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Sexual behaviours, sex toy and sexual safety methods reported by women who have sex with women and men

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Abstract. ***Background*:** Relative to women who engage in sex with exclusively men or women, women who have sex with women and men (WSWM) are more likely to report a history of sexually transmissible infections. Knowledge of the diversity and specificity of the sexual behaviours in which they engage may provide insight into the behavioural modes of infection. The present study sought to document a range of behaviours including concurrent multi-person sexual activity (e.g. orgy, threesome), anal sexual activity and sex toy use. Barrier use methods during specific behaviours were also assessed. ***Methods*:** Eighty women who reported recent genital contact with at least one man and one woman were recruited via targeted Internet, venue-based and snowball sampling methods. Consenting participants were directed to an online survey. During an in-person timeline follow-back interview (the SEQUENCE© calendar method), a subset of participants ($n = 53$) provided detailed sexual behaviour data for each sexual partner over the previous 12 months. ***Results*:** Almost three-quarters of the sample reported at least one concurrent multi-person sexual activity. Nearly two-thirds of participants reported engaging in sexual behaviour that involved their own (66.7%) or their partner's (49.4%) anus in the past year. Barrier use for sexual behaviours other than penile-vaginal intercourse was uncommon. Behaviours and safety strategies were similar with men and women regardless of partner gender. ***Conclusions*:** The sexual repertoires reported by participants in this study were diverse. Understanding the range of diverse sexual behaviours of the participants may enable the construction of tailored recommendations for sexual health maintenance among WSWM.

Additional keywords: anal sex, bisexual, condom use, group sex, mixed-methods, threesome, timeline follow-back methods.

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Introduction

Relative to women who have engaged in sexual behaviour with only men (WSM) or women (WSW), women who have had sex with both women and men (WSWM) are more likely to report a history of sexually transmissible infections (STI).[1,2] Research designed to assess this disparity has focussed on a variety of social and behavioural correlates of sexual risk, including comparatively high rates of sexual activities that occurred: under the influence of drugs or alcohol; in exchange for money or other goods; and/or with a partner who reported a history of injection drug use.[3–6] While these factors may predict STI, they are applicable only to the specific subset of WSWM engaging in particularly high-risk sexual behaviours. There remains a need for studies of the sexual health of a larger population of behaviourally bisexual women. Another limitation to extant literature regarding WSWM is the tendency to rely on explicit sexual identity as bisexual as an inclusion criterion.[7] This equation of identity and behaviour excludes those who are behaviourally bisexual without being bisexually identified.[8,9]

Engaging in sexual behaviour with both men and women has the potential to diversify women's sexual repertoires because certain sexual behaviours are predicated on the involvement of particular genitalia (e.g. penile-vaginal intercourse). This sexual

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diversity may include a variety of manual, oral and genital behaviours with both male and female partners. One study found that over 50% of WSW reported engaging in external genital rubbing, vaginal fingering, vaginal fisting, cunnilingus, genital scissoring/GG Rubbing (genital-to-genital rubbing of two individuals) and the use of sex toys.[10] Still, this list remains limited in that it ignores behaviours that may pose less potential for sexual risk (e.g. kissing, cuddling, breast massage); conflates behaviours that are differentially associated to sexual risk (e.g. genital scissoring with vs without clothing); and overlooks some behaviours that may pose the highest potential for risk (e.g. sadomasochistic (S&M) behaviours, anal rubbing, anal fingering, anal fisting and analingus). Furthermore, comparative analyses often presume a single partner in a given sexual encounter, whether male or female, and thus preclude consideration of concurrent multi-person sexual activity (e.g. a threesome, orgy, group sex). In a series of interviews with WSWM recruited from family planning/STI clinics, concurrent multi-person sexual activity emerged as a common theme with multiple participants reporting participation.[11] A focussed analysis on WSWM also provides the unique opportunity to explore the ways in which WSWM navigate sexual behaviours with men and women in similar and different ways, based on gender of the partner.

Alongside documentation of this behavioural diversity, data on condom/barrier use during these varied activities have important implications for STI transmission. Research on the diversity of risk reduction strategies among WSW[12,13] and lesbian-identified women[14] indicates that barrier use outside of penile penetration is relatively uncommon. Sexual safety recommendations for WSWM would be greatly enhanced by data regarding the specific sexual behaviours that may put WSWM at an increased risk and the measures that they take to protect their sexual health.

Aims

In order to better assess potential for sexual risk, a community-based sample of WSWM were asked to report whether they had engaged in a variety of sexual behaviours beyond those assessed in previous research. Additionally, the present study captured the number of partners with whom participants reported engaging in each behaviour within the past year. The relationship of these behaviours to self-reported STI diagnosis history was explored in order to identify potential behavioural modes of infection.

Methods

Participant recruitment and data collection

As part of the *Women in Indiana*: *Sexual Health and Experience Study* (*WISHES*), participants in the present study were recruited from two locations in the Midwest, United States, including one city with over 750 000 residents and another with over 75 000.[15] Cisgender women (i.e. individuals assigned female at birth and living as a woman) within driving distance of these locations were eligible to participate if they had engaged in genital contact with at least one cisgender man and cisgender woman within the past year. Genital contact in the previous year, as opposed to lifetime genital contact, was selected for inclusion in the study in order to capture data from women for whom these experiences were relatively recent, in order to increase the likelihood that they could be remembered and reported in the SEQUENCE© calendar and in terms of recent STI risk relevance. In addition to the behavioural criteria used to define inclusion, all participants were required to confirm that they were over the age of 17 years, had access to email or provided a current mailing address and were comfortable discussing sexual topics with the researcher.

Participants were recruited via web-based advertisements (43.8%, $n = 35$), distribution of paper-based flyers (20.0%, $n = 16$) and snowballing sampling methods (18.8%, $n = 15$). Most flyers/recruitment messages included the following phrase: 'Are you a female aged 18 or over who has had male and female sexual partners in the past year?' The advertisements were placed in Lesbian, Gay, Bisexual and Transgender (LGBT)-friendly spaces (coffee shops/bookstores), promoted on local media directed at the LGBT community and listed on email distribution lists/websites targeting women with diverse sexual backgrounds (e.g. LGBT student support services, Craigslist). Additionally, the larger community was targeted through online posts and paper-based advertisements in areas unrelated to sex/sexuality (e.g. university online classifieds advertisements, bus stops). Finally, all participants were welcome to recruit others who met the inclusion criteria. Data were not collected on participants who failed to meet the inclusion criteria.

