

An Examination of Sexual Practice Experience of Female Sexual Assault Victims

Philip A. Belcastro*

Health Education Department, The City University of New York-BMCC, New York, USA

***Corresponding author:** Philip A. Belcastro, Health Education Department, The City University of New York-BMCC, 199 Chambers Street, New York, NY 10007, USA

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Abstract

Scholars ascribe relationship dysphoria, sexual identity ambiguity, and high-risk sexual practices as sequelae of sexual assault. Despite this supposition, there is a paucity of empirical data describing sexual experience sequelae of female sexual assault victims. This study investigated whether sexual maturation, sexual practices, and sexual orientation differed between female victims and non-victims of sexual assault. A retrospective cross-sectional survey was drawn from the general population of a public community college. The sexual maturation, sexual practice patterns, and sexual orientation of sexually assaulted female victims differed markedly from non-victims. The reported difference was most profound between females sexually assaulted before their first consensual coitus versus females sexually assaulted after their first consensual coitus. There is a research imperative to fashion an evidentiary sexual behavior and sexual orientation profile of female victims of sexual assault, so as to provide an evidential foundation for judicial, social service, and health education practitioners.

Keywords: Oral-genital stimulation; Rape; Sexual assault; Sexual behaviors; Sexual orientation

Background

Developmental theory purports sexual life events hone sexual function, sexual practice, and sexual ideation [1,2]. Money proposed that one's love map (i.e., sexual ideation) for their perfect sexual mate was predicated upon the psychosexual context of their relationships as well as sexual life experience [3]. Traumatic life events such as sexual assault distort sexual maturation and can compromise adult sexual behavior patterns and relationships [4,5]. This supposition is evidenced by a body of work associating sexual assault to adult psychiatric morbidity, sexual dysfunction, relationship dysphoria, sexual identity ambiguity, and the frequency of proscribed high-risk sexual practices [6-14]. An account of the sexual maturation, sexual orientation, and sexual practices of sexual assault victims is fundamental to identifying sequelae of sexual assault. In turn, such an accounting is fundamental to delivering psychosocial and health care services to sexual assault victims. Despite this empirical requisite for providing health care services to sexual assault victims—there is an unsettling paucity of data delineating the sexual practice sequelae and relationships of post-traumatic female sexual assault victims [15].

This evidentiary void underlies a lack of confidence by judicial, social service, and health education practitioners in the nature and extent of sexual assault post-trauma sequelae [16-18]. In part, this lack of confidence stems from the incongruence between judicial and academic definitions of sexual assault—which range from non-contact verbal aggression to non-consensual vaginal and anal penetration [15]. While ‘flashing’ is rightfully labeled sexual abuse, intuitively its degree of psychosexual trauma is inferior to that of a physical (genital penetration) sexual assault (i.e., rape). Nevertheless, verbal, tactile, and non-invasive (bodily) sexual assaults are capriciously melded with genital penetration assaults in studies describing sexual assault sequelae. These obstreperous depictions of the ‘sexual assault/abuse’ act have confounded an empirical representation of the sexual practice and sexual ideation sequelae of traumatic genital penetration assaults.

By example, operate definitions of sexual abuse range from a suitor's veiled sexual threat—to forced genital penetration by an unknown adult perpetrator [19]. It is routine for a single survey item to discern the ‘violating act’ as well as ‘perpetrator’. Two such examples: (1) ... has anyone ever had sexual contact with you against your will? and (2) ... has anyone ever made you have sex by using force or threatening to harm you or someone close to you [20-22]. By design, these qualifiers brand the perpetrator

as ‘anyone’ and any sexual pretense as forced genital penetration. Arguably, the relationship of the perpetrator and the contextual relationship of the setting, as well as the context of the coerced sexual act, e.g., fondling in the back seat of a boyfriend’s vehicle or rape in the parson’s church vestibule—have varying degrees of psychosexual and developmental trauma [23]. Holt-Lunstad, Smith, & Layton suggest that a critical life event trauma is necessary to disrupt the sexual maturation and sexual practice patterns of victims [4]. The lack of rigor in academic psychometric definitions of sexual coercion, sexual abuse, sexual assault, and rape undermine reported inferences in adult high-risk sexual practices and relationships ascribed to sexual assault victims. As such, the lack of precision in academic operate definitions (metrics) of ‘sexual assault’ contributes to a qualitative inferential ambiguity in the literature.

Retrospective adult surveys present another methodological flaw in accounting for the disruption in sexual maturation and adult sexual practice patterns of female sexual assault victims. Retrospective adult surveys of juvenile sexual assault collected when victims are 30, 40, or more years of age are problematic in accounting for latent effects of juvenile sexual assault on their adult sexuality and sexual orientation [24]. Memory recollection surveys are prone to traumatic memory distortion or what Loftus termed ‘false memory’ [25]. Such distortions are most evident in research attempting to associate juvenile sexual assault with the victim’s adult sexual orientation. While epidemiological studies suggest an association between juvenile sexual assault and sexual orientation—there remains disagreement as to whether nascent same-sex orientation may increase the risk of sexual assault or conversely hone the victim’s adult sexual orientation as a consequence of the assailant’s gender and the inflicted trauma visited upon the victim [24]. Heretofore, retrospective adult surveys of female sexual assault victims are ambiguous in characterizing adult sexual practice patterns and concomitant sexual relationships as sexual assault sequelae.

Sexual practice and sexual orientation inferences derived from adolescent sexual assault victims while in the throes of their sexual becoming are tenuous. Such associations are inept at parsing sexual experimentation from adult sexual ideation. Consequently, predictions drawn from samples of juvenile sexual assault victims confound any inference of adult sexual orientation and sexual practice patterns being representative of sexual assault sequelae.

