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A Developmentally Relevant Approach to Classifying Nonconsensual Sexual Experiences in the Study of Women's Sexual Well-Being

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In this article we propose a sexual developmental approach to classifying the onset of non-consensual sexual experiences (NSEs) that differs from the traditional age cutoff approach. Online measures of sexual self-schemas, sexual response, and sexual functioning were administered to 797 women with and without NSE histories. Women were grouped based on when their NSEs first occurred in reference to their age of menarche and age of their first consensual sexual experience (i.e., premenarche onset, postmenarche preconsensual onset, postconsensual onset, and no NSEs). Between-group analyses assessed differences in sexual well-being and structural equation modeling (SEM) assessed measurement invariance across the four groups. Women with NSE onset postmenarche but before their first consensual sexual experience reported significantly more conservative-embarrassed sexual self-schemas than did women with no NSEs. Women with NSE onset postmenarche and post-first consensual sex had significantly less sexual satisfaction than did women with no NSE histories. The other groups did not significantly differ from each other. The model demonstrated partial indicator-level metric noninvariance, suggesting that the various indicators of sexuality contributed differentially to the overall sexual well-being across these groups of women. The results support the use of the developmentally informed approach to classifying NSEs when assessing female sexual well-being.

Nonconsensual sexual experiences (NSEs), such as sexual abuse, sexual assault, and rape, are estimated to be experienced by approximately 20% of women in both childhood and later life (Muehlenhard, Peterson, Humphreys, & Jozkowski, 2017; Stoltenborgh, van Ijzendoorn, Euser, & Bakermans-Kranenburg, 2011). These experiences play a significant role in the sexual well-being of women. Previous research has demonstrated that women with NSE histories report decreased sexual satisfaction (Rellini & Meston, 2007), decreased sexual desire (Meston, Heiman, & Trapnell, 1999), more negative sexual self-schemas (Stanton, Boyd, Pulverman, & Meston, 2015), more negative processing of sexual stimuli (Meston & Heiman, 2000), and higher levels of sexual dysfunction (Leonard & Follette, 2002). While there has been some research on the influence of NSEs in adulthood on sexuality (Kelley & Gidycz, 2015; Kilimnik, Trapnell, & Humphreys, 2016), most studies that have examined this relationship have focused on childhood NSEs, especially childhood sexual abuse (CSA) (for a review, see Rellini,

2008) and few studies have examined the mechanisms by which NSEs lead to diverse sexual adjustment outcomes.

When researching NSEs that occur at different developmental stages throughout the life span (e.g., childhood, adolescence, adulthood), researchers often use arbitrary age cutoffs to define CSA that range from under age 12 (e.g., Fromuth, 1986) to age 15 (e.g., Jehu, 1988; Koss et al., 2007), and some include those individuals with self-reported childhood sexual violence (e.g., Roller, Martsolf, Draucker, & Ross, 2009). Most frequently, researchers of CSA have used age 16 as the operationalized cutoff for childhood (e.g., Pulverman, Boyd, Stanton, & Meston, 2016), likely because early research claimed this to be the age at highest risk for sexual abuse (Finkelhor & Baron, 1986) and because it is the most common legal age of consent in the United States (Age of Consent, 2017).

Arbitrary age cutoffs for NSEs are problematic in that they gloss over important sexual developmental changes that occur at different ages for each individual, most notably age of pubertal onset and age of first sexual exploration. Pubertal onset marks the transition from childhood to adolescence (Suleiman & Harden, 2016) and involves the maturation of the hypothalamic-pituitary-adrenal (HPA) and the hypothalamic-pituitary-gonadal (HPG) axes (see Ruttle, Shirtcliff, Armstrong, Klein, & Essex, 2015),

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which influence the production of stress (i.e., cortisol) and sex hormones (e.g., testosterone). Early life trauma, such as CSA, has been related to hyperactivity of the HPA axis in adolescence, resulting in accelerated pubertal maturation (e.g., earlier age of menarche) and increased stress responsivity (Trickett, Noll, & Putnam, 2011). Increased stress responsivity in women with sexual trauma can create an overgeneralization of stress reactions to sexual stimuli even when they are not threatening (Fleurkens, Rinck, & van Minnen, 2011), potentially creating greater inhibition in sexual arousal responses (Hamilton & Meston, 2013).

Adolescence has been defined as a critical period for social learning (e.g., Fuhman, Knoll, & Blakemore, 2015) and sexual schema formation (e.g., Harden, 2014). Andersen and Cyranowski (1994) proposed that sexual self-schemas are developed with sexual learning and experiences and serve to guide future sexual behaviors that reciprocally influence these schemas. With the onset of puberty, the first experiences of sexual desire occur and individuals must integrate their learned information about sexuality into their own sexual development and experiences (Suleiman & Harden, 2016). Several studies have shown that women with CSA histories differ from their nonabused counterparts in that they have more negative sexual self-schemas and greater negative affect during genital arousal responses (Meston, Rellini, & Heiman, 2006), but positive changes in these schemas correspond with increases in sexual functioning (Pulverman et al., 2016). Women who experience their first sexual experience as nonconsensual and potentially traumatic may exhibit differential patterns of sexual self-schema development than those who have consensual sexual experiences prior to experiencing an NSE (Niehaus, Jackson, & Davies, 2010).

Given that pubertal development and sexual experience play such an integral role in the sexual health of women, the current study aimed to implement a developmentally relevant operational method for classifying NSEs and to examine the sexual responses, sexual self-schemas, and sexual functioning of women with NSE histories using this novel classification method. To do so, women's age of menarche (a commonly operationalized index of pubertal onset in retrospective studies with women; Livson & McNeill, 1962; Must et al., 2002) and age of first consensual sexual experience (a highly reliable self-report item; Goldberg, Haydon, Herring, & Halpern, 2014) were used as relevant sexual developmental markers to specify the developmental stage in which the NSEs first occurred. The notion of a developmental approach to classifying NSEs would be consistent with Finkelhor and Browne's (1985) widely recognized theoretical model on the influence of early-life NSEs on sociosexual development—the traumagenic dynamics model. The theory posits that positive sexual schema formation and sexual development can be disrupted when NSEs occur prior to safe and consensual sexual experiences. Inherently, the model proposes that understanding the sexual developmental markers (e.g., puberty, consensual sexual experiences) in relation to when NSEs occur are critical

for the NSEs' influence on later-life sexuality. The developmental approach to NSE classification may be a step toward more empirically informed, targeted interventions for the heterogeneous population of women with NSE histories and sexual concerns. The current study had two specific hypotheses:

- H1:** Based on the different sexual developmental processes that occur in adolescence, we hypothesized that women who experienced NSE onset after puberty but prior to their first consensual sexual experience would demonstrate more negative sexual self-schemas, worse sexual functioning, and greater levels of sexual inhibition than the other groups of women with and without NSE histories.
- H2:** As each developmental stage (e.g., childhood, adolescence) encompasses different developmental transitions and challenges (menarche, first consensual sexual experience), we proposed that sexual well-being indicators will function differentially in their overall contributions to sexual well-being for women with NSE onset during different developmental stages. The differential functioning of the indicators across the groups would provide evidence that the developmental categorization approach is capturing the unique sexual developmental implications of NSEs on sexual well-being.