Recruitment notices for the study contained a URL that directed potential participants to the eligibility questionnaire. Once eligibility was confirmed and consent was obtained, participants were automatically directed to an on-line survey (that took ~20 min to complete). Following completion of the baseline survey, participants were sent an email (typically within 24–48 h) inviting them to participate in an in-person interview. The interviews were scheduled at the participant's earliest convenience with most taking place within the following 1–2 weeks. As part of the interview, participants completed a modified in-person timeline follow-back interview using a SEQUENCE© calendar to capture the data. We developed the SEQUENCE© (*Sexual Event Questionnaire*: *Understanding Event-level Nuances through Calendar Entry*) calendar method specifically for use in the present study. It utilises some traditional aspects of calendar/timeline follow-back interviews while enabling the researcher to capture detailed data on multiple partners during each calendar day in a user-friendly format (refer to the appendix for more information). There were no significant demographic differences between those participants who did/did not attend the interview ($n = 53$). Participants collaboratively completed the calendar with an interviewer who recorded detailed data about all partners over the previous 12 months ($n = 308$ partners). Upon completion of this phase, participants received a $50 gift-card.

Measures

Baseline survey

Participants were asked a series of questions about sociodemographic characteristics including age, race/ethnicity, sexual identity and relationship status. Participants were also

asked to report the first time they engaged in genital contact with a male and female partner. Participants were then provided with a detailed list of sexual behaviours (Table 1) and asked to indicate the most recent time they had engaged in each of the behaviours (*Past Year*, *Over a Year Ago*, *Never*). Items were adapted from the National Survey of Sexual Health and Behaviour (NSSHB)[16] and other research focussed on the sexual behaviour of WSW and WSM.[7,12] Behaviours were asked separately by partner gender and giving/receiving roles (as appropriate).

In addition to questions about sexual behaviour with men and women individually, participants were asked, '*Have you ever participated in sexual behaviour with more than one person at one time*? *Some people call this an orgy*, *group sex*, *a threesome*, *or a ménage á trois*'. Participants who indicated 'yes' to this item were asked to indicate when the most recent encounter occurred (past 30 days, past 90 days, past year, more than a year ago, unsure). Participants were also asked to indicate all partner configurations of any previous concurrent multi-person sexual activity experiences (e.g. one woman and one man; two women and no men; two men and no women; three or more partners, men and women).

Finally, participants were asked to indicate whether 'they had ever used a latex barrier (e.g. condom, dental dam)' during a series of activities. Each sexual behaviour (e.g. cunnilingus) was asked separately by partner gender in both the giving and receiving role (as appropriate). Participants were asked to estimate whether they 'always use a condom/latex barrier', 'sometimes use a condom/latex barrier' or 'never use a condom/latex barrier' during each of the activities. There was also a 'not applicable' option for participants who did not engage in the behaviour in question.

At the conclusion of the survey, the participants were asked whether they had ever been screened for STI. Those who reported screening were directed to a series of questions regarding specific types of screening for various STI. Those who reported that they had been screened were asked whether they had been diagnosed by a healthcare provider with each respective STI (e.g. gonorrhoea, chlamydia). Those who reported a lifetime diagnosis were asked to report the most recent diagnosis. For this study, participants were grouped based upon whether they reported any STI diagnosis within the past year and were compared with those who did not.

Table 1. Sociodemographic characteristics of participants

Characteristics		% (*n*)	
Age	18–24	51.3	(41)
	25–29	23.8	(19)
	30–39	13.8	(11)
	40+	11.3	(9)
Education			
	High school or equivalent	11.3	(9)
	Some College or Associates	51.3	(41)
	Bachelor's	27.5	(22)
	Graduate (Master's or Doctoral)	8.8	(7)
	Other	1.3	(1)
Race/ethnicity			
	White	86.3	(69)
	Black	12.5	(10)
	Asian	3.8	(3)
	Hispanic	0.0	(0)
	Other	1.3	(1)
Sexual orientation			
	Lesbian/gay/homosexual	5.1	(4)
	Bisexual	46.8	(37)
	Heterosexual/straight	24.1	(19)
	Unsure/questioning	2.5	(2)
	Queer	11.4	(9)
	Other	10.1	(8)
Gender expression	Very femme/feminine	29.1	(23)
	Somewhat femme/feminine	35.4	(28)
	Slightly femme/feminine	19.0	(15)
	Androgynous	7.6	(6)
	Slightly butch/masculine	5.1	(4)
	Somewhat butch/masculine	3.8	(3)
	Very butch/masculine	0.0	(0)
Relationship status			
	In a relationship for over 1 year	10.1	(8)
	In a relationship for under 1 year	16.5	(13)
	Dating one person	13.9	(11)
	Dating more than one person	32.9	(26)
	Not sexually active with a person	8.9	(7)
	Other	17.7	(14)
Relationship partner gender			
	Cisgender Woman	8.8	(7)
	Cisgender Man	17.5	(14)
	Trans* woman (male to female)	0.0	(0)
	Trans* man (female to male)	1.3	(1)

SEQUENCE© calendar

Interviewers asked participants whether they were 'currently seeing, dating or hooking-up with anyone'. If the participant indicated that they were, the interviewer asked for a pseudonym for the partner and their information was recorded in the calendar. If they were not, they were asked to report the most recent date on which they engaged in a romantic or sexual partnership (described above), and the partner information was recorded on the date(s) during which the partnership occurred. After providing all relevant information for the current or most recent partner, the participant was encouraged to consider their next most recent partner; corresponding information was then entered on the appropriate calendar dates for that partner. This process was repeated until the participant had indicated all partners with whom they had a sexual or romantic relationship over the past year. The SEQUENCE© calendar tool allowed the participant to report up to 10 unique partners on each calendar date. No participants exceeded this limit.

For each partner, participants were asked to report whether they had 'ever' engaged in a series of sexual activities with the partner. The list of behaviours that the participant received was the same regardless of partner gender. However, the list of 'giving' behaviours varied based upon whether the partner was had a penis (referred to as male-bodied) or a vulva (referred to as female-bodied) regardless of gender identity. The total number of partners with whom the participants reported engaging in each of the behaviours was summed and

categorised as a behaviour that occurred with 'no partners', 'one partner' or 'two or more partners'. When applicable, participants were then asked whether they used a latex barrier with the partner during sexual activities 'always', 'sometimes' or 'never'.

Analysis

Participant sociodemographic characteristics and sexual behaviour history are all presented using descriptive statistics. Sociodemographic characteristics were entered into a multivariate logistic regression model. Given the multiple number of comparisons, a Bonferroni correction was used and the *P*-value was adjusted to 0.001. The relationship between individual sexual behaviours and self-reported STI diagnosis was assessed using a χ^2 test. Behaviours significant at the bivariate level were entered into a multivariate logistic regression model along with current age and age of first genital contact with a man and with a woman.

Results

Sociodemographic characteristics

Eighty participants ranging in age from 18 to 51 years (mean = 26.74, s.d. = 7.97) completed the survey. Almost all participants reported some college education (88.7%, $n = 71$) and were primarily White, Non-Hispanic (86.3%, $n = 69$). The largest percentage of participants reported that they publicly self-identified as bisexual (46.8%, $n = 37$) (see Table 1). Of those participants who were in a relationship (26.6%, $n = 21$), 31.8% reported that their relationship partner was a woman and 63.6% reported that their partner was a man.