A third fundamental flaw in sexual assault/abuse research is the limited number of sexual behaviors posited to represent the sexual life experience as well as sexual orientation of traumatic sexual assault victims. Research describing the sequelae of sexual assault is predicated on a handful of sexual behaviors such as virginity, number of lifetime coital partners, unintended pregnancy, and sexually transmitted diseases/infections [14,18,26]. Investigations of traumatic sexual assault confined to lifetime coital partners, unintended pregnancy, or sexually transmitted

infections fail to account for the breadth of human sexual practice as potential sequelae of traumatic sexual assault. There is a persistent absence in the literature of a comprehensive sexual practice profile of sexually assaulted female victims. Accordingly, there is an urgency to account for the province of sexual behavior and intimate relationships in positing sequelae of traumatic sexual assault.

This research exercise investigated whether sexual maturation, sexual practice, and sexual orientation profiles differ between female victims and non-victims of sexual assault. This investigation explored the link between sexual assault and subsequent patterns of sexual behavior and sexuality. This effort contributes to the precision in recognizing consequences of sexual assault on the sexual maturation, sexual practices, and sexual orientation of victims. Composing a comprehensive sexual practice and sexual orientation profile of victims fundamentally contributes to the practice of judicial, social service, and health practitioners in the identification, education, prevention, health care, and legislation for victims of sexual assault.

Methods

A retrospective cross-sectional survey utilizing a convenience sample was drawn from the general population of undergraduates at a public, northeastern, nonresidential community college. The college enrollment was 23 938 with a median age of 22.0 years. In all, 1 846 instruments were submitted of which 16 instruments were discarded due to invalid or inconsistent responses. The 1 830 respondents represented 7.6% of the undergraduate enrollment that semester. Of the 1 830 respondents, 802 were male and 1 028 were female.

Procedures

Respondents were recruited from intact Health Education course sections that were either required or elective courses for all but five of the college’s degree programs. Respondents were 18-years or older. Consent forms were obtained from each respondent. There were no identifiers linking respondents to their responses. Classroom seating was arranged in formal test-taking configuration. The in-class survey was voluntary, anonymous—with no incentives offered. Respondents opting out of the survey completed an in-class worksheet. Participants placed their instrument or worksheet in a sealed envelope and then into a cloaked ballot box. This study was sanctioned by the University’s Institutional Research Review Committee.

Measures

The instrument recorded in part, demographics of race, ethnicity, natal gender, sexual orientation, and sexual assault events. The instrument recorded masturbatory, oral-genital, and coital practices including initiation age, partner’s age at initiation, number of lifetime coital partners, and sexual behavior frequency in the last month and year. Previous studies reported a .85 to .91

reliability coefficient for the instrument [27-30]. The instrument's reliability coefficient (Chronbach's Alpha) for the masturbatory, oral-genital, and coital practices under investigation in this study was .91.

Tests of Significance

Tests of significance (SPSS IBM Advanced Statistics Version 24.0.0) were chi-square (X^2) for nominal variables, independent-sample t -tests (t) or one-way ANOVA (F) for scaled variables, and a stepwise discriminate analysis. Type 1 error was set to .05. Results yielding statistically insignificant outcomes not germane to the hypotheses were generally not reported.

Hypotheses

Traumatic sexual assault was defined as non-consensual, penetration of the vagina or anus by a penis, digit, or object—or oral stimulation of the genitals or anus. This standard is consistent with the United States Federal Bureau of Investigation definition of rape [31]. Females were blocked into the independent variable of 'sexually assaulted' or 'never sexually assaulted' (hereafter 'never assaulted'). The following null hypotheses were tested:

H₁: There are no significant differences between sexually assaulted and never assaulted females' masturbatory, consensual oral-genital, or consensual coital practices.

H₂: There are no significant differences between sexually assaulted and never assaulted females and their sexual orientation.

H₃: There are no significant differences in masturbatory, consensual oral-genital, or consensual coital practices between females sexually assaulted before their first consensual coitus equated to females sexually assaulted after their first consensual coitus.

H₄: There are no significant differences in masturbatory, consensual oral-genital, or consensual coital practices between females sexually assaulted before their first consensual coitus versus non-virgin, never assaulted females.

Results

Of the 1 028 female respondents, 84 respondents (8.1%) self-reported a sexual assault event. Their mean age was 21.7 years. There were no significant differences between sexually assaulted and never assaulted females regarding their racial-ethnic demographics. There were no significant differences between sexually assaulted and never assaulted females being United States natives or aliens. There was a significant difference between sexually assaulted and never assaulted females and the number of years they lived in the United States ($t(996) = 2.413, p = 0.016$). Sexually assaulted females ($\bar{x} = 18.241 \pm 8.714$) lived in the United

States significantly longer than cohorts ($\bar{x} = 16.092 \pm 7.677$). There was a significant difference between sexually assaulted and never assaulted females and their number of male siblings from different biological parents ($t(736) = 2.357, p = 0.021$). Sexually assaulted females ($\bar{x} = 1.655 \pm 1.973$) had significantly more male siblings from different biological parents than cohorts ($\bar{x} = 1.039 \pm 1.724$). There was a significant difference between sexually assaulted and never assaulted females and their age ($t(980) = 1.994, p = 0.049$). Sexually assaulted females ($\bar{x} = 23.217 \pm 6.480$) were older than cohorts ($\bar{x} = 21.717 \pm 4.994$).

