiers and non-identifiers as well as the main effects within non-identifiers and identifiers was calculated outside of the model using model constraints



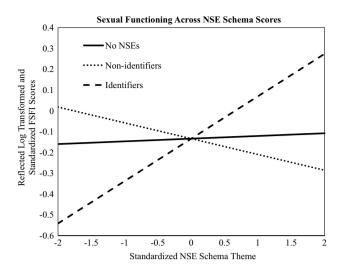


Fig. 1 Residualized FSFI scores for the three groups as a function of their NSE schema theme scores. Higher FSFI scores reflect greater sexual dysfunction due to the reflected transformation of the data

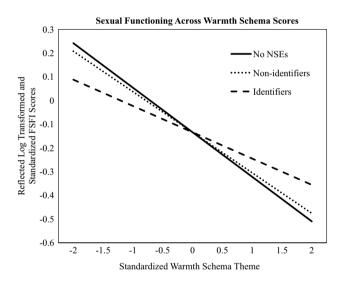


Fig. 2 Residualized FSFI scores for the three groups as a function of their Warmth schema theme scores. Higher FSFI scores reflect greater sexual dysfunction due to the reflected transformation of the data

women with NSEs, as the Erotophilia and Warmth themes are novel to this study.

Previous research that applied the MEM to 239 essays written in response to the same prompt used in the current

study by women with and without CSA histories led to the extraction of seven unique themes: Family and Development, Virginity, Abuse, Relationships, Sexual Activity, Attraction, and Existentialism (Stanton et al., 2015). While the schema themes in the current study and those of Stanton et al. overlap considerably (e.g., the NSE/Abuse, Relationships, Virginity, Sexual Activity themes), there were also some differences, which may be due to the recruitment and characteristics of the samples. The Stanton et al. study explicitly recruited women with CSA histories, resulting in (1) women with predominantly childhood NSEs and (2) only women who identified their NSEs as sexual abuse. Additionally, the sample of the current study was much larger. A larger sample size allows for more variability and the potential for more themes to be observed (nine vs. seven). It may be that the inclusion of non-identifiers and individuals with NSEs across the lifespan in the current sample resulted in more schema themes and greater diversity in the schema structure.

The current study found that women who identified their NSEs with these labels reported the lowest levels of sexual functioning across the groups. This is in line with Rellini and Meston's (2007) findings that women who identified their childhood NSEs as sexual abuse reported greater levels of sexual distress than did non-identifiers or those with no NSE histories. Kelley and Gidycz (2015), however, did not find a significant relationship between sexual function and sexual assault identification in women with adolescent or adulthood NSE histories. Notably, Kelley and Gidycz did not have a comparison group of women without NSE histories, and the current study revealed a difference in sexual functioning only between identifiers and those with no NSE histories. It may be the case that non-identifiers are not significantly different from identifiers in sexual functioning; however, they were also not significantly different from women with no NSEs. Identifiers exhibited lower levels of sexual functioning and reported an average level of functioning within the clinical range for sexual dysfunction.

The NSE identifiers also had greater prominence of the NSE theme in their sexual essays than both non-identifiers and those with no NSE histories. Interestingly, non-identifiers did not significantly differ from women with no NSEs. This corroborates the theory that identification involves a process of internalizing the NSE into one's sexual self-schema. The Warmth and Openness themes were also significantly less prominent in the identifiers' essays than in the essays written by women with no NSEs. These findings complement



previous research showing that individuals with NSEs have both more negative and less positive sexual schemas (Meston et al., 2006; Niehaus, Jackson, & Davis, 2012; Stanton et al., 2015).

In line with previous research suggesting that sexual self-schemas are predictive of sexual well-being (Rellini & Meston, 2011), the current study found that greater use of the Warmth theme specifically predicted greater sexual functioning in both women without NSE histories and NSE non-identifiers. Interestingly, the Warmth theme was not a significant predictor of sexual functioning in identifiers; instead, greater prominence of the NSE theme was significantly associated with poorer sexual functioning. Similarly, Pulverman et al. (2017) found that after a writing intervention that aimed to improve the sexual functioning of women with CSA histories (Meston et al., 2013), participants invoked the Abuse theme less over time. Together, these results suggest that identification is not only an index of greater internalization of the NSE into their schemas, but that this may influence sexual functioning.