Sexual behaviour history

On average, participants reported their first sexual activity (genital contact) with a women occurred at the age of 18.9 years (s.d. = 5.1) and with a man at age 16.0 years (s.d. = 3.3). For the majority of parallel behaviours (i.e. sexual behaviours that are not contingent upon partner genitalia and can be performed or received with both men and women), participants who reported engaging in a behaviour, reported engaging in the respective behaviour with both men and women. Almost 75% or more of the participants reported that they had kissed, cuddled, engaged in breast play, gave and/or received oral sex, gave external genital rubbing and/or received external genital rubbing and vaginal fingering from both a man and a women in the past year (see Table 2). Nearly two-thirds of participants reported engaging in sexual behaviour that involved their own (66.7%) or their partner's (49.4%) anus in the past year. While close to one-third of participants reported lifetime anal rubbing with both men and women, the largest percentage of participants reported only engaging in anal fingering and analingus with a man. There were no parallel behaviours that were more commonly performed or received with women.

Close to three-quarters of the sample (73.4%, $n = 58$) reported engaging in concurrent multi-person sexual activity at some point within their lifetime, with over half of the participants (58.2%, $n = 46$) reporting at least one episode of concurrent multi-person sexual activity within the past year (see Table 3). When asked about the gender configuration of their partners during the concurrent multi-person sexual activity, 82.8% of the participants who reported an experience indicated that they had at least one concurrent multi-person sexual activity with one other woman and one man. Over one-third of the participants who reported concurrent multi-person sexual activity indicated that they had engaged in concurrent sexual behaviour with two other women (no men) and/or three or more partners (men and women).

Barrier use

Most participants (94.8%, $n = 73$) reported using a condom at least once with a man during penile-vaginal intercourse (PVI) whereas almost three-quarters reported using a condom at least once during penile-anal intercourse (PAI) (see Table 4). A much smaller percentage of participants reported latex barrier use during other sexual activities with a man or woman. When barrier method use was reported for parallel behaviours, the largest percentage of participants reported using a barrier for the respective behaviour with both men and women. The only exception was GG-rubbing/scissoring and receiving oral sex, which were slightly more common with men than with women.

SEQUENCE© calendar data

Sexual behaviour data was collected from the participants for a total of 86 female-bodied partners and 158 male-bodied partners over the past 12 months. Over one-third of the participants reported engaging in vaginal fingering, cunnilingus and/or genital scissoring with clothing or without clothing with two or more partners (see Table 5). Participants reported receiving oral sex from an average of 1.33 (s.d. = 1.12) female-bodied partners. Toy use was reported by over one-third of participants, with less than 10% reporting toy use with two or more female-bodied partners. S&M behaviour was reported by close to 20% of the participants.

Over 60% of the participants ($n = 30$) reported engaging in PVI with two or more partners in the past year, with participants reporting an average of 2.65 (s.d. = 2.26) PVI partners in the past year. Close to one-quarter of the participants reported receiving analingus from one male partner in the past year (24.5%, $n = 12$). Over one-third of the participants reported engaging in S&M with at least one male partner in the past year, with over 12% reporting that they had urinated on at least one male partner. Over 10% of the participants reported inserting a strap-on into the anus of at least one male partner in the past year.

Participants were asked whether they engaged in 'safe sex' with each partner. When constrained to partners with whom participants reported genital contact, they reported 'always' engaging in barrier method use with 12.7% ($n = 7$) of female partners and 70.4% ($n = 69$) of male partners. When constrained to partners with whom they engaged in genital contact but did not report PVI or PAI, participants reported 'never' using barriers with 92.9% ($n = 13$) of the male partners. Of participants who reported engaging in PVI, less than 15% ($n = 4$) of the participants reported that they 'always' used barrier methods with all partners. Total number of partners (male or female) and total number of partners with whom the

Table 2. Women's lifetime sexual behaviours with women and men ($n = 80$)

Behaviours	% most recent time engaged in behaviour with both men and women										Women only						Men only						Never engaged in behaviour	
	Same timeline		Different timeline				Total % engaged in behaviour with men and women		Timeline				Total % engaged in behaviour with women only		Timeline				Total % engaged in behaviour with men only			
	Men and women past year		Women lifetime, men lifetime		Women past year, men lifetime		Men past year, women lifetime				Women past year, men never		Women lifetime, men never				Men past year, women never		Men lifetime, women never					
Mutual (performed and received behaviour)																								
Kissed	98.8	(79)	0.0	(0)	1.3	(1)	0.0	(0)	100.0	(80)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)
Cuddled	85.0	(68)	0.0	(0)	5.0	(4)	5.0	(4)	95.0	(76)	0.0	(0)	0.0	(0)	0.0	(0)	3.8	(3)	0.0	(0)	3.8	(3)	1.3	(1)
Masturbated	71.3	(57)	2.5	(2)	5.0	(4)	1.3	(1)	80.0	(64)	2.5	(2)	0.0	(0)	2.5	(2)	11.3	(9)	1.3	(1)	12.5	(10)	5.0	(4)
Genital-genital rubbing with clothing	53.2	(42)	0.0	(0)	6.3	(5)	6.3	(5)	65.8	(52)	1.3	(1)	1.3	(1)	2.5	(2)	24.1	(19)	3.8	(3)	27.8	(22)	3.8	(3)
Genital-genital rubbing without clothing	48.8	(39)	1.3	(1)	5.0	(4)	8.8	(7)	63.8	(51)	1.3	(1)	0.0	(0)	1.3	(1)	31.3	(25)	2.5	(2)	33.8	(27)	1.3	(1)
Penile-vaginal intercourse	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	92.5	(74)	3.8	(3)	96.3	(77)	3.8	(3)
Penile-anal intercourse	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	42.5	(34)	26.3	(21)	68.8	(55)	31.3	(25)
Participant performed behaviour																								
Breast play	–	–	–	–	–	–	–	–	–	–	97.5	(78)	1.3	(1)	98.8	(79)	–	–	–	–	0.0	(0)	1.3	(1)
Testicle rubbing	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	90.0	(72)	3.8	(3)	93.8	(75)	6.3	(5)
External genital rubbing	90.0	(72)	0.0		2.5	(2)	5.0	(4)	97.5	(78)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(2)	0.0	(0)	0.0	(2)	0.0	(0)
Vaginal fingering	–	–	–	–	–	–	–	–	–	–	87.3	(69)	6.3	(5)	93.6	(74)	–	–	–	–	–	–	6.3	(6)
Vaginal fisting	–	–	–	–	–	–	–	–	–	–	21.5	(17)	12.5	(10)	34.0	(27)	–	–	–	–	–	–	65.8	(53)
Genital oral (testicles)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	77.5	(62)	8.8	(7)	86.3	(69)	13.8	(11)
Genital oral (cunnilingus or fellatio)	73.8	(59)	0.0	(0)	6.3	(5)	7.5	(6)	87.5	(70)	0.0	(0)	0.0	(0)	0.0	(0)	11.3	(9)	1.3	(1)	12.5	(10)	0.0	(0)
Anal touching/ rubbing	16.9	(13)	2.6	(2)	6.5	(5)	3.9	(3)	29.9	(23)	5.2	(4)	2.6	(2)	7.8	(6)	19.5	(15)	9.1	(7)	28.6	(22)	33.8	(26)
Anal fingering	9.1	(7)	1.3	(1)	2.6	(2)	3.9	(3)	16.9	(13)	5.2	(4)	5.2	(4)	10.4	(8)	14.3	(11)	10.4	(8)	24.7	(19)	48.1	(37)
Anal fisting	2.6	(2)	0.0	(0)	0.0	(0)	0.0	(0)	2.6	(2)	0.0	(0)	1.3	(1)	1.3	(1)	1.3	(1)	1.3	(1)	2.6	(2)	93.5	(72)
Analingus (anal oral)	10.4	(8)	1.3	(1)	1.3	(1)	1.3	(1)	14.3	(11)	2.6	(2)	0.0	(0)	2.6	(2)	10.4	(8)	7.8	(6)	18.2	(14)	64.9	(50)
Participant received behaviour																								
Breast play	93.8	(75)	0.0	(0)	2.5	(2)	1.3	(1)	97.5	(78)	0.0	(0)	0.0	(0)	0.0	(0)	2.5	(2)	0.0	(0)	2.5	(2)	0.0	(0)
External genital rubbing	91.3	(73)	0.0	(0)	1.3	(1)	3.8	(3)	96.3	(77)	0.0	(0)	0.0	(0)	0.0	(0)	3.8	(3)	0.0	(0)	3.8	(3)	0.0	(0)