Method

Participants

A total of 808 women over age 18 completed a battery of online measures. All participants reporting at least one NSE in their lifetime (including nonconsensual or forced sexual contact, genital stimulation, oral sex, or vaginal or anal penetration) were included in the NSE history group ($n = 474$). Participants reporting no history of NSEs made up the comparison group ($n = 334$). We excluded 11 participants from analyses due to missing data on age at the time of their NSE, resulting in a final sample of 463 women for the NSE group in the current analyses ($N = 797$).

The participants ranged in age from 18 to 78 ($M = 35.32$, $SD = 11.23$) and were primarily Caucasian (75.5%). The education level of the sample was relatively normally distributed, with the majority of participants having completed some college/university (38.8%) or receiving an undergraduate degree (38.8%). The majority of participants were in a committed relationship or married (72.2%), and 22.7% of participants had previously been divorced. Just under half of the sample reported some form of psychological diagnosis (45.3%), and 15.8% of them had previously sought mental health treatment for sexual concerns.

All participants had engaged in at least one consensual sexual experience. The average age of first consensual penetrative sexual experience (vaginal or anal) was 17.56 ($SD = 3.32$), and the average age of first consensual oral sex

experience was 18.18 ($SD = 4.36$). The average of age of menarche was 12.63 ($SD = 1.76$). The sample predominantly identified as heterosexual (79.4%). They were predominantly or exclusively attracted to other-sex partners (88.0%) and predominantly or exclusively engaged in sexual behaviors with other-sex partners (91.5%).

The group of women with NSE onset premenarche had significantly more self-identified bisexual women than the other three groups ($V_{Cramer} = .13$) and more same-sex sexual attraction ($MD = 0.39$, $SE = 0.10$, $p < .001$) and same-sex sexual behavior ($MD = .29$, $SE = .09$, $p = .004$) than the no NSE history group. The group of women with NSE onset postmenarche and post-first consensual sexual experience reported an earlier age of first consensual intercourse than both those with no NSE histories ($MD = 1.64$, $SE = 0.32$, $p < .001$) and those with postmenarche and preconsensual NSE onset ($MD = 0.92$, $SE = 0.34$, $p = .036$). The women with NSE onset postmenarche and pre-first consensual sexual experience reported an earlier age of menarche than those with no NSE histories ($MD = 0.64$, $SE = 0.15$, $p < .001$). The group with NSE onset postmenarche and postconsensual sex also reported more divorce history than the group of women with no NSE histories. The group of women with no NSE history reported significantly less sex-related mental health treatment than all three groups of women with NSE histories ($V_{Cramer} = .20$) and significantly fewer psychological diagnoses ($V_{Cramer} = .32$). There were no other between-group differences in demographic variables observed. All demographic information for the groups, using the developmental approach, is presented in Table 1.

Measures

Demographic information. The demographic survey assessed general background information about the participants and their sexual history (refer to Table 1).

Nonconsensual Sexual Experience Inventory (NSEI; Kilimnik & Meston, 2017). NSE histories of the women were examined using the NSEI. The NSEI is designed to comprehensively assess the characteristics of various forms of NSEs that individuals may have had. The inventory is composed of four behavior-specific questions of NSEs, each framed as “Has anyone ever ... against your will?,” for experiences of vaginal penetration by fingers, objects, or genitals; anal penetration by fingers, objects, or genitals; giving or receiving oral sex; and genital or breast fondling or touching (others touching their own or being made to touch others’). Although not used in the current analyses, each of the NSE history questions preceded a series of follow-up questions for participants who indicated “Yes,” including age of NSE occurrence, relationship to perpetrator, frequency of NSE occurrence, violence/force or presence of injury, self-perceived level of trauma, self-perceived level of overall life impact, and whether they had disclosed the experience to anyone. There is a fifth NSE history item that asks participants if there are any other

sexual experiences that occurred against their will not captured in the previous questions. This question provides for open-ended response to allow participants to explain the experience. For the purposes of this study, women who answered “Yes” to any of the five NSE items and also provided the age of NSE occurrence were included in the NSE history group; participants who answered “No” to all five NSE items were included in the no NSE history group.

Sexual Self-Schema Survey (SSSS; Andersen & Cyranowski, 1994). Women’s sexual self-schemas were assessed using the SSSS. The SSSS is a 30-item measure of individuals’ cognitive representations of themselves as sexual beings across three factors: passionate-romantic (10 items, $\alpha = 0.71$), open-direct (9 items, $\alpha = 0.72$), and embarrassed-conservative (7 items, $\alpha = 0.62$). Four of the items are distraction items to defer participants’ attention away from the sexual aspects of the measure; these items are not used in the score calculations. The scale is the most widely used measure of sexual self-schemas in the literature and has reported high construct validity and nine-week test-retest reliability of $r = 0.88$. The SSSS is also highly reliable with an internal consistency of $\alpha = 0.80$ across the 30 items for the current sample (previously reported alphas are for the current sample).

Sexual Excitation and Sexual Inhibition Inventory for Women (SESII-W; Graham, Sanders, & Milhausen, 2006). Women’s excitatory and inhibitory sexual propensities were measured using the SESII-W, a widely used and validated 36-item scale that was developed specifically to assess the sexual excitation and inhibition propensities of women based on the dual control model (Graham et al., 2006). Items are rated on a 4-point Likert scale ranging from 1 (*Strongly agree*) to 4 (*Strongly disagree*), with lower scores reflecting greater excitation and inhibition responses on the respective scales. The SESII-W’s normative data suggest that moderate scores are indicative of healthy functioning, with more extreme scores suggesting areas of potentially problematic functioning (Graham et al., 2006).

The scale is made up of two higher-order factors, excitation ($\alpha = 0.88$) and inhibition ($\alpha = 0.80$), both of which are composed of separate lower-order factors. Excitation contains the factors of arousability (nine items, $\alpha = 0.84$), partner characteristics (four items, $\alpha = 0.67$), sexual power dynamics (four items, $\alpha = 0.58$), smell (two items, $\alpha = 0.87$), and setting (two items, $\alpha = 0.69$). Inhibition is composed of concerns about sexual function (four items, $\alpha = 0.74$), arousal contingency (three items, $\alpha = 0.82$) and relationship importance (six items, $\alpha = 0.74$). All reported alphas are for the current sample.

Female Sexual Function Index (FSFI; Rosen et al., 2000). Women’s overall sexual functioning was examined using the FSFI, the gold-standard measure for examining sexual functioning in women. The index is composed of 19 items that measure sexual functioning across six domains,

Table 1. Demographic Information for the Separate Groups (No NSEs, Premenarche, Preconsensual, Postconsensual)