Peterson and Muehlenhard (2011) proposed that identification involves fitting one's interpretation of their NSE into previously developed schemas and scripts of sex and sexual violence. In line with this proposal, the current study suggests that identifying the experience is associated with a greater prominence of the NSE into the sexual self-schema. Holguin and Hansens (2003) suggested that the sexual violence label itself may be harmful, as it may influence how individuals perceive themselves. Indeed, the results of the current study suggest identification may have a negative effect on sexual self-perspectives, which in turn could result in compromised sexual well-being.

Importantly, the current study had several limitations. The sample may have been affected by a self-selection bias. The study was advertised as an examination of consensual and nonconsensual sexual experiences and sexual well-being. This recruitment strategy could have led to a self-selection bias in that women who perceived a relationship between their experiences and their sexuality may have selected into the study over individuals who did not view a connection between their experiences and their sexuality. Additionally, while participants were unable to proceed past the writing page until 20 min had elapsed and a minimum of three sentences was required for compensation, there was no way of ensuring that the participants wrote continuously for the

whole 20-min period. Thus, there is likely some variability between participants in the degree to which they were actively engaged with the writing task.

The current analyses did not control for characteristics of the NSEs that may have had potentially confounding effects on the results. Future research could examine further the role of specific NSE characteristics (e.g., developmental stage of NSE onset, relationship to perpetrator) in the sexual self-schemas of women with NSE histories (see supplemental material for initial examination). Additionally, previous research has found correlates of NSE identification (e.g., self-blame, rape myth acceptance; Peterson & Muehlenhard, 2004, 2011) that should be further examined in the context of sexual self-schemas. Due to the cross-sectional nature of the study, the direction of the effect between sexual self-schema and identification was not addressed. Prospective longitudinal studies would be helpful in determining the chronology and potential causality of the constructs.

In conclusion, the results of this study provide support for the theory that NSE identification indexes the integration of the experience into one's sexual self-schema and, in turn, may affect sexual functioning. Researchers should carefully consider the language used in the recruitment and measurement of sexual violence in the context of their outcome variables as identification with traditional sexual violence labels appears to reflect differential sexual schemas as they relate to sexual functioning. Clinicians should be cautious of the labels they ascribe patients' NSEs as identification with these labels may be an important cognitive process in understanding the experience. Clinicians who treat women with NSE histories and sexual concerns may consider helping their patients disentangle their NSEs from their overall sexual self-schemas. Currently, treatments for the negative psychological and sexual consequences of NSEs are varied. Psychological concerns are often treated with cognitive behavioral therapy where assexual problems are typically addressed via sex therapy. Notably, the only empirically supported treatment for sexual dysfunction that has been specifically validated for women with NSE histories is expressive writing (Meston et al., 2013). Future research should continue to explore the use of expressive writing for the treatment of sexual concerns in women with NSE histories.

Acknowledgements This work was supported by the Canadian Institutes of Health Research (Funding Reference Number: 152269, awarded to Chelsea Kilimnik in May 2017).



Appendix: NSEI

Nonconsensual Sexual Experience Inventory

1. Has anyone ever inserted fingers, objects, or their penis into your vagina against your

Below are questions about sexual experiences that may have occurred against your will. We recognize that this is a sensitive topic, so please remember that your answers are completely anonymous and confidential. Please answer as honestly as possible.