(*continued next page*)

Table 2. (*continued*)

Behaviours	% most recent time engaged in behaviour with both men and women							Women only				Men only				Never engaged in behaviour
	Same timeline		Different timeline				Total %	Timeline			Total %	Timeline			Total %	
	Men and women past year	Women lifetime, men lifetime	Women past year, men lifetime	Men past year, women lifetime			engaged in behaviour with men and women	Women past year, men never	Women lifetime, men never		engaged in behaviour with women only	Men past year, women never	Men lifetime, women never		engaged in behaviour with men only	
Vaginal fingering	84.8	(67)	0.0	(0)	3.8	(3)	2.5	(2)	91.1	(72)	0.0	(0)	0.0	(0)	0.0	(0)	7.6	(6)	1.3	(1)	8.9	(7)	0.0	(0)
Vaginal fisting	17.7	(14)	2.5	(2)	2.5	(2)	1.3	(1)	24.1	(19)	8.9	(7)	3.8	(3)	12.7	(10)	6.3	(5)	7.6	(6)	13.9	(11)	49.4	(39)
Cunnilingus	73.8	(59)	0.0	(0)	6.3	(5)	7.5	(6)	87.5	(70)	0.0	(0)	0.0	(0)	0.0	(0)	11.3	(9)	1.3	(1)	12.5	(10)	0.0	(0)
Anal touching/ rubbing	19.5	(15)	3.9	(3)	3.9	(3)	5.2	(4)	32.5	(25)	2.6	(2)	2.6	(2)	5.2	(4)	31.2	(24)	9.1	(7)	40.3	(31)	22.1	(17)
Anal fingering	10.4	(8)	1.3	(1)	1.3	(1)	2.6	(2)	15.6	(12)	5.2	(4)	3.9	(3)	9.1	(7)	33.8	(26)	9.1	(7)	42.9	(33)	32.5	(25)
Anal fisting	1.3	(1)	1.3	(1)	0.0	(0)	0.0	(0)	2.6	(2)	0.0	(0)	2.6	(2)	2.6	(2)	0.0	(0)	2.6	(2)	2.6	(2)	92.2	(71)
Analingus	7.8	(6)	3.9	(3)	2.6	(2)	3.9	(3)	18.2	(14)	3.9	(3)	0.0	(0)	3.9	(3)	18.2	(14)	11.7	(9)	29.9	(23)	48.1	(37)

participants used barriers were not significantly related to STI self-reported diagnosis in the past year.

Relationship between sociodemographic characteristics, lifetime sexual behaviours and self-reported STI history

Upon assessing the relationship between sociodemographic characteristics and individual sexual behaviours, only one behaviour was related to a sociodemographic characteristic after applying the Bonferroni correction. Heterosexually identified participants were significantly less likely to report receiving cunnilingus from a woman in the past year than bisexually identified participants (adjusted odds ratio (AOR) = 0.02, CI = 0.002–0.21, $P < 0.001$).

The relationship between past-year sexual behaviours to past-year self-reported STI diagnosis history was assessed. Several of the behaviours were not included, given that there was limited variability in the reported behaviour (e.g. PVI). Of the total sample, 7.4% ($n = 6$) reported a bacterial STI diagnosis (chlamydia = 5, gonorrhoea = 1), 4.9% reported a viral STI diagnosis (human papillomavirus = 3, herpes = 1), 11.25% ($n = 9$) reported a diagnosis of bacterial vaginosis (BV) and 1.25% reported that they were diagnosed with trichomoniasis by a healthcare provider within the past year. No participants reported a diagnosis of syphilis or HIV in the past year. No behaviours were significantly related to a viral STI diagnosis in the past year. The only behaviour related to a bacterial STI diagnosis included inserting several fingers into a woman's anus (30.8% behaviour vs 3.1% no behaviour-reported diagnosis, $\chi^2 = 11.70$, $P = 0.006$). Behaviours significantly related to a self-reported bacterial vaginosis diagnosis within the past year included: rubbing genitals against a man's genitals with clothing (7.5% behaviour vs 30.8% no behaviour-reported diagnosis, $\chi^2 = 5.92$, $P = 0.03$), rubbing genitals against a woman's genitals without clothing (e.g. 18.2% reported behaviour vs 2.8% no reported behaviour reported diagnosis, $\chi^2 = 4.71$, $P = 0.03$) and receiving vaginal fisting by a woman (21.7% reported behaviour vs 5.4% no reported behaviour diagnosis, $\chi^2 = 4.81$, $P = 0.04$). When entering participant age, first age of genital contact with a woman and first age of genital contact with a man in a logistic regression, with the significant behavioural predictors of past year bacterial vaginosis diagnosis (coded as 0 = no STI diagnosis, 1 = STI diagnosis), only first age of genital contact with a woman was significantly related to reported bacterial vaginosis diagnosis (AOR = 0.72, CI = 0.55–0.95, $P = 0.02$). In entering the above variables into a model to predict self-reported bacterial STI diagnosis, anal fingering remained the only significant predictor (AOR = 13.40, CI = 0.201–87.14, $P = 0.007$) of self-reported bacterial STI diagnosis.