Assailants

Respondents' mean age at first sexual assault was 13.4 years. Their assailants' mean age was 20.5 years. Sexually assaulted females identified their assailants as 30.4% relatives; 35.4% acquaintances; 16.5% girlfriends/boyfriends; 8.9% first time dates; or 8.9% strangers. Of the 'acquaintance' assailants 14.2% were family acquaintances or childcare acquaintances.

Masturbatory Practices

There were no significant differences between sexually assaulted and never assaulted females in their initiation age at masturbation or the number of times they masturbated in the last month. Respondents were asked the frequency in which they used erotic aids for masturbation on a scale of zero to three (zero = never, one = some of the time, two = most of the time, and three = all the time). There was a significant difference between sexually assaulted and never assaulted females in the frequency of using non-vibrating sex toys for masturbation ($t(455) = 2.476, p = 0.038$). Sexually assaulted females ($\bar{x} = 0.819 \pm 1.087$) used non-vibrating sex toys more often than cohorts ($\bar{x} = 0.510 \pm 0.878$). There was a significant difference between sexually assaulted and never assaulted females in the frequency of using vibrating sex toys for masturbation ($t(456) = 2.179, p = 0.030$). Sexually assaulted females ($\bar{x} = 0.967 \pm 1.139$) used vibrating sex toys more often than cohorts ($\bar{x} = 0.667 \pm 0.977$).

Oral-genital Practices

Significantly more sexually assaulted (84.5%) than never assaulted females (64.3%) had ever received cunnilingus performed by a male (Table 1). Sexually assaulted females reported a significantly younger initiation age at receiving male performed cunnilingus ($\bar{x} = 15.7$ years) than cohorts ($\bar{x} = 16.9$ years) (Table 2). Sexually assaulted females reported receiving male performed cunnilingus from significantly more lifetime partners ($\bar{x} = 7.2$) than cohorts ($\bar{x} = 3.7$) (Table 2). There were no significant differences between sexually assaulted females and cohorts in male performed cunnilingus in their partner's age at initiation or frequency in the last month or year.

	%	n	χ^2 a	df	p value
Received Male Preformed Cunnilingus		1028	14.049	1	.000
Sexually Assaulted	84.5				
Never Assaulted	64.3				
Preformed Fellatio		1028	13.218	1	.000
Sexually Assaulted	76.2				
Never Assaulted	55.7				
Male Preformed Cunnilingus While I Performed Fellatio		1028	8.098	1	.003
Sexually Assaulted	58.3				
Never Assaulted	42.3				
Received Male Preformed Analingus		1028	9.560	1	.002
Sexually Assaulted	36.9				
Never Assaulted	22.0				
Preformed Male Analingus		1028	3.932	1	.054 ^b
Sexually Assaulted	8.3				
Never Assaulted	3.8				
Received Female Preformed Cunnilingus		1028	19.993	1	.000
Sexually Assaulted	31.0				
Never Assaulted	13.0				
Preformed Cunnilingus		1028	24.565	1	.000
Sexually Assaulted	32.1				
Never Assaulted	12.5				
Female Preformed Cunnilingus While I Performed Cunnilingus		1028	12.050	1	.002
Sexually Assaulted	15.5				
Never Assaulted	5.7				
Received Female Preformed Analingus		1028	12.466	1	.003
Sexually Assaulted	9.5				
Never Assaulted	2.5				
Preformed Female Analingus		1028	8.961	1	.017
Sexually Assaulted	4.8				
Never Assaulted	1.0				
^a Fisher's Exact Test					
^b Not significant					

Table 1: Oral-Genital Experience of Sexually Assaulted and Never Assaulted Females.

Significantly more sexually assaulted (76.2%) than never assaulted females (55.7%) had ever performed fellatio (Table 1). Sexually assaulted females ($\bar{x} = 8.1$) performed fellatio on significantly more lifetime partners than cohorts ($\bar{x} = 3.7$) (Table 2). Sexually assaulted females performed fellatio significantly more times in the last month ($\bar{x} = 4.8$) than cohorts ($\bar{x} = 2.5$) (Table 2). There were no significant differences between sexually assaulted females and cohorts in performing fellatio in their initiation age, partner's age at initiation, or frequency in the last year. Significantly more sexually assaulted females (58.3%) than never assaulted females (42.3%) had ever received male performed cunnilingus while performing fellatio (Table 1). There were no significant differences between sexually assaulted females and cohorts in receiving male performed cunnilingus while performing fellatio in their initiation age, partner's age at initiation, or frequency in the last month or year. Significantly more sexually assaulted females (36.9%) than never assaulted females (22.0%) had ever received anilingus from a male (Table 1). There were no significant differences between sexually assaulted females and cohorts in performing or receiving anilingus with a male partner in their initiation age, partner's age at initiation, lifetime partners, or frequency in the last month or year.

	M	SD	t score	df	p value
Received Male Performed Cunnilingus					
Age Initiation			-3.797	676	.000
Sexually Assaulted Females	15.718	2.854			
Never Assaulted Females	16.874	2.374			
Lifetime Partners			2.019	613	.047
Sexually Assaulted Females	7.197	13.770			
Never Assaulted Females	3.743	5.433			
Lifetime Partners			-2.154	59	.038
Sexually Assaulted BEFORE First Coitus	3.222	2.516			
Sexually Assaulted AFTER First Coitus	9.617	17.077			
Performed Fellatio					
Lifetime Partners			2.059		.044
Sexually Assaulted Females	8.109	15.724			
Never Assaulted Females	3.714	5.198			
Last Month Frequency			3.342	484	.040
Sexually Assaulted Females	4.836	8.054			
Never Assaulted Females	2.508	4.300			
Male Performed Cunnilingus While I Performed Fellatio					
Lifetime Partners			-2.599	45	.014
Sexually Assaulted BEFORE First Coitus	1.610	1.116			
Sexually Assaulted AFTER First Coitus	3.076	2.575			
Consensual Coitus					
Age Initiation			-3.791	741	.000
Sexually Assaulted Females	15.266	2.532			
Never Assaulted Females	16.396	2.437			