Variables	No NSEs (<i>n</i> = 334)		Premenarche (<i>n</i> = 164)		Preconsensual (<i>n</i> = 150)		Postconsensual (<i>n</i> = 149)	
	<i>M</i> (<i>SD</i>)	<i>n</i> (%)	<i>M</i> (<i>SD</i>)	<i>n</i> (%)	<i>M</i> (<i>SD</i>)	<i>n</i> (%)	<i>M</i> (<i>SD</i>)	<i>n</i> (%)
Continuous variables (range)								
Age (18–78)	34.40 (11.36)		36.05 (11.13)		34.78 (11.07)		37.08 (11.06)	
Age of first sex (10–39)	18.05 (3.28)		17.32 (3.56)		17.91 (3.65)		16.40 (2.38)	
Age of menarche (8–27)	12.87 (1.63)		12.65 (2.23)		12.23 (1.45)		12.46 (1.63)	
Same-sex attraction (1–5) ^a	4.60 (0.88)		4.21 (1.06)		4.36 (0.96)		4.41 (0.82)	
Same-sex behaviors (1–5) ^a	4.69 (0.85)		4.40 (1.03)		4.60 (0.90)		4.60 (0.81)	
Categorical variables								
Sexual orientation								
Homosexual/lesbian		11 (3.3)		10 (6.1)		6 (4.0)		6 (4.0)
Bisexual		24 (7.2)		32 (19.5)		21 (14.0)		21 (14.1)
Pansexual		4 (1.2)		2 (1.2)		4 (2.7)		2 (1.3)
Heterosexual		294 (88.0)		113 (68.9)		113 (75.3)		113 (75.8)
Queer		1 (0.3)		1 (0.6)		1 (0.7)		0 (0.0)
Asexual		0 (0.0)		3 (1.8)		2 (1.3)		3 (2.0)
Did not disclose		0 (0.0)		3 (1.8)		3 (2.0)		4 (2.7)
Relationship status								
Single		92 (27.6)		48 (29.3)		43 (28.7)		39 (26.2)
Committed		73 (21.9)		25 (15.2)		41 (27.3)		39 (26.2)
Cohabiting		37 (11.1)		18 (11.0)		15 (10.0)		24 (16.1)
Married		132 (39.5)		73 (44.5)		51 (34.0)		47 (31.5)
Divorce history								
No		274 (82.0)		125 (76.2)		112 (74.7)		97 (65.1)
Yes		60 (18.0)		39 (23.8)		38 (25.3)		52 (34.9)
Race								
Native American		5 (1.5)		2 (1.2)		3 (2.0)		1 (0.7)
Pacific Islander/Hawaiian Native		0 (0.0)		2 (1.2)		0 (0.0)		0 (0.0)
African American/Black		30 (9.0)		25 (15.2)		19 (12.7)		9 (6.0)
Hispanic/Latin American		20 (6.0)		12 (7.3)		6 (4.0)		8 (5.4)
Asian		20 (6.0)		5 (3.0)		10 (6.7)		4 (2.7)
Middle Eastern		0 (0.0)		0 (0.0)		1 (0.7)		0 (0.0)
Caucasian/White		256 (76.6)		114 (69.5)		107 (71.3)		125 (83.9)
Other		3 (0.9)		4 (2.4)		4 (2.7)		2 (1.3)
Education								
Some high school		2 (0.6)		2 (1.2)		3 (2.0)		0 (0.0)
High school diploma/GED		31 (9.3)		26 (15.9)		12 (8.0)		16 (10.7)
Some college		120 (35.9)		71 (43.3)		64 (42.7)		54 (36.2)
College degree		147 (44.0)		49 (29.9)		55 (36.7)		58 (38.9)
Advanced degree		34 (10.2)		16 (9.8)		16 (10.7)		21 (14.1)
Psychological diagnosis								
No		237 (71.0)		62 (37.8)		66 (44.0)		71 (47.7)
Yes		97 (29.0)		102 (62.2)		84 (56.0)		78 (52.3)
Sex treatment seeking								
No		302 (90.4)		118 (72.0)		120 (80.0)		130 (87.2)
Yes		32 (9.6)		46 (28.0)		30 (20.0)		19 (12.8)

Note. NSE = nonconsensual sexual experience; no NSEs = women with no reported NSE histories; premenarche = women with NSE onset prior to age of menarche; preconsensual = women with NSE onset post-age of menarche but prior to their first consensual sexual experience; postconsensual = women with NSE onset post-age of first consensual sexual experience; GED = general equivalency diploma.

^aThese variables were measured on a 5-point Likert scale from 1 (*Exclusively same-sex partners*) to 5 (*Exclusively other-sex partners*).

including desire (two items, $\alpha = 0.87$), arousal (four items, $\alpha = 0.90$), lubrication (four items, $\alpha = 0.66$), orgasm (three items, $\alpha = 0.44$), satisfaction (three items, $\alpha = 0.71$), and pain (three items, $\alpha = 0.93$). The FSFI is internally consistent, with an overall internal consistency of $\alpha = 0.84$ for the current sample (all reported domain alphas are for the current sample). The FSFI has reported strong construct validity and two- to four-week test-retest reliability ($r = 0.88$; Rosen et al., 2000).

Procedure

Women over age 18 and living in the United States were recruited from Amazon's Mechanical Turk (MTurk) to take part in the study, advertised as "examining the influence of consensual and nonconsensual sexual experiences on female sexual well-being." Participants were first directed to an informed consent form that detailed the risks and benefits of participation. After giving consent, participants completed a

battery of measures online that assessed demographic information, their previous consensual sexual histories, their NSE histories, their sexual self-schemas, their sexual excitation and inhibition responses, and their sexual functioning across the domains of desire, arousal, orgasm, lubrication, satisfaction, and pain. Participants were compensated \$1.50 to their MTurk accounts following completion of the study. All study protocols and methods were reviewed and approved by the University of Texas at Austin's Institutional Review Board (IRB).

Data Analyses

Women were grouped using three different approaches: (1) the NSE history approach, where individuals with no NSE history ($n = 334$) made up one group and women with any reported NSE history made up the second group ($n = 463$); (2) the age-cutoff approach, where women with no NSE histories made up one group ($n = 334$), those with NSE onset before age 16 made up a second group ($n = 227$), and those with NSE onset at age 16 or later made up a third group ($n = 236$); and (3) the proposed developmental approach to NSE onset. In the developmental approach, women with NSE onset premenarche were classified as the premenarche group ($n = 164$). Women with NSE onset postmenarche but prior to their first consensual sexual experience became the preconsensual group ($n = 150$). Women with NSE onset postmenarche and after their first consensual sexual experience comprised the postconsensual group ($n = 149$). Women with no NSE histories were used as a reference group (no NSEs group, $n = 334$). It should be noted that NSE onset is when the NSEs first began and not necessarily the developmental stage in which the NSEs stopped.

Missing data were replaced with item-level means calculated from the whole sample for individuals who were missing less than 10% of the items on a particular scale. If the individual was missing more than 10% of their entire data (across all scales), she was not included in analyses ($n = 2$). All other missing values were left as missing.

Descriptive cross-tabulations were run to assess for NSE type prevalence across the different NSE groups. Three multivariate analyses of variance (MANOVAs) were conducted to examine between-group differences in the sexual well-being variables (the three sexual self-schema subscales, the five excitation subscales, the three inhibition variables, and the six sexual function variables). The first MANOVA assessed for group differences using the NSE history approach to grouping the women (two groups). A second MANOVA was then conducted using the age-cutoff approach to determine between group differences (three groups). A final MANOVA was conducted to assess between-group differences in the sexual well-being variables using the developmental approach (four groups). All variables that demonstrated a significant Levene's test, suggesting an inequality of error variances across the groups, were assessed at the post hoc level using Games-Howell

comparisons. All other variables were assessed at the post hoc level using Bonferroni comparisons.

Structural equation modeling (SEM) was used to explore the nuances of sexual well-being differences of women using the developmental approach to NSE categorization to provide evidence that they are distinct groups. A multigroup confirmatory factor analysis (CFA) was run for each group within a nested model to test for measurement invariance. The CFAs were conducted on the 17 sexual well-being variables as indicators for a single latent construct of sexual well-being, allowing the variables from the same scales to correlate (e.g., the SSSS subscales were allowed to correlate with one another).