A multivariate logistic regression was conducted to assess predictors of reported sexual safety method use with partners. The only significant predictor of 'sometimes' (AOR = 0.08, CI = 0.03–0.23, $P < 0.001$) or 'always' (AOR = 0.09, CI = 0.03–0.28, $P < 0.001$) using sexual safety methods relative to 'never' using sexual safety methods was whether they reporting engaging in PVI or PAI with the partner. Partner gender was not a significant predictor. The relationship between barrier use and self-reported STI diagnosis was not investigated due to the low number of

Table 3. Lifetime history of concurrent multi-person sexual activity

Behaviours	Past 30 days % (N)		Past 90 days % (N)		Past year % (N)		Ever % (N)		Never % (N)	
Sexual behaviour with two or more people	5.1	(4)	15.2	(12)	58.2	(46)	73.4	(58)	26.6	(21)
One woman and one man							60.0	(48)	40.0	(31)
Two women, no men							23.8	(19)	76.3	(60)
Two men, no women							15.0	(12)	85.0	(67)
Three or more partners (all women)							5.0	(4)	95.0	(75)
Three or more partners (all men)							5.0	(4)	95.0	(75)
Three or more partners (men and women)							25.0	(20)	75.0	(59)

participants who reported 'always' using condoms/barriers during various behaviours.

Discussion

The reason for the heightened STI rate among WSWM[1,2] remains poorly understood. The present study assessed the prevalence of several understudied behaviours among a community-based sample of WSWM, providing unique insight into several behaviours through which infection may potentially occur. In contrast to previous research, the participants in the present study varied in their reported sexual identity, with approximately half of the participants reporting that they identified as bisexual, similar to other recent studies of behaviourally bisexual men.[17] A higher frequency of WSWM in this study reported engaging in the more commonly endorsed behaviours (e.g, vaginal fingering, cunnilingus), while a comparable percentage of participants reported engaging in the less common sexual behaviours (e.g. vaginal fisting).[7] These differences may be due to variations in study inclusion criteria that focussed on either sexual identity or behaviour which, in turn, influenced the population from whom the questions were asked. This supports the notion that the needs of bisexually identified women may not match those of WSWM and adds to the literature advocating for the consideration of both sexual behaviour and identity by researchers and clinicians.[8,18,19]

In the present study, almost three-quarters of the sample reported at least one episode of concurrent multi-person sexual activity. This is the first known quantitative study to assess frequency of concurrent multi-person sexual activity among WSWM. This is comparable to the frequency of group sex found in one study of heterosexual couples who engage in sexual activity with other individuals/couples[20] and is higher than rates reported by people who use injection drugs and WSW.[21] Concurrent multi-person sexual activity has been characterised as a 'unique risk environment' for STI/HIV transmission because bodily fluids have the potential to be shared among multiple partners during a single sexual encounter.[20–22] However, more remains to be understood about the ways in which risks are enacted or avoided during these encounters.

Depending on the type of behaviour and the context in which it is engaged, sexual contact with the anus has the potential to expose those engaging in it to anal secretions, fecal matter and/or blood if the act results in anal tearing.[23] In the baseline survey of the present study, over half of the participants reported receiving analingus in the past year. One-quarter of the participants reported that they had inserted a toy into their male partner's anus. In the calendar interview, over 12% of the participants reported using a non-vibrating strap-on with a male partner, suggesting that some of the participants were likely engaging in pegging (i.e. penetration of their male partner's anus). Few other studies have evaluated the prevalence of diverse anal behaviours among women, presumably, due to assumptions that these behaviours are too rare or too taboo to assess. This data suggest that, on the contrary, the lack of dialogue about anal sexual behaviour among women should not be mistaken for evidence of the frequency in which it occurs. Currently, anal STI screening and prevention efforts have primarily focussed on men who have sex with men.[24,25] This research suggests that WSWM may benefit from similar conversations with their healthcare providers.

While the possibility of transmission of BV via sexual activity remains contested,[26] research has consistently identified WSW as having an increased risk. In the present study, two rarely discussed sexual behaviours with women (GG rubbing/scissoring and receiving vaginal fisting) were related to recent BV diagnosis. While these behaviours did not remain significant when entered into a model with first genital contact with a woman, they do suggest the need for further understanding of the risks and corresponding sexual safety guidelines associated with these behaviours. For instance, through GG rubbing/genital scissoring, women may transmit infected cervicovaginal secretions if no barrier is used. Depending on the size of the fist and the force with which it is inserted, there may be potential for vaginal tearing during vaginal fisting. In order to reduce these potential risks, providers may wish to recommend the use of lubricant and nail trimming.

In the calendar, a small minority of participants (less than 15%) reported using condoms with all male partners with whom they reported PVI. With the exception of PVI and PAI, the use of latex barriers (e.g. condoms) was reported by only a small minority of participants, with similar rates for male and female-bodied partners. This may be due to a lower perceived need or unique obstacles that impede condom/barrier use during sexual activities that do not involve penile penetration. Condom use negotiations may be made easier by the suggestion that they are to be used for contraception as opposed to STI prevention measures.[27] As condoms only serve a contraceptive function when used during PVI, suggested barrier use could imply a lack of trust and concern about STI transmission.[28] This perception may be heightened if a barrier method is suggested during an activity that is not perceived to be

Table 4. Condom/barrier use by behaviour and partner gender

Condom/barrier use with a male partner	Always		Sometimes		Never		Condom/barrier use with a female partner	Always		Sometimes		Never		Ever used a condom/barrier by gender	Men and women		Women only		Men only		Never used with either	
Vaginal fingering	2.6	(2)	5.3	(4)	92.1	(70)	Vaginal fingering	2.7	(2)	8.1	(6)	89.2	(66)	Vaginal fingering	6.76	(5)	4.05	(3)	1.35	(1)	87.84	(65)
Anal fingering (participant)	6.4	(3)	14.9	(7)	78.7	(37)	Anal fingering	5.3	(2)	13.2	(5)	81.6	(31)	Anal fingering	18.4	(7)	0.0	(0)	5.3	(2)	76.3	(29)
Anal fingering (partner)	14.7	(5)	23.5	(8)	61.8	(21)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Vaginal fisting	4.0	(2)	10.0	(5)	86.0	(43)	Vaginal fisting	6.0	(3)	8.0	(4)	86.0	(43)	Vaginal fisting	11.6	(5)	2.3	(1)	4.7	(2)	81.4	(35)
Anal fisting (participant)	4.5	(1)	13.6	(3)	81.8	(18)	Anal fisting	6.9	(2)	6.9	(2)	86.2	(25)	Anal fisting	10.3	(3)	3.4	(1)	3.4	(1)	82.8	(24)
Anal fisting (partner)	5.3	(1)	10.5	(2)	84.2	(16)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Genital-genital rubbing	0.0	(0)	12.7	(9)	87.3	(62)	Genital-genital rubbing/scissoring	1.6	(1)	4.9	(3)	93.4	(57)	Genital-genital rubbing/scissoring	3.5	(2)	3.5	(2)	10.5	(6)	82.5	(47)
Fellatio	0.0	(0)	24.1	(19)	75.9	(60)	Oral sex on partner	1.4	(1)	5.6	(4)	93.1	(67)	Oral sex on partner	4.2	(3)	4.2	(3)	5.6	(4)	85.9	(61)
Cunnilingus	0.0	(0)	11.5	(9)	88.5	(69)	Oral sex on participant	1.4	(1)	6.9	(5)	91.7	(66)	Oral sex on participant	4.2	(3)	2.8	(2)	18.3	(13)	74.6	(53)
Vibrator insertion-vagina	8.0	(4)	20.0	(10)	72.0	(36)	Vibrator insertion-vagina	16.7	(9)	16.7	(9)	66.7	(36)	Vibrator insertion-vagina	23.1	(9)	17.9	(7)	5.1	(2)	53.8	(21)
Vibrator insertion-anus	16.7	(4)	33.3	(8)	50.0	(12)	Vibrator insertion-anus	28.6	(8)	7.1	(2)	64.3	(18)	Vibrator insertion-anus	41.2	(7)	11.8	(2)	0.0	(0)	47.1	(8)
Dildo insertion-vagina	11.1	(3)	29.6	(8)	59.3	(16)	Dildo insertion-vagina	18.8	(9)	22.9	(11)	58.3	(28)	Dildo insertion-vagina	38.5	(10)	19.2	(5)	3.8	(1)	38.5	(10)
Dildo insertion-anus (participant)	18.8	(3)	37.5	(6)	43.8	(7)	Dildo insertion-anus	32.0	(8)	8.0	(2)	60.0	(15)	Dildo insertion-anus	28.0	(7)	12.0	(3)	0.0	(0)	60.0	(15)
Dildo insertion-anus (partner)	15.8	(3)	31.6	(6)	52.6	(10)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Penile-vaginal intercourse	26.0	(20)	68.8	(53)	5.2	(4)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Penile-anal intercourse	22.4	(11)	40.8	(20)	36.7	(18)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Table 5. Number of partners with whom participants reported engaging in individual sexual behaviours within the past year
S&M, sadomasochistic