Age Initiation			1.940	67	.046
Sexually Assaulted BEFORE First Coitus	16.000	2.905			
Sexually Assaulted AFTER First Coitus	14.731	2.269			
Lifetime Partners			4.205	738	.000
Sexually Assaulted Females	10.805	14.855			
Never Assaulted Females	6.061	8.249			
Lifetime Partners			-2.531	63	.014
Sexually Assaulted BEFORE First Coitus	6.076	6.266			
Sexually Assaulted AFTER First Coitus	13.897	17.701			
Coitus with a Male Ten or More Years Older Than You					
Age Initiation			-2.477	134	.014
Sexually Assaulted Females	18.000	3.198			
Never Assaulted Females	19.834	3.502			
Partner's Age			-2.028	145	.044
Sexually Assaulted Females	31.923	5.733			
Never Assaulted Females	34.809	6.748			
Lifetime Partners			3.710	80	.048
Sexually Assaulted Females	3.000	3.201			
Never Assaulted Females	1.323	0.937			
Role-played Coital Rape					
Last Year Frequency			-1.610	23	.036
Sexually Assaulted Females	1.285	1.603			
Never Assaulted Females	3.667	3.741			
Coital Dominant Over Male's Submissiveness					
Partner's Age			-2.777	82	.007
Sexually Assaulted Females	24.823	4.530			
Never Assaulted Females	21.328	4.659			
Coitus While Tied Up					
Last Month Frequency			3.826	75	.027
Sexually Assaulted Females	1.333	1.543			
Never Assaulted Females	0.338	0.676			
Coitus After Receiving Pain from the Male					
Partner's Age			2.057	181	.041
Sexually Assaulted Females	22.375	4.777			

Never Assaulted Females	20.602	4.352			
Lifetime Partners			-1.563	16	.027
Sexually Assaulted BEFORE First Coitus	1.000	0.707			
Sexually Assaulted AFTER First Coitus	3.461	3.430			

Table 2: Age Initiation, Lifetime Partners, and Frequency of Oral-Genital and Coital Practices of Sexually Assaulted and Never Assaulted Females.

Significantly more sexually assaulted females (31.0%) than never assaulted females (13.0%) had ever received cunnilingus performed by a female (Table 1). There were no significant differences in performing cunnilingus between sexually assaulted females and cohorts in initiation age, partner’s age at initiation, lifetime partners, or frequency in the last month or year. Significantly more sexually assaulted females (32.1%) than never assaulted females (12.5%) had ever performed cunnilingus (Table 1). There were no significant differences between sexually assaulted females and cohorts in performing cunnilingus in their initiation age, partner’s age at initiation, lifetime partners, or frequency in the last month or year. Significantly more sexually assaulted females (15.5%) than never assaulted females (5.7%) ever had mutual cunnilingus with a female partner (Table 1). There were no significant differences between sexually assaulted females and cohorts in mutual cunnilingus in their initiation age, partner’s age at initiation, lifetime partners, or frequency in the last month or year.

Significantly more sexually assaulted females (9.5%) than never assaulted females (2.5%) had ever received anilingus from a female (Table 1). Significantly more sexually assaulted females (4.8%) than never assaulted females (1.0%) had ever performed anilingus on a female (Table 1). There were no significant differences between sexually assaulted females and cohorts in performing or receiving anilingus with a female partner in their initiation age, partner’s age at initiation, lifetime partners, or frequency in the last month or year.

Coital Practices

Respondents were asked to report their consensual coital experience with ‘partners of the opposite sex’. Sexually assaulted females (\bar{x} = 15.3 years) were significantly younger than cohorts (\bar{x} = 16.4 years) at first consensual coitus. Sexually assaulted females (\bar{x} = 10.8) had significantly more lifetime coital partners than cohorts (\bar{x} = 6.1) (Table 2). There were no significant differences between sexually assaulted females and never assaulted females in their partners’ age at initiation, or frequency of coitus in the last month or year. Significantly more sexually assaulted females (89.3%) ever had consensual coitus with a male than never assaulted females (70.8%) (Table 3).

Significantly more sexually assaulted females (9.5%) than

never assaulted females (2.0%) ever had coitus simultaneously with two males (Table 3). There were no significant differences between sexually assaulted females and never assaulted females in having coitus simultaneously with two males in their initiation age, partners’ age at initiation, lifetime partners, or frequency in the last month or year.

Significantly more sexually assaulted females (16.7%) than never assaulted females (3.7%) ever had coitus simultaneously with a male and female (Table 3). There were no significant differences between sexually assaulted females and never assaulted females in having coitus simultaneously with a male and female in their initiation age, partners’ age at initiation, lifetime partners, or frequency in the last month or year.

Significantly more sexually assaulted females (32.1%) than never assaulted females (11.5%) ever had consensual coitus with a male ten or more years older (Table 3). Sexually assaulted females reported a significantly younger age at first consensual coitus with a male ten or more years older (\bar{x} = 18.0 years) than never assaulted females (\bar{x} = 19.8 years) (Table 2). Sexually assaulted females reported a significantly younger age of their ten or more years older coital partner (\bar{x} = 31.9 years) than never assaulted females (\bar{x} = 34.8 years) (Table 2). Sexually assaulted females reported a significantly higher number of lifetime coital partners ten or more years older (\bar{x} = 3.0) than never assaulted females (\bar{x} = 1.3) (Table 2). There were no significant differences between sexually assaulted females and never assaulted females in their frequency of coitus with partners ten or more years older in the last month or year.