No Yes

a.	Please select the age group(s) you were in when this happened. Please select all that apply: i. This happened in my childhood (ages 0-11) ii. This happened in my adolescence (ages 12-17) iii. This happened in my adulthood (ages 18 and over)
Note: the follo	owing items are repeated for each age group if an NSE is reported as occurring ne.
b.	For the experience(s) that happened in your CHILDHOOD (ages 0-11), how old were you the first time this happened?
c.	For the experience(s) that happened in your CHILDHOOD (ages 0-11), what was your relationship to this person? i. Parent / Guardian ii. Grandparent iii. Cousin iv. Sibling v. Friend vi. Family friend vii. Uncle or Aunt viii. Religious authority figure (e.g., clergy, minister, priest, rabbi, etc.) ix. Teacher x. Babysitter xi. Neighbor xii. Romantic / Dating Partner xiii. Acquaintance xiv. Stranger xv. Other:
d.	What was the gender of this person? i. Male ii. Female
e.	How old was this person? years OR I don't know
f.	How often did this experience take place or was repeated with this person during your CHILDHOOD (ages 0-11)? i. Once ii. Two to three times iii. Multiple times iv. Too many times to count
g.	Was violence, physical force, or physical injuries involved during this CHILDHOOD (ages 0-11) experience? No Yes
h.	To what extent do you feel this CHILDHOOD (ages 0-11) experience was traumatic?
	1 2 3 4 5 Not at all Extremely traumatic traumatic
i.	How do you feel this CHILDHOOD (ages 0-11) experience impacted your overalife?
	-3 -2 -1 0 1 2 3 Extremely Neutral Extremely negative impact impact



J.	did you tell anyone about this CHILDHOOD (ages 0-11) experience? If yes, who did you tell and what was their reaction or response?

- Has anyone ever inserted fingers, objects, or their penis into your <u>anus/butt</u> against your will? No Yes
 - a. Please select the age group(s) you were in when this happened. Please select all that apply:
 - i. This happened in my childhood (ages 0-11)
 - ii. This happened in my adolescence (ages 12-17)
 - iii. This happened in my adulthood (ages 18 and over)

Note: the previous items (questions b through j demonstrated for item 1 above) are repeated for each age group if an NSE is reported as occurring during that time.

- 3. Has anyone ever made you have <u>oral sex</u> against your will (either giving or receiving)? No Yes
 - a. Please select the age group(s) you were in when this happened. Please select all that apply:
 - i. This happened in my childhood (ages 0-11)
 - ii. This happened in my adolescence (ages 12-17)
 - iii. This happened in my adulthood (ages 18 and over)

Note: the previous items (questions b through j demonstrated for item 1 above) are repeated for each age group if an NSE is reported as occurring during that time.

- Has anyone ever fondled your breasts or genitals against your will or made you fondle their breasts or genitals against your will? No Yes
 - a. Please select the age group(s) you were in when this happened. Please select all that apply:
 - i. This happened in my childhood (ages 0-11)
 - ii. This happened in my adolescence (ages 12-17)
 - iii. This happened in my adulthood (ages 18 and over)

Note: the previous items (questions b through j demonstrated for item 1 above) are repeated for each age group if an NSE is reported as occurring during that time.

5. Other than the events already mentioned, are there any other sexual experiences that occurred against your will? No Yes

If yes, please specify what the other sexual experience that occurred against your will was.

- a. Please select the age group(s) you were in when this happened. Please select all that apply:
 - i. This happened in my childhood (ages 0-11)
 - ii. This happened in my adolescence (ages 12-17)
 - iii. This happened in my adulthood (ages 18 and over)

Note: the previous items (questions b through j demonstrated for item 1 above)) are repeated for each age group if an NSE is reported as occurring during that time.

References

Andersen, B. L., & Cyranowski, J. M. (1994). Women's sexual self-schema. *Journal of Personality and Social Psychology*, 67, 1079–1100. https://doi.org/10.1037/0022-3514.67.6.1079.

Botta, R. A., & Pingree, S. (1997). Interpersonal communication and rape: Women acknowledge their assaults. *Journal of Health Communication*, 2, 197–212. https://doi.org/10.1080/1081073971 27752. Boyd, R. L. (2017). MEH: Meaning extraction helper (Version 1.4.15) [Software]. Retrieved from http://meh.ryanb.cc/. Accessed 30 Jan 2017.

Boyd, R. L., & Pennebaker, J. W. (2015). A way with words: Using language for psychological science in the modern era. In C. Dimofte, C. Haugtvedt, & R. Yalch (Eds.), Consumer psychology in a social media world (pp. 222–236). New York: Routledge Publishers.