Behaviours	Behaviour with female-bodied partner(s)						Behaviour with male-bodied partner(s)					
	No partners		One partner		2 or more partners		No partners		One partner		2 or more partners	
	% (*n*)						% (*n*)					
Mutual (performed and received behaviour)												
Kissed	4.3	(2)	47.8	(22)	47.8	(22)	2.0	(1)	28.6	(14)	32.7	(16)
Cuddled	17.4	(8)	43.5	(20)	39.1	(18)	8.2	(4)	34.7	(17)	57.1	(28)
Genital-genital rubbing with clothing	28.3	(13)	30.4	(14)	41.3	(19)	12.2	(6)	34.7	(17)	53.1	(26)
Genital-genital rubbing without clothing	34.8	(16)	32.6	(15)	32.6	(15)	12.2	(6)	32.7	(16)	55.1	(27)
Penile-vaginal intercourse	–	–	–	–	–	–	6.1	(3)	32.7	(16)	61.2	(30)
Penile-anal intercourse	–	–	–	–	–	–	69.4	(34)	22.4	(11)	8.1	(4)
Participant performed behaviour												
Breast massage	0.0	(0)	54.3	(25)	45.7	(21)	–	–	–	–	–	–
Breast oral	2.2	(1)	54.3	(25)	43.5	(20)	–	–	–	–	–	–
Genital rubbing	2.2	(1)	58.7	(27)	39.1	(18)	8.2	(4)	30.6	(15)	61.2	(30)
Vaginal fingering	6.5	(3)	58.7	(27)	34.8	(16)	–	–	–	–	–	–
Vaginal fisting	87.0	(40)	10.9	(5)	2.2	(1)	–	–	–	–	–	–
Genital oral (cunnilingus/fellatio)	8.7	(4)	60.9	(28)	30.4	(14)	4.1	(2)	34.7	(17)	61.2	(30)
Anal fingering	84.8	(39)	15.2	(7)	0.0	(0)	71.4	(35)	20.4	(10)	8.2	(4)
Anal fisting	100.0	(46)	0.0	(0)	0.0	(0)	93.9	(46)	6.1	(3)	0.0	(0)
Analingus (anal oral)	89.1	(41)	10.9	(5)	0.0	(0)	83.7	(41)	12.2	(6)	4.1	(2)
S&M	80.4	(37)	10.9	(5)	8.7	(4)	61.2	(30)	24.5	(12)	14.3	(7)
Urination	97.8	(45)	2.2	(1)	0.0	(0)	87.8	(43)	12.2	(6)	0.0	(0)
Other (e.g., toe insertion)	96.3	(44)	4.3	(2)	0.0	(0)	100.0	(49)	0.0	(0)	0.0	(0)
Toy use												
Anal beads in anus	95.7	(44)	4.3	(2)	0.0	(0)	93.9	(46)	4.1	(2)	2.0	(1)
Butt plug in anus	93.5	(43)	6.5	(3)	0.0	(0)	85.7	(42)	10.2	(5)	4.1	(2)
Dildo in anus	100.0	(46)	0.0	(0)	0.0	(0)	91.8	(45)	4.1	(2)	4.1	(2)
Dildo in mouth	93.5	(43)	6.5	(3)	0.0	(0)	95.9	(47)	4.1	(2)	0.0	(0)
Dildo in vagina	82.6	(38)	15.2	(7)	2.2	(1)	–	–	–	–	–	–
Double-dildo	87.0	(40)	13.0	(6)	0.0	(0)	95.9	(47)	4.1	(2)	0.0	(0)
Strap-on in mouth	91.3	(42)	8.7	(4)	0.0	(0)	93.9	(46)	2.0	(1)	4.1	(2)
Strap-on in vagina	76.1	(35)	19.6	(9)	4.3	(2)	–	–	–	–	–	–
Strap-on in vulva	82.6	(38)	17.4	(8)	0.0	(0)	–	–	–	–	–	–
Strap-on in anus	97.8	(45)	2.2	(1)	0.0	(0)	89.8	(44)	4.1	(2)	6.1	(3)
Vibrator in anus	97.8	(45)	2.2	(1)	0.0	(0)	87.8	(43)	10.2	(5)	2.0	(1)
Vibrator in mouth	91.3	(42)	8.7	(4)	0.0	(0)	93.9	(46)	6.1	(3)	0.0	(0)
Vibrator in vagina	65.2	(30)	30.4	(14)	4.3	(2)	–	–	–	–	–	–
Vibrator on vulva	65.2	(30)	28.3	(13)	6.5	(3)	–	–	–	–	–	–
Participant received behaviour												
Breast massage	0.0	(0)	52.2	(24)	47.8	(22)	2.0	(1)	30.6	(15)	67.3	(33)
Breast oral	4.3	(2)	50.0	(23)	45.7	(21)	6.1	(3)	28.6	(14)	65.3	(32)
Genital rubbing	4.3	(2)	58.7	(27)	37.0	(17)	6.1	(3)	30.6	(15)	63.3	(31)
Vaginal fingering	4.3	(2)	65.2	(30)	30.4	(14)	6.1	(3)	26.5	(13)	67.3	(33)
Vaginal fisting	87.0	(40)	10.9	(5)	2.2	(1)	85.7	(42)	10.2	(5)	4.1	(2)
Cunnilingus	17.4	(8)	54.3	(25)	28.3	(13)	8.2	(4)	32.7	(16)	59.2	(29)
Anal fingering	82.6	(38)	17.4	(8)	0.0	(0)	65.3	(32)	26.5	(13)	8.2	(4)
Anal fisting	100.0	(46)	0.0	(0)	0.0	(0)	100.0	(49)	0.0	(0)	0.0	(0)
Analingus	87.0	(40)	13.0	(6)	0.0	(0)	73.5	(36)	24.5	(12)	2.0	(1)
S&M	80.4	(37)	8.7	(4)	10.9	(5)	63.3	(31)	20.4	(10)	16.3	(8)
Urination	100.0	(46)	–	–	–	–	100.0	(46)	–	–	–	–
Other (e.g., toe insertion)	91.3	(42)	8.7	(4)	0.0	(0)	98.0	(48)	2.0	(1)	0.0	(0)
Toy use												
Anal beads in anus	93.5	(43)	6.5	(3)	0.0	(0)	95.9	(47)	4.1	(2)	0.0	(0)
Butt plug in anus	93.5	(43)	4.3	(2)	2.2	(1)	91.8	(45)	6.1	(3)	2.0	(1)
Dildo in anus	97.8	(45)	2.2	(1)	0.0	(0)	95.9	(47)	4.1	(2)	0.0	(0)
Dildo in mouth	95.7	(44)	4.3	(2)	0.0	(0)	91.8	(45)	8.2	(4)	0.0	(0)
Dildo in vagina	73.9	(34)	23.9	(11)	2.2	(1)	73.5	(36)	26.5	(13)	0.0	(0)