Significantly more sexually assaulted females (44.0%) than never assaulted females (26.5%) ever had coitus with a male of a different race. Significantly more sexually assaulted females (50.0%) than never assaulted females (32.1%) ever had coitus less than two hours after consuming alcohol. Significantly more sexually assaulted females (34.5%) than never assaulted females (19.6%) ever had coitus less than two hours after smoking marijuana. Significantly more sexually assaulted females (10.7%) than never assaulted females (2.3%) ever had coitus less than two hours after using cocaine (Table 3).

Significantly more sexually assaulted females (23.8%) than never assaulted females (8.2%) ever had coitus while viewing

erotica. Significantly more sexually assaulted females (31.0%) than never assaulted females (15.6%) ever photographed or video recorded themselves during coitus (Table 3).

Significantly more sexually assaulted females (16.7%) than never assaulted females (6.0%) ever had coitus with someone they met on the internet. Significantly more sexually assaulted females (13.1%) than never assaulted females (4.9%) ever had coitus with a married man while they were single (Table 3).

Significantly more sexually assaulted females (8.3%) than never assaulted females (2.5%) ever had coitus while they were dressed as a fantasy. Significantly more sexually assaulted females (22.6%) than never assaulted females (7.8%) ever had coitus while their partner was dressed as a fantasy (Table 3).

	%	n	X ² a	df	p value
Coitus with One Male		1028	13.208	1	.000
Sexually Assaulted	89.3				
Never Assaulted	70.8				
Coitus Simultaneously with Two Males		1028	17.016	1	.001
Sexually Assaulted	9.5				
Never Assaulted	2.0				
Coitus Simultaneously with One Male and One Female		1028	28.537	1	.000
Sexually Assaulted	16.7				
Never Assaulted	3.7				
Sexually Assaulted BEFORE First Coitus	7.1	69	4.217	1	.037
Sexually Assaulted AFTER First Coitus	26.8				
Coitus with a Male Ten or More Years Older Than You		1028	28.505	1	.000
Sexually Assaulted	32.1				
Never Assaulted	11.5				
Sexually Assaulted BEFORE First Coitus	17.9	69	7.886	1	.005
Sexually Assaulted AFTER First Coitus	51.2				
Coitus with a Male of a Different Race		1028	11.825	1	.001
Sexually Assaulted	44.0				
Never Assaulted	26.5				
Coitus Less Than Two Hours After Consuming Alcohol		1028	11.088	1	.001
Sexually Assaulted	50.0				
Never Assaulted	32.1				
Coitus Less Than Two Hours After Consuming Marijuana		1028	10.426	1	.002
Sexually Assaulted	34.5				
Never Assaulted	19.6				
Coitus Less Than Two Hours After Consuming Cocaine		1028	18.538	1	.000
Sexually Assaulted	10.7				

Never Assaulted	2.3				
Coitus While Viewing Erotica		1028	22.116	1	.000
Sexually Assaulted	23.8				
Never Assaulted	8.2				
Coitus While Photographing or Video Recording Yourself		1028	13.037	1	.001
Sexually Assaulted	31.0				
Never Assaulted	15.6				
Coitus with Someone You Met on the INTERNET		1028	13.553	1	.001
Sexually Assaulted	16.7				
Never Assaulted	6.0				
Coitus with a Married Male While You Were Single		1028	9.957	1	.005
Sexually Assaulted	13.1				
Never Assaulted	4.9				
Coitus While Dressed as a Fantasy		1028	8.845	1	.01
Sexually Assaulted	8.3				
Never Assaulted	2.5				
Coitus While Male Dressed as a Fantasy		1028	20.479	1	.000
Sexually Assaulted	22.6				
Never Assaulted	7.8				
Coital Role-play Being Raped		1028	6.904	1	.017
Sexually Assaulted	9.5				
Never Assaulted	3.6				
Coital Dominance Over Male's Submissiveness		1028	16.616	1	.000
Sexually Assaulted	21.4				
Never Assaulted	8.1				
Coital Submissive to Male's Dominance		1028	24.789	1	.000
Sexually Assaulted	23.8				
Never Assaulted	7.6				
Sexually Assaulted BEFORE First Coitus	14.3	69	4.146	1	.037
Sexually Assaulted AFTER First Coitus	36.6				
Coitus While Tied Up		1028	22.324	1	.000
Sexually Assaulted	27.4				
Never Assaulted	10.2				
Coitus While Male Tied Up		1028	14.188	1	.001
Sexually Assaulted	17.9				

Never Assaulted	6.6				
Coitus After Spanking the Male		1028	7.296	1	.008
Sexually Assaulted	23.8				
Never Assaulted	13.1				
Coitus After Being Spanked by the Male		1028	5.148	1	.018
Sexually Assaulted	35.7				
Never Assaulted	24.5				
Coitus After Administering Pain to the Male		1028	13.068	1	.001
Sexually Assaulted	23.8				
Never Assaulted	10.6				
Coitus After Receiving Pain from the Male		1028	22.709	1	.000
Sexually Assaulted	38.1				
Never Assaulted	16.9				
Coital Orgasm		1028	13.262	1	.000
Sexually Assaulted	64.3				
Never Assaulted	43.6				
Faked Coital Orgasm		1028	28.139	1	.000
Sexually Assaulted	54.8				
Never Assaulted	27.2				
a Fisher's Exact Test					

Table 3: Ever Experienced Consensual Coital Practices of Sexually Assaulted and Never Assaulted Females.