To identify and scale the model, the variance of the latent variable (sexual well-being) for the reference group (no NSEs group) was fixed at one, while the variances for the latent variables of the other groups were freely estimated. To identify the model, a single indicator was set to be equal across the groups. Arousalability, from the sexual excitation subscale of the SESII-W, was selected as the indicator to be equal across groups. Previous research has demonstrated that the means of women with and without CSA histories do not differ on the higher-order sexual excitation factor (Kilimnik & Meston, 2016), and arousalability has been shown to be the main contributor to the variance in this excitation factor (Graham et al., 2006). This provides some evidence to assume that arousalability would contribute to sexual well-being relatively similarly across groups.

Model fit was assessed using the root mean square error of approximation (RMSEA) and the comparative fit index (CFI) statistics of model fit (Hu & Bentler, 1999; MacCallum, Browne, & Sugawara, 1996). Research has suggested, however, that these fit indices may be understated with large numbers of indicator variables per latent construct (e.g., 12 or more) (Kenny & McCoach, 2003). Given that the current study examined 17 indicators for a single latent construct across four groups, some leniency on goodness of fit for these statistics has been extended to allow for mediocre and acceptable fit indices that border traditional rule-of-thumb cutoffs (see Hu & Bentler, 1999).

Configural invariance was assessed by looking at the model fit indices for each group to ensure the single-factor model fit the data for each group similarly when the parameters were freely estimated. Construct-level metric invariance was assessed by conducting a chi-square difference test of model fit between a model where the unstandardized indicator loadings were all freely estimated across groups (aside from arousalability, which was set to be equal across groups) and a model where all indicator loadings were set to be equal across groups (fully constrained model). If the chi-square difference test is significant, this suggests a lack of model fit to the data by forcing the loadings of all the indicators to be equal across the groups and, therefore, construct-level metric noninvariance.

Partial measurement invariance was then conducted to assess for differential functioning among the indicators.

Determining if there is metric invariance for a specific indicator is done by setting all loadings for a single indicator to be equal across groups while allowing the other indicators to be freely estimated, and then comparing the model fit to the model where all indicators are freely estimated using a chi-square difference test. If the chi-square test is significant, this suggests a loss of model fit by forcing that indicator to load equally onto sexual well-being across the groups. This is repeated for each of the indicators to determine which indicators are differing across the groups in their contribution to sexual well-being. If the model demonstrates indicator-level metric noninvariance (i.e., that the indicators differentially contribute to the sexual well-being construct across the groups), this provides evidence the sexual well-being construct is defined differently at the indicator level across the groups, suggesting that the developmental approach to classifying NSEs is capturing distinct groups of individuals in terms of their sexual well-being.

A final chi-square comparison of model fit was conducted to assess for differences among the groups in the variance of the latent sexual well-being construct. This is done by comparing a model where the variances are all set to equal one (as in the reference group) to a model where the variances are freely estimated (aside from the reference group). If the chi-square difference test of model fit is significant, this suggests a significant reduction of model fit in fixing the latent variable variances to all be equal and the variance of the latent variable differs across the groups.

Results

NSE Prevalence and Characteristics

Of the women with reported NSE histories ($n = 463$), 61.6% reported nonconsensual vaginal penetration ($n = 285$), 21.8% reported nonconsensual anal penetration

($n = 101$), 23.9% reported nonconsensual oral sex ($n = 111$), 56.6% reported nonconsensual touching of genitals ($n = 262$), and 7.1% experienced a form of NSE other than these (including attempted NSEs, coercive undressing, or exposure to nudity; $n = 33$). Chi-square difference tests indicated that women with NSE onset premenarche reported more nonconsensual vaginal penetration than the premenarche and postconsensual groups (respectively, $V = .14$, $p = .012$; $V = .25$, $p < .001$), and more touching or fondling than the postconsensual group ($V = .21$, $p = .001$). Both the premenarche and premenarche groups demonstrated significantly more nonconsensual oral sex than did those women with postconsensual NSE onset (respectively, $V = .26$, $p < .001$; $V = .18$, $p = .003$). There were no significant differences between the groups in nonconsensual anal penetration experiences. Group frequencies in type of NSEs experienced are depicted in Figure 1. Again, it should be noted that NSE onset is when the NSEs first began and not necessarily the developmental stage in which the NSEs stopped. It may be that individuals with the earliest NSE onset have experienced more NSEs overall because they have been experiencing them for a longer period of time.

Group Differences in Sexual Well-Being

Group differences with the overall NSE history approach. A MANOVA was run to assess differences in sexual well-being using the overall NSE history approach to group formation. The assumption of equality of error variances across groups was not met for nine of the 17 dependent variables, including desire ($F_{(1, 507)} = 10.08$, $p = .002$), arousal ($F_{(1, 507)} = 9.05$, $p = .003$), lubrication ($F_{(1, 507)} = 12.32$, $p < .001$), orgasm ($F_{(1, 507)} = 7.14$, $p = .008$), satisfaction ($F_{(1, 507)} = 9.20$, $p = .003$), pain ($F_{(1, 507)} = 6.09$, $p = .014$), power dynamics ($F_{(1, 507)} = 7.90$,

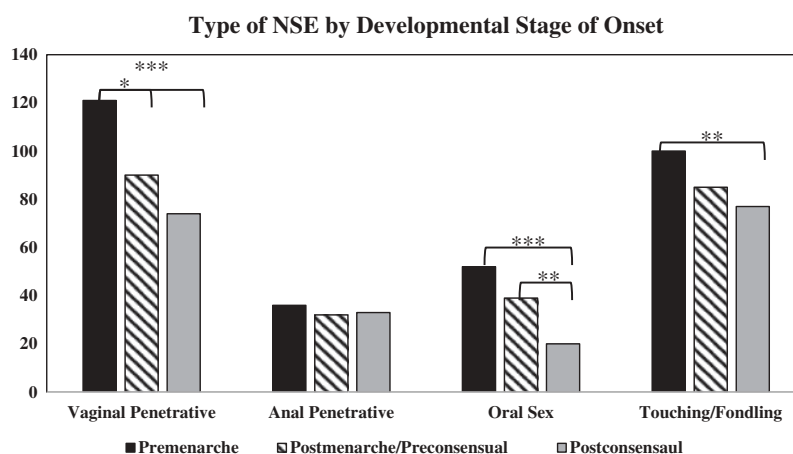


Figure 1. Prevalence of the different types of nonconsensual sexual experience (NSE) for each of the three developmental stages of onset. The premenarche group includes women who experienced their NSE prior to age of menarche. The postmenarche/preconsensual group includes women who experienced their first NSE after age of menarche but before their first consensual sexual experience. The postconsensual group includes women who experienced their first NSE after their first consensual sexual experience. *** $p < .001$; ** $p < .01$; * $p < .05$.

$p = .005$), smell ($F_{(1, 507)} = 4.00, p = .046$), and arousal contingency ($F_{(1, 507)} = 13.15, p < .001$), as indicated by their significant Levene's test of between-group differences in error variance.

The omnibus multivariate test indicated that there were significant between-group differences in the sexual well-being of women with and without NSE histories, $\Lambda = .935, F_{(17, 491)} = 2.01, p = .010$, with a moderate effect size ($d = 0.53$). The between-subjects effects, after a Bonferroni correction for the 17 comparisons (α/k , where k = the number of comparisons; $\alpha = .003$), indicated that women with NSE histories had significantly less sexual satisfaction ($M = 4.18, SD = 1.62; F_{(1, 507)} = 10.77, p = .001, d = 0.29$) and significantly more conservative-embarrassed sexual self-schemas ($M = 21.88, SD = 5.01; F_{(1, 507)} = 9.18, p = .003, d = 0.27$) than did women with no NSE histories.