(*continued next page*)

Table 5. (*continued*)

Behaviours	Behaviour with female-bodied partner(s)						Behaviour with male-bodied partner(s)					
	No partners		One partner		2 or more partners		No partners		One partner		2 or more partners	
	% (*n*)						% (*n*)					
Double-dildo	87.0	(40)	13.0	(6)	0.0	(0)	100.0	(49)	0.0	(0)	0.0	(0)
Strap-on in mouth	91.3	(42)	6.5	(3)	2.2	(1)	98.0	(48)	2.0	(1)	0.0	(0)
Strap-on in vagina	76.1	(35)	21.7	(10)	2.2	(1)	95.9	(47)	2.0	(1)	2.0	(1)
Strap-on in vulva	76.1	(35)	21.7	(10)	2.2	(1)	98.0	(48)	2.0	(1)	0.0	(0)
Strap-on in anus	97.8	(45)	2.2	(1)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)
Vibrator in anus	97.8	(45)	2.2	(1)	0.0	(0)	89.8	(44)	10.2	(5)	0.0	(0)
Vibrator in mouth	91.3	(42)	8.7	(4)	0.0	(0)	93.9	(46)	6.1	(3)	0.0	(0)
Vibrator in vagina	60.9	(28)	37.0	(17)	2.2	(1)	67.3	(33)	20.4	(10)	12.2	(6)
Vibrator on vulva	60.9	(28)	32.6	(15)	6.5	(3)	59.2	(29)	26.5	(13)	14.3	(7)

Note: The term 'male-bodied' refers to partners with a penis while the term 'female-bodied' refers to partners with a vulva. This terminology was selected by the participants to be inclusive of all partners regardless of gender identity.

high risk. Condoms are only approved by the United States Food and Drug Administration for PVI and must be drastically altered for use during other sexual activities. Although dental dams are available, they are expensive and rarely sold in mainstream retailers.[28] Associations of condoms with infidelity and STI-risk, coupled with a lack of coherent messaging and a lack of availability of products for diverse sexual activities, all together influence condom/barrier use uptake.

Strengths and limitations

These data should be interpreted in light of limitations based on the composition of the sample, the types of behaviours addressed and the full range of behaviours that might have been considered 'safe' behaviours by the participants that were not included in the present study. First, it remains unclear from this data whether participants who reported concurrent multi-person sexual activity also had dyadic experiences with men and women within their lifetime. However, it is unlikely that many participants in the present study relied on a sole experience of concurrent multi-person sexual activity for inclusion, given that the majority of the participants reported their first sexual experience with a woman occurred at an age earlier than their current one. Second, the study was exploratory in nature and the participants were from a geographically limited area. Third, not all data may be independent because snowball-sampling methods were used. However, as large probability samples of behaviourally bisexual individuals are difficult to obtain, we relied on community-based recruitment methods that have shown to be successful in recruiting other samples of bisexual men.[17] If participants engaged in sexual behaviour with one another, it would count the number of participants who reported engaging in the respective behaviour twice. Additionally, use of sexual safety methods outside of condoms and other latex barriers (e.g. plastic wrap) were not assessed. Finally, because the STI data was based upon self-report, it was limited to participants who reported a history of STI screening. Furthermore, it is possible that participants misunderstood and inaccurately reported their diagnosis. The relationship between behaviour and self-reported STI diagnosis is correlational and, therefore, any causal associations are merely speculative. Given the correlational nature of the data and the lack of a comparison group, an alternative interpretation may be that the diverse sexual repertoires of WSWM may actually enhance their knowledge of corresponding safety methods and their ability to negotiate those strategies.

Despite these limitations, the study was the first to capture a diverse range of sexual behaviours among WSWM using mixed-methods with unique strengths. As an anonymous assessment, the web-based survey minimised reporting error that may occur due to social desirability, while the SEQUENCE© calendar method was designed to reduce memory bias through the use of a timeline. Thus, the relative consistency between past behaviour reported on the baseline and rates reported during the interview speaks to the potential strengths of this data. Additionally, during the interview, no participants reported 'other' behaviours not included on the list, suggesting that this list of behaviours fully encompasses the sexual lives of many WSWM.

Conclusions

Some bisexual individuals maintain that gender of their potential partner is not a critical component of their sexual attraction to that individual.[29] This concept was reflected in the behaviours and safety strategies with male and female partners in which there were few differences in parallel behaviours and safety strategies as a result of partner gender. These similarities, coupled with their diverse sexual repertoires, speaks to the importance of promoting safety strategies outside of PVI/PAI, potentially enhancing sexual safety options for every*body* regardless of partner gender or genitalia.

Conflicts of interest

None declared.

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Appendix I.