Significantly more sexually assaulted females (9.5%) than never assaulted females (3.6%) ever role-played coital rape (Table 3). However, sexually assaulted females ($\bar{X} = 1.3$) role-played coital rape significantly fewer times in the last year than never assaulted females ($\bar{X} = 3.7$) (Table 2).

Significantly more sexually assaulted females (21.4%) than never assaulted females (8.1%) ever role-played coital 'dominance' to their male partner's 'submissiveness' (Table 3). Sexually assaulted females reported a significantly older age 'submissive' coital partner ($\bar{X} = 24.8$ years) than cohorts ($\bar{X} = 21.3$ years) (Table 2). Significantly more sexually assaulted females (23.8%) than never assaulted females (7.6%) ever role-played coital 'submissiveness' to their male partner's 'dominance' (Table 3).

Significantly more sexually assaulted females (27.4%) than never assaulted females (10.2%) ever had coitus while 'tied up' (Table 3). Sexually assaulted females reported a significantly higher last month frequency of being 'tied up' during coitus than never assaulted females ($\bar{X} = 1.3$ vs. $\bar{X} = 0.3$) (Table 2). Significantly more sexually assaulted females (17.9%) than never assaulted females (6.6%) ever had coitus while their male partner

was 'tied up' (Table 3).

Significantly more sexually assaulted females (23.8%) than never assaulted females (13.1%) ever had coitus after 'spanking' their male partner. Significantly more sexually assaulted females (35.7%) than never assaulted females (24.5%) ever had coitus after being 'spanked' by their male partner (Table 3).

Significantly more sexually assaulted females (23.8%) than never assaulted females (10.6%) ever had coitus after administering pain or discomfort to their male partner. Significantly more sexually assaulted females (38.1%) than never assaulted females (16.9%) ever had coitus after receiving pain or discomfort from their male partner (Table 3). Sexually assaulted females reported a significantly older coital partner ($\bar{X} = 22.4$ years) that they received pain or discomfort from compared to never assaulted females ($\bar{X} = 20.6$ years) (Table 2).

Significantly more sexually assaulted females (64.3%) than never assaulted females (43.6%) ever had a coital orgasm. Significantly more sexually assaulted females (54.8%) than never assaulted females (27.2%) ever 'faked' a coital orgasm (Table 2).

Heterosexual Cohabitation

There was a significant difference between cohabiting sexually assaulted females in reported sexual assaults ($X^2 (1, N = 664) = 16.506, p = 0.000$). In that, 6.7% of females who never cohabited with a male for over six-months reported a sexual assault whereas 17.2% of females who cohabited with a male for over six-months reported a sexual assault.

Stepwise Discriminate Analysis

A stepwise discriminate analysis was conducted to classify if a female was or was not sexually assaulted. The discriminate function yielded a significant association between the groups and predictor variables accounting for 66.7% of between group variability with five key predictors entered into the matrix: (1) lifetime number of male consensual coital partners who were ten or more years older than you (.490), (2) lifetime number of consensual coital partners with whom you experienced an orgasm (.401), (3) number of lifetime coital partners (.357), (4) age initiation at performing fellatio (-.323), and (5) lifetime number of male partners performing cunnilingus (.296). The cross-validated classification yielded an 80.9% correct classification for this model.

Sexual Assault by Sexual orientation

The prevalence of a sexual assault by natal gender (i.e., female) was 9.5% for heterosexual females, 15.6% for homosexual

females, and 18.5% for bisexual females. Homosexual females were significantly more likely (1.6 times) to report a sexual assault than heterosexual females. Bisexual females were significantly more likely (1.9 times) to report a sexual assault than heterosexual females ($X^2 (2, N = 776) = 7.125, p = 0.028$). While sexually assaulted homosexual females reported the highest number of lifetime male consensual coital partners—there was no significant difference between sexually assaulted females’ sexual orientation and consensual coitus in their initiation age, partner’s age at initiation, and number of lifetime partners.

There was no significant difference between sexually assaulted females’ sexual orientation and their age initiation at performing fellatio. There were significant differences between sexually assaulted heterosexual and bisexual females. Sexually assaulted bisexual females reported a significantly younger age initiation for masturbation ($\bar{x} = 10.7$ years) than sexually assaulted heterosexual females ($\bar{x} = 15.1$ years). Sexually assaulted bisexual females reported a significantly younger age initiation at receiving cunnilingus performed by a male ($\bar{x} = 14.1$) than sexually assaulted heterosexual females ($\bar{x} = 16.5$ years). Sexually assaulted bisexual females reported a significantly younger age initiation at receiving cunnilingus performed by a female ($\bar{x} = 13.1$ years) than sexually assaulted heterosexual females ($\bar{x} = 18.1$ years). Sexually assaulted bisexual females reported a significantly younger age initiation at performing cunnilingus ($\bar{x} = 14.1$ years) than sexually assaulted heterosexual females ($\bar{x} = 17.3$ years) (Table 4).

	M	SD	t score	df	p value
Age at First Masturbation			3.082	52	.003
Sexually Assaulted Heterosexual Females	15.098	4.908			
Sexually Assaulted Bisexual Females	10.692	2.658			
Received Male Performed Cunnilingus			3.044	63	.003
Sexually Assaulted Heterosexual Females	16.461	1.994			
Sexually Assaulted Bisexual Females	14.153	3.804			
Received Female Performed Cunnilingus			3.267	20	.004
Sexually Assaulted Heterosexual Females	18.077	3.546			
Sexually Assaulted Bisexual Females	13.111	3.444			
Performed Cunnilingus			2.130	19	.046
Sexually Assaulted Heterosexual Females	17.333	3.962			
Sexually Assaulted Bisexual Females	14.111	2.522			

Table 4: Sexual Practice Differences by Sexually Assaulted Females’ Sexual orientation.