- Boyd, R. L., Wilson, S. R., Pennebaker, J. W., Kosinski, M., Stillwell, D. J., & Mihalcea, R. (2015, April). Values in words: Using language to evaluate and understand personal values. In *International association for the Advancement of Artificial Intelligence (AAAI) Conference on Web and Social Media* (pp. 31–40). Retrieved from https://www.aaai.org/ocs/index.php/ICWSM/ICWSM15/paper/view/10482.
- Buhrmester, M., Kwang, T., & Gosling, S. D. (2011). Amazon's Mechanical Turk: A new source of inexpensive, yet high quality data? *Perspectives on Psychology Science*, 6, 3–5. https://doi. org/10.1177/1745691610393980.
- Cantor, D., Fisher, B., Chibnall, S., Townsend, R., Lee, H., Bruce, C., & Thomas, G. (2015). Report on the AAU Campus Climate Survey on Sexual Assault and Sexual Misconduct. Washington, DC: Association of American Universities. Retrieved from http://www.aau.edu/uploadedFiles/AAU_Publications/AAU_Reports/Sexual_Assault_Campus_Survey/Report%20on%20the%20AAU%20Campus%20Climate%20Survey%20on%20Sexual%20Assault%20and%20Sexual%20Misconduct.pdf. Accessed 18 May 2017.
- Chung, C. K., & Pennebaker, J. H. (2008). Revealing dimensions of thinking in open–ended self-descriptions: An automated meaning extraction method for natural language. *Journal of Research in Personality*, 42, 96–132. https://doi.org/10.1016/j.jrp.2007.04.006.
- Cleere, C., & Lynn, S. J. (2013). Acknowledged versus unacknowledged sexual assault among college women. *Journal of Interpersonal Violence*, 28, 2593–2611. https://doi.org/10.1177/0886260513 479033.
- Derogatis, L. R., & Melisaratos, N. (1979). The DSFI: A multidimensional measure of sexual functioning. *Journal of Sex and Marital Therapy*, *5*, 244–281. https://doi.org/10.1080/00926237908403732.
- Harned, M. S. (2004). Does it matter what you call it? The relationship between labeling unwanted sexual experiences and distress. *Journal of Consulting and Clinical Psychology*, 72, 1090–1099. https://doi.org/10.1037/0022-006X.72.6.1090.
- Holguin, G., & Hansen, D. J. (2003). The "sexual abused child": Potential mechanisms of adverse influences of such a label. Aggression and Violent Behavior, 8, 645–670. https://doi.org/10.1016/S1359-1789(02)00101-5.
- Kahn, A. S., Jackson, J., Kully, C., Badger, K., & Halvorsen, J. (2003). Calling it rape: Differences in experiences of women who do or do not label their sexual assault as rape. *Psychology of Women Quarterly*, 27, 233–242. https://doi.org/10.1111/1471-6402.00103.
- Katerdahl, D., Burge, S., & Kellogg, N. (2006). Factors that predict how women label their own childhood sexual abuse. *Journal of Child Sexual Abuse*, 15, 43–54. https://doi.org/10.1300/J070v15n02_03.
- Kelley, E. L., & Gidycz, C. A. (2015). Labeling of sexual assault and its relationship with sexual functioning: The mediating role of coping. *Journal of Interpersonal Violence*, 30, 348–366. https:// doi.org/10.1177/0886260514534777.
- Kilimnik, C. D., Trapnell, P. D., & Humphreys, T. P. (2016). Negative affectivity in female's identification of their nonconsensual sexual experiences and sexual dissatisfaction. *Canadian Journal of Human Sexuality*, 25, 177–185. https://doi.org/10.3138/cjhs.253-A1.
- Layman, M. J., Gidycz, C. A., & Lynn, S. J. (1996). Unacknowledged versus acknowledged rape victims: Situational factors and posttraumatic stress. *Journal of Abnormal Psychology*, 105, 124–131. https://doi.org/10.1037/0021-843X.105.1.124.
- 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. https://doi.org/10.1080/10532528.2002.10559809.