Group differences with the age-cutoff approach.

A second MANOVA was run to assess differences in the sexual well-being variables using the age-cutoff approach to grouping NSE onset. The assumption of equality of error variances across groups was not met for nine of the 17 dependent variables, including desire ($F_{(2, 506)} = 4.49, p = .012$), arousal ($F_{(2, 506)} = 5.34, p = .005$), lubrication ($F_{(2, 506)} = 6.72, p = .001$), orgasm ($F_{(2, 506)} = 5.46, p = .004$), satisfaction ($F_{(2, 506)} = 5.05, p = .007$), pain ($F_{(2, 506)} = 3.18, p = .045$), power dynamics ($F_{(2, 506)} = 4.16, p = .016$), arousal contingency ($F_{(2, 506)} = 6.26, p = .002$), and relationship importance ($F_{(2, 506)} = 3.44, p = .033$), as indicated by their significant Levene's test of between-group differences in error variance. Analyses demonstrated a significant multivariate effect ($\Lambda = .890, F_{(34, 980)} = 1.72, p = .007$) with a moderate effect size ($d = 0.49$); however, none of the between-subject analyses was significant after the Bonferroni correction for 17 comparisons ($\alpha = .003$).

Group differences with the developmental approach.

A final MANOVA assessed differences between the women using the proposed developmental approach to NSE categorization. The assumption of equality of error variances across groups was not met for nine of the 17 dependent variables, including desire ($F_{(3, 505)} = 3.63, p = .013$), arousal ($F_{(3, 505)} = 5.05, p = .002$), lubrication ($F_{(3, 505)} = 5.17, p = .002$), orgasm ($F_{(3, 505)} = 4.72, p = .003$), satisfaction ($F_{(3, 505)} = 4.40, p = .005$), pain ($F_{(3, 505)} = 3.39, p = .018$), power dynamics ($F_{(3, 505)} = 2.78, p = .040$), smell ($F_{(3, 505)} = 3.51, p = .015$), and arousal contingency ($F_{(3, 505)} = 5.83, p = .001$), as indicated by their significant Levene's test. Descriptive information for the four groups on the sexual well-being variables is presented in Table 2.

At the multivariate level the model was significant, suggesting significant between-group differences in the sexual well-being variables, $\Lambda = .845, F_{(51, 1456.64)} = 1.66, p = .003$, with a moderate effect size, $d = 0.48$. Between-group analyses, after

Bonferroni corrections for 17 comparisons, indicated there were significant group differences in conservative-embarrassed sexual self-schemas ($F_{(3, 505)} = 4.78, p = .003, d = 0.34$) and satisfaction ($F_{(3, 505)} = 4.96, p = .002, d = 0.35$).

Follow-up analyses indicated that women with NSE onset that occurred postmenarche but pre-consensual sex reported significantly more conservative-embarrassed sexual self-schemas ($MD = -2.11, SE = 0.62, 95\% CI [-3.76, -0.46], p = .005$) than did women with no NSE histories. In addition, women with postmenarche and post-consensual sex NSE onset reported significantly less sexual satisfaction than women with no NSE histories ($MD = -0.56, SE = 0.17, 95\% CI [-1.00, -.012], p = .007$). The other groups of NSE onset did not significantly differ from those with no NSE histories on these sexual well-being variables within the current sample, nor from the other NSE onset groups.

Models of Sexual Well-Being

A multigroup CFA for the developmental approach of NSE classification with unit variance identification was conducted using SEM to examine differences in the contribution of each of the 16 indicator variables (all variables aside from the fixed indicator, arousability) across groups onto a latent sexual well-being factor. The overall freely estimated model fit across the groups yielded mediocre fit, with an RMSEA of .082 [.074, .089] and CFI of .867; this model is depicted for the reference group in Figure 2. The freely estimated unstandardized factor loadings for each of the variables onto the sexual well-being latent factor for each group is presented in Table 3, along with the model fit indices for each group separately.

The model fit indices for each group, as shown in Table 3, provides evidence for configural invariance. This suggests that the single-factor solution for sexual well-being fits reasonably well across all four groups. The chi-square difference test for construct invariance ($\chi^2_{D(48)} = 97.64, p < .001$) indicated that the freely estimated model had a significantly better fit to the data than the fully constrained model, suggesting that the sexual well-being construct is manifested differently across groups (i.e., construct-level metric noninvariance).

Indicator-level metric invariance was then assessed to see which indicators were exhibiting differential functioning across the groups and where the partial measurement noninvariance was occurring. The chi-square coefficients and difference tests for each indicator are reported in Table 3. Indicator-level metric noninvariance was found for five of the indicators. The three sexual inhibition subscales (arousal contingency, relationship importance, and concerns about sexual function) and two sexual functioning subscales (orgasm and pain) contributed to the sexual well-being construct differently across these groups of women. After the Bonferroni correction for 16 comparisons ($\alpha = .003$), one of the indicators maintained its metric noninvariance: Relationship importance demonstrated a significant difference

Table 2. Descriptive Information for the Separate Groups (No NSEs, Premenarche, Preconsensual, Postconsensual) on the Sexual Well-Being Variables