Homosexual Cohabitation

There was a significant difference between sexually assaulted females and cohorts that had cohabitated in a sexual relationship with a female for over six-months ($X^2(1, N = 715) = 13.765, p = 0.002$). In that, 8.2% of females who never cohabited with a female for over six-months reported a sexual assault whereas 28.6% of females who cohabited with a female for over six-months reported a sexual assault.

Sexual Assault Prior to First Consensual Coitus

Females sexually assaulted before their first consensual coitus reported significantly fewer lifetime male partners ($\bar{x} = 3.2$) performing cunnilingus than females sexually assaulted after their first consensual coitus ($\bar{x} = 9.6$). Females sexually assaulted before their first consensual coitus reported significantly fewer lifetime male partners ($\bar{x} = 1.6$) performing cunnilingus while they performed fellatio, than females sexually assaulted after their first consensual coitus ($\bar{x} = 3.1$) (Table 2).

There was no significant non-virginity difference between females sexually assaulted before their first consensual coitus and females sexually assaulted after their first consensual coitus. However, at respondents' first consensual coitus—females sexually assaulted before their first consensual coitus were significantly older ($\bar{x} = 16.0$) than females sexually assaulted after their first consensual coitus ($\bar{x} = 14.7$). Females sexually assaulted before their first consensual coitus had significantly fewer lifetime coital partners ($\bar{x} = 6.1$) than females sexually assaulted after their first consensual coitus ($\bar{x} = 13.9$) (Table 2). There were no significant differences between females sexually assaulted before their first consensual coitus or after their first consensual coitus—in their partners' age at coital initiation, or frequency of coitus in the last month or year.

Significantly fewer females sexually assaulted before their first consensual coitus (7.1%) than females sexually assaulted after their first consensual coitus (26.8%) had coitus simultaneously with a male and female. Significantly, fewer females sexually assaulted before their first consensual coitus (17.9%) had a consensual coital partner ten or more years older than females sexually assaulted after their first consensual coitus (51.2%) (Table 3).

Significantly fewer females sexually assaulted before their first consensual coitus (14.3%) ever role-played coital 'submissiveness' to their male partner's 'dominance' than females sexually assaulted after their first consensual coitus (36.6%) (Table 3). Females sexually assaulted before their first consensual coitus had significantly fewer lifetime coital partners ($\bar{x} = 1.0$) that they received pain or discomfort from compared to females sexually assaulted after their first consensual coitus ($\bar{x} = 3.5$) (Table 2).

Females Sexually Assaulted Prior to First Consensual Coitus vs. Non-virgin, Never Assaulted Females

There was no significant difference in sexual orientation

between females sexually assaulted before their first consensual coitus and non-virgin, never assaulted females. There were no significant differences between the groups in age initiation for masturbation, age initiation at receiving cunnilingus performed by a male, number of lifetime male performing cunnilingus partners, age initiation at performing fellatio, number of lifetime male partners they performed fellatio on, age initiation at receiving cunnilingus performed by a female, number of lifetime female performing cunnilingus partners, age initiation at performing cunnilingus, number of lifetime female partners they performed cunnilingus on, age initiation at receiving male performed cunnilingus while performing fellatio, and number of lifetime male partners performing cunnilingus while they performed fellatio.

There were no significant differences between the groups in age initiation at first consensual coitus or number of lifetime coital partners. There were no significant differences between the groups in age initiation or number of lifetime partners having coitus less than two hours after consuming alcohol or marijuana. There was no significant difference between the groups in age initiation at first coitus while viewing erotic video. There were no significant differences between the groups in age initiation at first consensual coitus or number of lifetime coital partners while dressed as a fantasy. There were no significant differences between the groups in age initiation at first consensual coitus or number of lifetime coital partners while 'tied-up', spanked, or receiving discomfort. There were no significant differences between the groups in age initiation at first coital orgasm or faking a coital orgasm or number of lifetime coital partners in having a coital orgasm or faking an orgasm.

There were no significant differences between the groups in 'ever' receiving cunnilingus from male or female partners as well as performing cunnilingus or fellatio. There was a significant difference between the groups in ever experiencing mutual oral-genital stimulation with a male partner ($X^2(1, N = 731) = 4.228, p = 0.029$). Females sexually assaulted before their first consensual coitus (75.0%) had greater experience in mutual oral-genital stimulation with a male partner than non-virgin, never assaulted females (55.3%).

Limitations

This investigation should be interpreted with limitations. Causality cannot be inferred from this cross-sectional analysis. This study drew a convenience sample from a two-year college of undergraduates, limiting its generalizability. However, this sample provided uncommon insight into the research question given it was from a pedestrian population not uniquely clustered by their identified or self-identified sexual coercion, sexual abuse, or sexual assault experience. In addition, the sample was not drawn from a delimited collective solicited via social media sexual abuse/rape affiliation, sexual abuse/rape support group, sexual abuse/rape counseling-patient population, or from a public health education sexual abuse/rape high-risk population.

Discussion

The purpose of this research exercise was to investigate whether sexual maturation, sexual practice, and sexual orientation profiles differ between female victims and non-victims of sexual assault. The operate term ‘sexual assault’ was defined as the completed act of a non-consensual penetration of the vagina or anus by a penis, digit, or object—or oral stimulation of the genitals or anus.