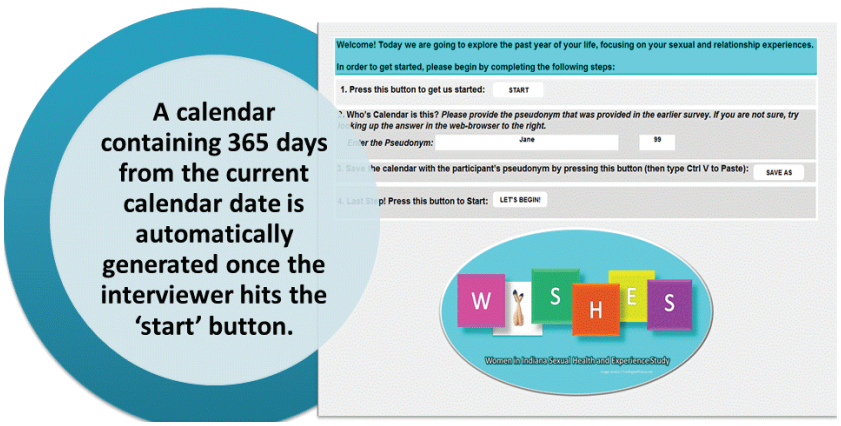
The SEQUENCE© Calendar

Sexual Event Questionnaire: Understanding Event-level Nuances through Calendar Entry

The SEQUENCE© calendar method is a tool used to capture data using a timeline follow-back or calendar interview method. These methods allow for the exploratory analysis of individual events over a pre-specified period (e.g., month, childhood, college years). The participant is provided a calendar of the given time period including months, days of the week and ages (when appropriate) and is asked to name notable life events (e.g., holidays, relationship changes) within the specified period. These salient life events help trigger memories within the appropriate timeframe increasing the reliability of the sequencing of events in question. The format of the interview has been described as "structured but conversationally-flexible".[1] This format allows the researcher to investigate constructs of interest while encouraging the participant to augment the discussion with other factors not originally taken into consideration by the researcher. Researchers have found that calendars elicited higher quality reports[2] and more frequent reports of socially undesirable behaviors[3] than traditional semi- structured interviews. Additionally, event history calendars have yielded higher quality responses than a traditional questionnaire format which requires closed or open-ended responses.[4] Event history calendars have been used to assess a variety of public health outcomes including assessing periods of illness, smoking, partner violence and sexual behavior.

Using the SEQUENCE calendar method for data collection expands upon the benefits of traditional timeline follow-back or calendar interview methods in several ways: 1.) With traditional timeline follow-back/event calendar methods, the data is collected by calendar date. The SEQUENCE© calendar connects multiple databases, enabling the investigator to collect detailed data on multiple variables of interest (e.g., partner type, sexual event). These databases are connected by a common variable (e.g., calendar date). 2.) The SEQUENCE© calendar has a number of built-in features designed to trigger memories and reduce fatigue. For instance, once the partner data has been entered, it can be automatically viewed on every calendar date on which the participant reported a relationship with the partner. 3.) The participant/interviewer has the option to provide an additional category for each response option. This additional category is automatically provided for all similar questions. 4.) It is aesthetically pleasing with push-button features. While it can be used on any computer with the appropriate software, it was designed to be used on a touchscreen computer (e.g., ipad). 5.) The research team that developed the tool has published extensively in the area of sexual health and wellness. This expertise has been integrated into the design and questions within the SEQUENCE© calendar.

In order to better illustrate the SEQUENCE© calendar, several screenshots are included below from a study on the sexual lives and experiences of behaviorally bisexual women entitled the 'WISHES' study:



For more information about the SEQUENCE© Calendar, please contact Vanessa Schick, PhD:
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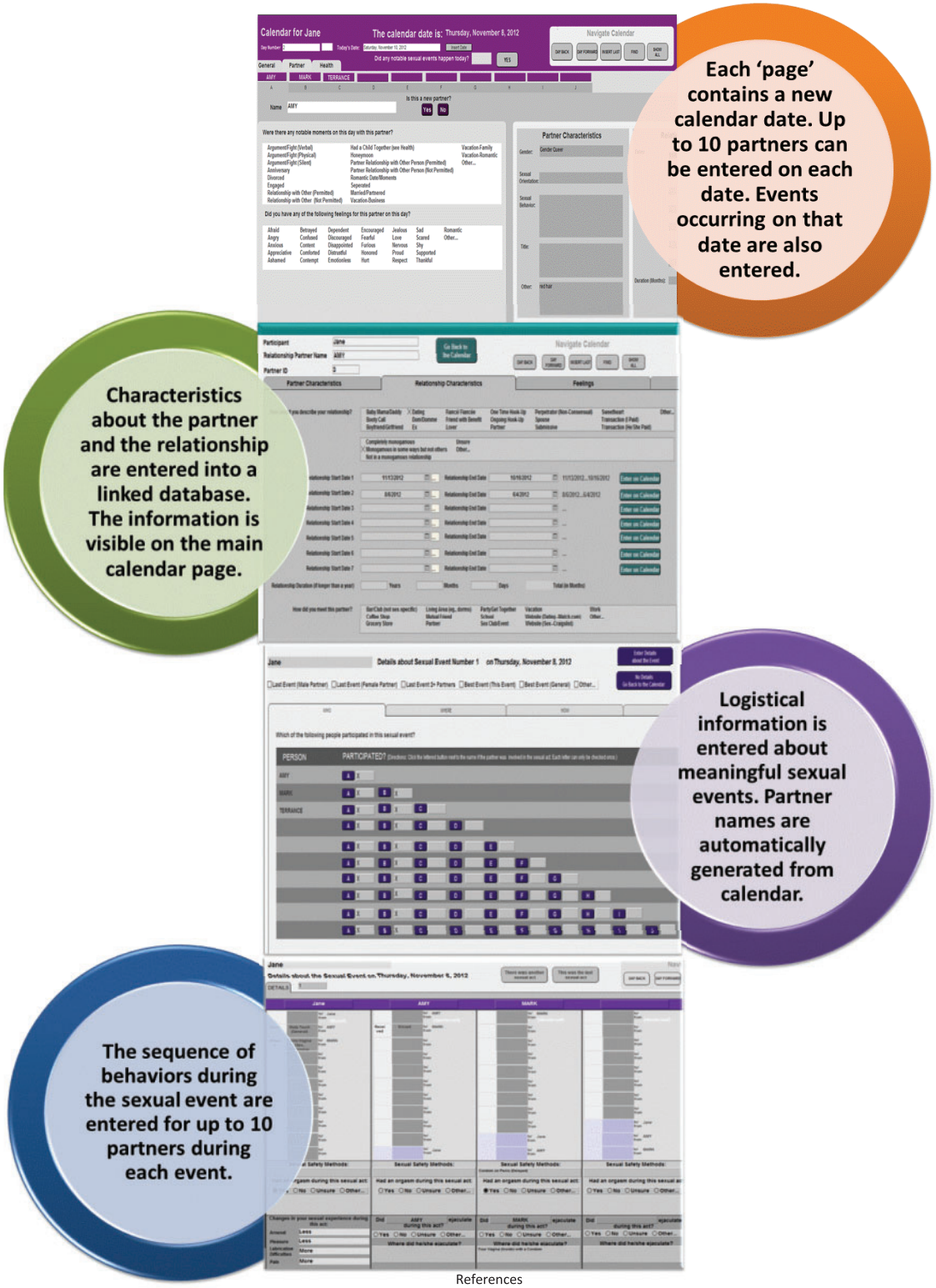

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