Variable	No NSEs (<i>n</i> = 334)			Premenarche (<i>n</i> = 164)			Preconsensual (<i>n</i> = 150)			Postconsensual (<i>n</i> = 149)		
	<i>M</i> (<i>SD</i>)	95% CIs		<i>M</i> (<i>SD</i>)	95% CIs		<i>M</i> (<i>SD</i>)	95% CIs		<i>M</i> (<i>SD</i>)	95% CIs	
		LL	UL		LL	UL		LL	UL		LL	UL
FSFI	28.57 (5.06)	27.95	29.20	28.00 (5.56)	26.80	29.19	27.27 (5.76)	26.02	28.52	26.67 (6.56)	25.27	28.07
Desire	3.90 (1.12)	3.76	4.04	3.80 (1.34)	3.51	4.09	3.81 (1.28)	3.54	4.09	3.60 (1.45)	3.29	3.91
Arousal	4.68 (1.17)	4.54	4.83	4.74 (1.31)	4.45	5.02	4.46 (1.38)	4.16	4.76	4.38 (1.51)	4.06	4.70
Lubrication	5.10 (0.94)	4.98	5.21	4.91 (1.28)	4.64	5.19	5.03 (1.08)	4.79	5.26	4.86 (1.23)	4.60	5.12
Orgasm	4.68 (1.35)	4.52	4.85	4.69 (1.36)	4.39	4.98	4.32 (1.52)	3.99	4.65	4.14 (1.67)	3.79	4.49
Satisfaction	4.96 (1.08)	4.83	5.09	4.69 (1.20)	4.43	4.95	4.74 (1.27)	4.47	5.02	4.40 (1.46)	4.09	4.71
Pain	5.25 (1.09)	5.11	5.38	5.16 (1.20)	4.90	5.42	4.90 (1.35)	4.61	5.20	5.29 (1.19)	5.03	5.54
Excitation	2.66 (0.51)	2.60	2.72	2.68 (0.53)	2.57	2.80	2.72 (0.47)	2.62	2.82	2.70 (0.51)	2.59	2.81
Arousability	2.83 (0.60)	2.76	2.91	2.88 (0.69)	2.32	3.03	2.90 (0.55)	2.78	3.02	2.87 (0.54)	2.76	2.99
Power dynamics	2.53 (0.62)	2.45	2.61	2.57 (0.77)	2.40	2.74	2.65 (0.70)	2.50	2.81	2.51 (0.73)	2.36	2.67
Smell	2.75 (0.88)	2.64	2.86	2.72 (1.02)	2.50	2.94	2.79 (0.88)	2.60	2.98	2.72 (1.02)	2.51	2.94
Partner characs.	2.76 (0.65)	2.68	2.84	2.72 (0.61)	2.59	2.85	2.85 (0.59)	2.72	2.98	2.86 (0.66)	2.72	2.99
Setting	2.44 (0.73)	2.35	2.53	2.52 (0.69)	2.37	2.67	2.41 (0.69)	2.26	2.56	2.52 (0.82)	2.35	2.69
Inhibition	2.39 (0.51)	2.32	2.45	2.41 (0.60)	2.29	2.54	2.56 (0.57)	2.43	2.68	2.46 (0.63)	2.33	2.60
Arousal conting.	1.98 (0.74)	1.89	2.07	2.06 (0.86)	1.87	2.24	2.14 (0.84)	1.96	2.32	2.15 (0.93)	1.95	2.34
Rel. importance	2.90 (0.68)	2.82	2.98	2.83 (0.72)	2.67	2.98	2.98 (0.58)	2.86	3.11	2.91 (0.64)	2.77	3.05
Concerns func.	2.28 (0.76)	2.19	2.37	2.36 (0.77)	2.19	2.52	2.54 (0.77)	2.38	2.71	2.32 (0.86)	2.14	2.51
Sexual Self-Schema	56.78 (13.50)	55.33	58.24	56.37 (13.69)	53.88	58.87	54.70 (12.31)	52.44	56.96	57.48 (14.29)	54.86	60.10
Passionate-rom.	41.35 (6.59)	40.54	42.17	42.22 (6.47)	40.83	43.62	40.92 (6.91)	39.42	42.42	41.67 (6.48)	40.28	43.05
Open-direct	36.06 (7.05)	35.20	36.93	37.68 (7.36)	36.05	39.31	36.63 (6.50)	35.22	38.04	36.86 (7.44)	35.28	38.45
Cons.-embarr.	20.54 (4.92)	19.93	21.15	22.04 (4.80)	21.00	23.07	22.65 (4.76)	21.62	23.69	20.97 (5.35)	19.83	22.11

Note. NSE = nonconsensual sexual experience; no NSEs = women with no reported NSE histories; premenarche = women with NSE onset prior to age of menarche; preconsensual = women with NSE onset post-age of menarche but prior to their first consensual sexual experience; postconsensual = women with NSE onset post-age of first consensual sexual experience; FSFI = Female Sexual Function Index; excitation = Sexual Excitation and Sexual Inhibition Inventory for Women (SESII-W) excitation; inhibition = SESII-W inhibition; characs. = characteristics; conting. = contingency; rel. = relationship; func. concerns = concerns about sexual functioning; passionate-rom. = passionate-romantic self-schema; cons.-embarr. = conservative-embarrassed self-schema.

in its contribution to the sexual well-being construct across the groups at the most conservative level of identifying significance.

The final preferred model allowed for the loadings of arousal contingency, relationship importance, concerns about sexual function, satisfaction, and pain to be freely estimated while all other variables were set to have equal loadings across the groups. This preferred model demonstrated acceptable model fit (RMSEA = .079, 90% CIs [.073, .086]). The standardized and unstandardized loadings of the indicators in the preferred model are reported in Table 4. The indicator-level metric noninvariance across these groups supports that these are distinct groups of women in terms of how the various indicators contribute to their overall sexual well-being. Notably, all three subscales of the sexual inhibition higher-order factor of the SESII-W and two of the subscales from the FSFI differentially contributed to the sexual well-being of these women dependent on NSE history status and the sexual developmental stage of NSE onset.

Looking at the indicator loadings for the sexual well-being construct, as demonstrated in Table 3, the groups that seem to display the differential indicator functioning are the three groups with NSE histories. While these comparisons were not statistically tested, the indicator

loadings suggest the arousal contingency subscale of the SESII-W and the orgasm and pain subscales of the FSFI played a larger role in the overall sexual well-being of women with NSE onset postmenarche but prior to their first consensual sexual experience than the other groups. In addition, the relationship importance subscale of the SESII-W seems to be differentially important to the overall sexual well-being of women with NSE onset after their first consensual sexual experience, and the concerns about sexual functioning subscale of the SESII-W appears to be playing a differentially important role in the overall sexual well-being of women with NSE onset prior to menarche.

An additional chi-square difference test was run to assess for differences between the groups in the variance of the latent factor by comparing a model where the variances were all set to one to a model where the variances were freely estimated (aside from the first group whose variance is set to one consistently for scaling and identification purposes). The chi-square difference test indicated there was no significant reduction in model fit when the variances were all set to equal one than when they were freely estimated ($\chi^2_{D(3)} = 5.57, p = .134$). This suggests that across all groups overall sexual well-being was consistently variable.



Figure 2. Path diagram of the freely estimated model for a single latent construct of sexual well-being and 17 indicator variables with unstandardized loadings. The diagram depicts the model for the reference group (the no-NSEs group) only. The model repeats four times, once for each group. In the subsequent groups, the variance of the latent variable would be freely estimated, as opposed to fixed at one as in this representation, and all of the arousability loadings would be equal across the groups.

Discussion

The current study proposed a sexual developmental approach to the classification of women's NSEs when examining sexual well-being. The approach allowed for relevant markers of sexual developmental stages of the individual to indicate the developmental stage of their NSE onset. This approach proved to capture more of the nuances in the sexual well-being of women with NSE histories than a traditional age-cutoff classification approach.

Results of measurement invariance analyses provided evidence for the distinctiveness of the groups of women with respect to their sexual well-being when using the sexual developmental approach to grouping. Three sexual inhibition subscales (arousal contingency, relationship importance, concerns about sexual functioning) and two sexual functioning subscales (orgasm and pain) showed differential contribution to the variance explained in sexual well-being across the different groups. Specifically, concern about sexual functioning (sexual inhibition subscale) played a less significant role in the sexual well-being of women with NSE onset prior to their age of menarche compared to the other groups. The arousal contingency (sexual inhibition subscale), orgasm, and pain subscales played a more important role in the sexual well-being of women with NSE onset postmenarche but prior to their first consensual sexual experience. The relationship importance subscale of sexual inhibition played a larger role in the sexual well-being of women with NSE onset

postmenarche and after their first consensual sexual experience. The fact that these indicators function differentially within the sexual well-being construct across these groups of women supports the use of the sexual developmental approach to classifying NSEs when studying women's sexual well-being. The approach captures the distinct conceptualizations of women's sexual well-being when NSE onset occurs during these different developmental stages.

Between-groups analyses using the overall NSE history approach demonstrated that women with an NSE history reported more conservative-embarrassed sexual self-schemas and less sexual satisfaction than women with no NSE onset. When the NSE history group was further divided using the developmental approach, it became evident which developmental stage of NSE onset was driving these sexual outcome differences. Women with NSE onset postmenarche but pre-consensual sex reported more conservative-embarrassed sexual self-schemas than those with no NSE histories, and women with NSE onset postmenarche and post-consensual sex reported less sexual satisfaction than those with no NSE histories. Yet when the age-cutoff approach was used to establish the groups, these differences in sexual well-being were not observed. Evidently, the age-cutoff approach glosses over important nuances in sexual well-being related to the developmental context of NSE onset.