The H₁ hypothesis was rejected. Females sexually assaulted were markedly more precocious and experienced in their masturbatory, consensual oral-genital stimulation, and consensual coital experience, with a more extensive sexual practice repertoire than never assaulted females. Markedly more sexually assaulted females than never assaulted females had coitus concomitantly with alcohol, marijuana, and cocaine. In the stepwise discriminate analysis, sexually assaulted females were differentiated from never assaulted females by their greater number of lifetime ten or more years older consensual coital partners, number of lifetime coital partners providing their orgasms, number of lifetime coital partners, number of lifetime male partners performing cunnilingus, and their age initiation at performing fellatio. These findings markedly expand the sexual practices conventionally associated with sexual assault sequelae [18].

The H₂ hypothesis was rejected. Sexually assaulted bisexual females reported a significantly younger age initiation at receiving cunnilingus performed by a male, significantly younger age initiation at receiving cunnilingus performed by a female, and a significantly younger age initiation at performing cunnilingus than sexually assaulted heterosexual females. Homosexual and bisexual females reported a markedly higher rate of sexual assault than heterosexual females—even though there was no significant age difference. Females who cohabited with a female for over six-months were 3.5 times more likely to report a male perpetrator sexual assault than females who never cohabited with a female. These findings support previous research observing sexual orientation as a dynamic in sexual assault [6,23]. These findings also reveal sexually assaulted bisexual females’ propensity for oral-genital sexual behaviors juxtaposed to sexually assaulted heterosexual females.

By experience, cunnilingus was a core motive in bisexual females’ sexual maturation and sex play with females as well as males. As such, the progression from heterosexual oral-genital stimulation to coitus may not be an expectation or motive of the homosexual or bisexual female when sexually engaging a heterosexual or bisexual male partner. Nevertheless, the progression from heterosexual oral-genital stimulation to coitus may well be within the sexual expectations and motives of the male sexual partner of a bisexual or homosexual female. Conflicting sexual expectations and motives of male sexual partners of bisexual females grant no license for sexual assault.

Nevertheless, it may well explain the high frequency of reported sexual assaults by bisexual and homosexual females engaging male sexual partners. There is a research imperative to investigate the sexual expectations and motives of both the victim and the assailant as a predictor of sexual assault, controlling for the sexual orientation of both actors.

The H₃ hypothesis was rejected. Females sexually assaulted after their first consensual coitus were more precocious and experienced in their consensual oral-genital stimulation and consensual coital experience, with a more extensive sexual practice repertoire and lifetime number of sexual partners, than females sexually assaulted before their first consensual coitus. Given their more precocious and experienced sexual experience—females sexually assaulted after their first consensual coitus were at greater risk of sexual assault. The relatively restrained sexual experience profile of females sexually assaulted before their first consensual coitus poses a lessened risk of sexual assault. These results support the Holt-Lunstad, Smith, & Layton evidence that early traumatic life events, in this case sexual assault, shapes adult sexual practice patterns of female victims [4].

The H₄ hypothesis failed to be rejected. Females sexually assaulted before their first consensual coitus reported masturbatory, consensual oral-genital, and consensual coital practices analogous to non-virgin females never assaulted. Both groups were remarkably similar in sexual maturation (age initiation) and coital orgasm experience.

Rejection of hypotheses H₁, H₂, and H₃ denote that the sexual maturation, sexual practice, and sexual orientation profile of sexually assaulted female victims significantly differ from non-victims. The greater number of lifetime consensual oral-genital stimulation and coital partners reported by females sexually assaulted exposed them to a higher risk of sexual assault than never assaulted females. The greater number of lifetime consensual oral-genital stimulation and coital partners reported by females sexually assaulted after their first consensual coitus exposed them to a higher risk of sexual assault than females sexually assaulted before their first consensual coitus. Indeed, number of lifetime sexual partners is not the exclusive predictor of sexual assault. Nonetheless, this difference in sexual behavior experience between sexually assaulted and never assaulted females necessitates further investigation.

Females sexually assaulted before their first consensual coitus reported masturbatory, consensual oral-genital, and consensual coital practices analogous to non-virgin females never assaulted. This is a novel observation. In turn, further investigation is indicated to determine if these analogous sexual practice patterns are an anomaly or evidence that sexual behavior patterns of females sexually assaulted before their first consensual coitus are not discernable from sexual behavior patterns of non-virgin females never sexually assaulted.

Conclusions

Tallies of female sexual behavior in no way indict the victim or reflect on the quality of emotional intimacy in their sexual relationships. Nevertheless, these findings indicate that the sexual maturation, sexual practice, and sexual orientation profile of sexually assaulted female victims differed markedly from non-victims, with one novel exception. The subset of females sexually assaulted before their first consensual coitus reported masturbatory, consensual oral-genital, and consensual coital practices wholly analogous to non-virgin females never assaulted. Dissimilarly, sexually assaulted females reported sexual maturation, sexual behavior practices, and sexual orientation profiles profoundly different than females never sexually assaulted. Furthermore, the sexual maturation, sexual practice, and sexual orientation reported by females sexually assaulted before their first consensual coitus was markedly dissimilar to females sexually assaulted after their first consensual coitus. Noted was the decidedly higher rate of sexual assault reported by homosexual and bisexual females compared to that of heterosexual females.

Collectively, these observations indicate that sexual orientation, age initiation (sexual maturation), as well as patterns of sexual behavior differed significantly between female victims and nonvictims of sexual assault. There remains a research imperative to fashion an evidentiary inclusive sexual behavior and sexual orientation profile of female victims of sexual assault, so as to provide an evidential foundation for judicial, social service, and health education practitioners.

Compliance with Ethical Standards

- 1. Statement of Human Rights:** This study was approved by The City University of New York Institutional Research Review Board (IRB NET#: 11-12-037-0140). Informed consent was obtained from all individual participants included in the study.
- 2. Financial disclosure:** None
- 3. Conflict of interest:** None

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