- Littleton, H. L., Rhatigan, D. L., & Axsom, D. (2007). Unacknowledged rape: How much do we know about the hidden rape victim? *Journal of Aggression, Maltreatment, & Trauma, 14,* 57–74. https://doi.org/10.1300/J146v14n04_04.
- Marx, B., & Soler-Baillo, J. (2005). The relationships among risk recognition, autonomic and self-reported arousal, and posttraumatic stress symptomatology in acknowledged and unacknowledged victims of sexual assault. *Psychosomatic Medicine*, 67, 618–624. https://doi.org/10.1097/01.psy.0000171809.12117.79.
- Meston, C. M., Lorenz, T. A., & Stephenson, K. R. (2013). Effects of expressive writing on sexual dysfunction, depression, and PTSD in women with a history of childhood sexual abuse: Results from a randomized clinical trial. *Journal of Sexual Medicine*, 10, 2177– 2189. https://doi.org/10.1111/jsm.12247.
- Meston, C. M., Rellini, A. H., & Heiman, J. R. (2006). Women's history of sexual abuse, their sexuality, and sexual self-schemas. *Journal of Consulting and Clinical Psychology*, 74, 229–236. https://doi.org/10.1037/0022-006X.74.2.229.
- Meyer-Bahlburg, H. F. L., & Dolezal, C. (2007). The Female Sexual Function Index: A methodological critique and suggestions for improvement. *Journal of Sex and Marital Therapy*, 33, 217–224. https://doi.org/10.1080/00926230701267852.
- Niehaus, A. F., Jackson, J., & Davies, S. (2010). Sexual self-schemas of female child sexual abuse survivors: Relationships with risky sexual behavior and sexual assault in adolescence. Archives of Sexual Behavior, 39, 1359–1374. https://doi.org/10.1007/s10508-010-9600-9.
- Peterson, Z. D., & Muehlenhard, C. L. (2004). Was it rape? The function of women's rape myth acceptance and definitions of sex in labeling their own experiences. *Sex Roles*, *51*, 129–144. https://doi.org/10.1023/B:SERS.0000037758.95376.00.
- Peterson, Z. D., & Muehlenhard, C. L. (2011). A match-and-motivation model of how women label their nonconsensual sexual experiences. *Psychology of Women Quarterly*, 35, 558–570. https://doi. org/10.1177/0361684311410210.
- Pulverman, C. S., Boyd, R. L., Stanton, A. M., & Meston, C. M. (2017). Changes in the sexual self-schema of women with a history of childhood sexual abuse following expressive writing treatment. *Psychological Trauma*, 9, 181–188. https://doi.org/10.1037/tra00 00163.
- Rellini, A., & Meston, C. (2007). Sexual function and satisfaction in adults based on the definition of child sexual abuse. *Journal of Sexual Medicine*, *4*, 1312–1321. https://doi.org/10.1111/j.1743-6109.2007.00573.x.
- Rellini, A. H., & Meston, C. M. (2011). Sexual self-schemas, sexual dysfunction, and the sexual responses of women with a history of childhood sexual abuse. Archives of Sexual Behavior, 40, 351–362. https://doi.org/10.1007/s10508-010-9694-0.
- Rodríguez-Auarez, G., Ramirez-Ezparza, N., Pérez-Brena, N., & Boyd, R. L. (2017). Hablos Inglés y Español: Cultural self-schemas as a function of language. *Frontiers in Psychology*, 30, 885. https://doi.org/10.3389/fpsyg.2017.00885.
- Rosen, R., Brown, C., Heiman, J., Leiblum, S., Meston, C., ... D'Agostino, R. (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. https://doi.org/10.1080/009262300278597
- Stanton, A. M., Boyd, R. L., Pulverman, C., & Meston, C. M. (2015). Determining women's sexual self-schemas through advanced computerized text analysis. *Child Abuse and Neglect*, 46, 78–88. https://doi.org/10.1016/j.chiabu.2015.06.003.
- Wilcox, R. R. (2010). Fundamentals of modern statistical methods (2nd ed.). New York, NY: Springer.