The developmental stage for NSE onset that seems most salient for the risk of negative sexual self-schemas and

Table 3. Indicator Loadings and Model Fit Statistics for Each Group From a Multigroup Confirmatory Factor Analysis With a Single Sexual Well-Being Construct and Chi-Square Difference Tests for Indicator-Level Metric Invariance Testing

Variable	Unstandardized Loadings and Standard Errors				χ^2_{df} ^b	<i>p</i>
	No NSEs	Premenarche	Preconsensual	Postconsensual		
Passionate-romantic	2.56 (0.46)	2.15 (0.65)	4.61 (1.74)	2.09 (0.65)	4.90	0.179
Open-direct	2.15 (0.51)	1.04 (0.54)	2.43 (1.11)	2.05 (0.70)	2.85	0.416
Embarrassed-conservative	-1.25 (0.33)	-1.06 (0.40)	-2.22 (0.99)	-1.37 (0.52)	2.07	0.558
Arousability	0.25 (0.04)	0.25 (0.04)	0.25 (0.04)	0.25 (0.04)	—	—
Power dynamics	0.14 (0.05)	0.20 (0.07)	0.23 (0.09)	0.23 (0.07)	2.30	0.512
Smell	0.21 (0.06)	0.16 (0.07)	0.32 (0.12)	0.13 (0.08)	3.17	0.366
Partner characteristics	0.17 (0.05)	0.16 (0.05)	0.11 (0.07)	0.06 (0.05)	4.78	0.188
Setting	0.27 (0.05)	0.18 (0.06)	0.34 (0.12)	0.38 (0.10)	5.62	0.131
Arousal contingency	-0.37 (0.05)	-0.30 (0.09)	-0.83 (0.29)	-0.44 (0.12)	10.06	0.018
Relationship importance	0.00 (0.05)	0.04 (0.05)	-0.09 (0.08)	-0.21 (0.07)	13.98	0.003
Concerns sexual functioning	-0.31 (0.05)	-0.07 (0.06)	-0.55 (0.21)	-0.24 (0.09)	12.93	0.005
Desire	0.71 (0.09)	0.55 (0.16)	0.77 (0.30)	0.84 (0.23)	1.95	0.584
Arousal	0.91 (0.09)	0.48 (0.15)	1.22 (0.43)	0.86 (0.23)	6.79	0.079
Lubrication	0.59 (0.08)	0.70 (0.20)	1.16 (0.41)	0.74 (0.20)	3.87	0.276
Orgasm	0.63 (0.12)	0.62 (0.19)	1.65 (0.58)	0.81 (0.25)	9.62	0.022
Satisfaction	0.62 (0.09)	0.56 (0.17)	0.93 (0.37)	0.43 (0.19)	2.62	0.453
Pain	0.63 (0.10)	0.47 (0.17)	1.47 (0.52)	0.50 (0.17)	11.95	0.008
RMSEA, 90% CIs ^a	.085 [.074, .095]	.064 [.043, .083]	.073 [.053, .092]	.096 [.078, .114]		
CFI ^a	.884	.910	.892	.854		
SWB ^a <i>M</i> (<i>SD</i>)	0.00 (1.00)	-0.73 (2.05)	-0.38 (0.53)	-0.30 (1.58)		

Note. All indicator loadings are for the freely estimated model. The chi-square difference tests are for the comparisons of the freely estimated model to a model where that specific indicator was fixed to be equal across the groups while all other indicators were freely estimated. Significant *p* values suggest indicator-level measurement noninvariance for that specific indicator. The bolded coefficients are speculations on where the measurement noninvariance might be occurring between the groups. NSE = nonconsensual sexual experience; no NSEs = women with no reported NSE histories; premenarche = premenarche NSE onset; preconsensual = postmenarche and preconsensual NSE onset; postconsensual = post-consensual sex NSE onset; concerns sexual functioning = concerns about sexual functioning.

^aRMSEA = root mean square error of approximation, CI = confidence interval; CFI = comparative fit index, SWB = sexual well-being latent variable.

^bThe degrees of freedom for all chi-square comparisons is 3.

sexual dysfunction is the stage between age of menarche and age of first consensual sex. This is in line with Finkelhor and Browne's (1985) traumagenic dynamics model, which suggests NSEs occurring before young women have had the opportunity to develop sexual schemas in a consensual and positive context have negative implications for their sexual development. Previous literature has shown that when young women are beginning adolescence (e.g., postmenarche) they transition from relying on their parents for social learning to relying on their peers (Nelson, Jarcho, & Guyer, 2016; Suleiman & Deardorff, 2015). This is also a developmental stage where women begin learning about romantic and sexual interactions and their sexual selves (Hensel, Fortenberry, O'Sullivan, & Orr, 2011; Suleiman & Harden, 2016). Experiencing NSEs during this critical period of sexual learning and development may have pervasive downstream effects on sexual well-being by disrupting the development of women's sexually relevant neurocognitive processes.

Hensel et al. (2011) demonstrated that sexual experiences in adolescence not only influence sexual self-concepts but also influence future sexual interactions. The current study's results support these findings in that women with NSE onset during this phase (postmenarche but pre-consensual sex)

showed heightened embarrassed-conservative sexual self-schemas and more difficulty with orgasm and sexual pain. The multigroup CFA also suggested that, for women with NSE onset during this phase, arousal contingency plays a more significant role in the overall sexual well-being than it does in the other groups. It may be that this stage, which is focused on sociosexual development for women, is particularly vulnerable to the negative consequences of NSEs on sexual well-being. Consistent with this, this same group of women displayed the least variability in their overall sexual well-being in comparison to the other groups (i.e., sexual well-being is more similar among the individuals with NSE onset during this stage than women with no NSE histories and women with NSE onset in other developmental stages). It may be that the overall impact of NSEs during this critical developmental stage has a more consistent impact on the sexual well-being of these women than NSEs do in other developmental stages.

In the current study, women who experienced NSEs prior to their age of menarche did not demonstrate sexual well-being decrements that were significantly different from those with no NSE histories. Interestingly, concerns about sexual function (sexual inhibition subscale) demonstrated a less significant role in the sexual well-being of

Table 4. Indicator Loadings for Each Group From the Final Preferred Model of a Multigroup Confirmatory Factor Analysis With a Single Sexual Well-Being Construct

Variable	No NSEs	Premenarche	Preconsensual	Postconsensual
Standardized loadings and standard errors				
Passionate-romantic	0.36 (0.04)	0.47 (0.05)	0.39 (0.05)	0.51 (0.05)
Open-direct	0.26 (0.04)	0.31 (0.05)	0.30 (0.05)	0.34 (0.06)
Embarrassed-conservative	-0.26 (0.04)	-0.34 (0.05)	-0.28 (0.05)	-0.34 (0.05)
Arousability	0.39 (0.04)	0.49 (0.06)	0.43 (0.05)	0.61 (0.06)
Power dynamics	0.26 (0.04)	0.29 (0.05)	0.28 (0.05)	0.33 (0.06)
Smell	0.21 (0.04)	0.25 (0.05)	0.24 (0.05)	0.27 (0.05)
Partner characteristics	0.20 (0.04)	0.30 (0.06)	0.24 (0.05)	0.29 (0.05)
Setting	0.35 (0.04)	0.46 (0.06)	0.40 (0.05)	0.46 (0.06)
Arousal contingency	-0.48 (0.06)	-0.46 (0.09)	-0.72 (0.05)	-0.64 (0.06)
Relationship importance	0.00 (0.07)	0.10 (0.10)	-0.14 (0.09)	-0.37 (0.09)
Concerns sexual functioning	-0.40 (0.06)	-0.09 (0.10)	-0.50 (0.07)	-0.36 (0.10)
Desire	0.65 (0.06)	0.73 (0.07)	0.61 (0.07)	0.71 (0.06)
Arousal	0.74 (0.05)	0.80 (0.06)	0.68 (0.07)	0.76 (0.06)
Lubrication	0.71 (0.05)	0.64 (0.07)	0.66 (0.07)	0.73 (0.06)
Orgasm	0.44 (0.08)	0.51 (0.11)	0.75 (0.09)	0.63 (0.08)
Satisfaction	0.54 (0.06)	0.60 (0.07)	0.48 (0.07)	0.51 (0.06)
Pain	0.60 (0.07)	0.33 (0.12)	0.72 (0.08)	0.50 (0.09)
Unstandardized loadings and standard errors				
Passionate-romantic	2.40 (0.27)	2.40 (0.27)	2.40 (0.27)	2.40 (0.27)
Open-direct	1.77 (0.27)	1.77 (0.27)	1.77 (0.27)	1.77 (0.27)
Embarrassed-conservative	-1.29 (0.20)	-1.29 (0.20)	-1.29 (0.20)	-1.29 (0.20)
Arousability	0.24 (0.03)	0.24 (0.03)	0.24 (0.03)	0.24 (0.03)
Power dynamics	0.17 (0.03)	0.17 (0.03)	0.17 (0.03)	0.17 (0.03)
Smell	0.19 (0.04)	0.19 (0.04)	0.19 (0.04)	0.19 (0.04)
Partner characteristics	0.14 (0.03)	0.14 (0.03)	0.14 (0.03)	0.14 (0.03)
Setting	0.25 (0.03)	0.25 (0.03)	0.25 (0.03)	0.25 (0.03)
Arousal contingency	-0.36 (0.05)	-0.30 (0.07)	-0.55 (0.08)	-0.40 (0.07)
Relationship importance	0.00 (0.05)	0.06 (0.06)	-0.07 (0.05)	-0.17 (0.05)
Concerns sexual functioning	-0.30 (0.05)	-0.05 (0.06)	0.34 (0.07)	-0.22 (0.07)
Desire	0.71 (0.07)	0.71 (0.07)	0.71 (0.07)	0.71 (0.07)
Arousal	0.83 (0.07)	0.83 (0.07)	0.83 (0.07)	0.83 (0.07)
Lubrication	0.68 (0.06)	0.68 (0.06)	0.68 (0.06)	0.68 (0.06)
Orgasm	0.59 (0.11)	0.60 (0.13)	1.03 (0.16)	0.81 (0.13)
Satisfaction	0.57 (0.07)	0.57 (0.07)	0.57 (0.07)	0.57 (0.07)
Pain	0.66 (0.09)	0.37 (0.14)	0.96 (0.15)	0.49 (0.11)

Note. Bolded values are speculations of where the differential indicator functioning is occurring across the different groups. The standardized values differ across the groups despite being set to be equal across the groups in the unstandardized values due to differences in variances of the loadings between the groups. NSE = nonconsensual sexual experience; no NSEs = women with no reported NSE histories; premenarche = premenarche NSE onset; preconsensual = postmenarche and preconsensual NSE onset; postconsensual = post-consensual sex NSE onset; concerns sexual functioning = concerns about sexual functioning.

women with NSE onset prior to menarche. Researchers have proposed that adolescence is a time of both heightened vulnerabilities to negative social learning and increased opportunities for positive social learning (Fuhrman et al., 2015). Women who experience NSEs premenarche have an opportunity to relearn sexual schemas during a developmentally appropriate phase (e.g., postmenarche adolescence). This may also be part of the reason why this group of women did not exhibit differences in the measured variables of sexual well-being from the no NSEs group. A prospective study of the influences of CSA on externalizing and internalizing behavior during adolescence demonstrated that individuals with CSA (predominantly reported before age 12; 85%) reported significantly more externalizing behaviors (e.g., sexual risk taking, sensation seeking) throughout adolescence (ages

10 through 16) than those with other forms of childhood maltreatment or no childhood maltreatment (Lewis, McElroy, Harlaar, & Runyan, 2016). It may be that women with premenarche NSEs engage in more sexual behavior during adolescence that allows for greater opportunity to relearn sexual schemas and sexual responses in a positive and consensual framework, thus decreasing the influence of NSEs on sexual well-being.

The women who experienced their first NSEs after their first consensual sexual experience exhibited significantly less sexual satisfaction than women with no NSE histories. Notably, in the multigroup CFA, the relationship importance subscale of sexual inhibition appeared to play a greater role in the sexual well-being of these women than in the other groups of women. It may be that because these women have already experienced consensual sexual interactions,

potentially in the context of intimate relationships, relationship context has become more critical to their ability to become aroused.

There are a number of limitations that warrant mention. We recruited women from Amazon's Mechanical Turk, and while this provides a fairly representative sample (Buhrmester, Kwang, & Gosling, 2011), it is not a clinical or treatment-seeking sample. The recruitment methods did not call for women with NSE histories, and the results may be different for a treatment-seeking sample or women who identify their NSEs as sexual abuse or rape. While there are no recent reports of U.S. national lifetime prevalence estimates of sexual violence experiences, the frequently referenced statistic is that up to 35% of women experience CSA (Putnam, 2003) and 15% to 40% of women will experience sexual assault (Tjaden & Thoennes, 2006). Although the study was described as examining the influence of consensual and nonconsensual sexual experiences on sexual well-being, the language used in recruitment could be one reason for the high prevalence of NSEs in the current sample and should not be taken as an estimate of population prevalence rates.

The measure of pubertal timing was a retrospective self-report of age of menarche. Although age of menarche has been found to be a fairly reliable self-report variable (Livson & McNeill, 1962; Must et al., 2002), it does not capture the full onset and end point of puberty in these women. A more comprehensive assessment of pubertal timing would be useful in future research. Prospective and longitudinal studies on NSEs and women's sexual well-being would be particularly useful in establishing the validity of the proposed NSE classification approach.

While this study provides a new developmentally relevant approach to classifying NSEs in the study of women's sexual well-being, the approach should be further assessed and confirmed across different types of NSE experiences, such as different perpetration strategies (e.g., coercion, alcohol involvement, use of violence or weapons). Previous research has documented that NSEs with father or father-figure perpetrators have more significant implications on the sexual and psychological well-being of women (Noll, Trickett, & Putnam, 2003). Future research may want to examine the sexual well-being construct in women with different relationships to their NSE perpetrators.

In conclusion, the current study proposed an approach to classifying NSEs that accounts for the unique developmental context in which NSEs occur on an individual level. We demonstrated significant differences in the sexual well-being of women with NSE histories when classified using this new approach that were absent when classifying NSEs with the traditional approach. We also provided evidence for differential functioning of contributors to the sexual well-being of these women, further supporting the idea that these are distinct groups of women with NSE histories. Using a developmentally relevant classification system to categorize NSEs in the study of sexual well-being allows the sexual developmental

context in which the NSEs occurred to be accounted for across individuals. Understanding the developmental context of the NSE onset provides a new lens through which to examine the sexual well-being of these women that may be better equipped to inform treatments for NSE-related sexual concerns.

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