Contextualising sexual health practices among lesbian and bisexual women in Jamaica: a multi-methods study

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Abstract: Limited research has examined lesbian and bisexual women’s sexual health practices in the Caribbean, where lesbian and bisexual women experience sexual stigma that may reduce sexual healthcare utilisation. We conducted a sequential multi-method research study, including semi-structured individual interviews (n = 20) and a focus group (n = 5) followed by a cross-sectional survey (n = 205) with lesbian and bisexual women in Kingston, Montego Bay, and Ocho Rios, Jamaica. Binary logistic analyses and ordinal logistic regression were conducted to estimate the odds ratios for social-ecological factors associated with lifetime STI testing, sex work involvement, and the last time of STI testing. Over half of participants reported a lifetime STI test and of these, 6.1% reported an STI diagnosis. One-fifth of the sample reported ever selling sex. Directed content analysis of women’s narratives highlighted that stigma and discrimination from healthcare providers, in combination with low perceived STI risk, limited STI testing access and safer sex practices. Participants described how safer sex self-efficacy increased their safer sex practices. Quantitative results revealed that a longer time since last STI test was positively associated with depression, sexual stigma, and forced sex, and negatively associated with residential location, perceived STI risk, safer sex self-efficacy, and LGBT connectedness. Selling sex was associated with perceived STI risk, relationship status, sexual stigma, food insecurity, and forced sex. Sexual health practices among lesbian and bisexual women in Jamaica are associated with intrapersonal, interpersonal, and structural factors, underscoring the urgent need for multi-level interventions to improve sexual health and advance sexual rights among lesbian and bisexual women in Jamaica. DOI: 10.1080/09688080.2018.1517543

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Introduction
Lesbian, bisexual, queer and other women who have sex with women (WSW) are an under-researched population in relation to sexually transmitted infection (STI) prevention, likely due to the perception that WSW are at reduced risk of STI acquisition. Yet studies using STI clinic data and gynaecological reports indicate evidence of bacterial and viral STI transmission between women. Despite this, significant STI diagnosis
and screening barriers for lesbian, bisexual and WSW exist, including low perceived STI risk.\textsuperscript{6} Qualitative research from Australia\textsuperscript{7}, South Africa, Zimbabwe and Namibia\textsuperscript{8} suggests that low perceived risk originates from lesbian, bisexual and WSW’s exclusion from dominant safer sex narratives, health promotion, healthcare provider attitudes and misconceptions about risk of transmission between women. Few studies have examined associations between STI risk perception and STI screening and diagnosis among lesbian, bisexual and WSW. Even less is known about sexual health care among lesbian, bisexual and WSW in Caribbean countries, such as Jamaica, where same-sex sexual practices among men are criminalised and lesbian, gay, bisexual, transgender (LGBT) people experience high levels of stigma and discrimination.\textsuperscript{9} Studies report that LGBT persons in Jamaica experience pervasive stigma in community and healthcare settings.\textsuperscript{10}

Sexual stigma, conceptualised as social and institutional structures and processes that limit access to power and opportunity among LGBT people,\textsuperscript{11} may influence individual and group level STI vulnerability among lesbian, bisexual and WSW. Sexual stigma can limit uptake of safer sex practices\textsuperscript{12} and access to sexual health services\textsuperscript{13} in LGBT populations. Lesbian and bisexual women experience barriers to sexual health care, such as heteronormative expectations of healthcare providers.\textsuperscript{13} Studies conducted among lesbian, bisexual and WSW in Canada found that sexual stigma was associated with increased odds of reporting a lifetime history of STI\textsuperscript{14} and reduced uptake of safer sex practices.\textsuperscript{15} The few studies of lesbian, bisexual and WSW in low- and middle-income countries reveal numerous structural drivers of STI vulnerability, including high stigma, invisibility and pervasive violence.\textsuperscript{16–18}

Selling sex, or exchanging sex for money or other goods, is often associated with criminalisation, rights violations, and violence that elevates STI and HIV exposure.\textsuperscript{19} Moreover, public policy in Caribbean countries that criminalise and marginalise sex workers perpetuates stigma and may present a barrier to accessing sexual health services among sex workers.\textsuperscript{20} Studies conducted in North America found that sexual minority women report higher rates of selling sex than their heterosexual counterparts.\textsuperscript{21–23} Lesbian, bisexual and WSW in these studies also reported increased indicators of health and social marginalisation such as drug use,\textsuperscript{21,22} violence,\textsuperscript{21,22} unstable housing,\textsuperscript{23} and recent STI diagnosis,\textsuperscript{23} in comparison with heterosexual women. Cross-sectional research with MSM ($n = 556$) in Jamaica found that selling sex was associated with higher stigma, food and housing insecurity, and not having a regular health provider.\textsuperscript{24} Stigma is an important area to examine among lesbian, bisexual and WSW who sell sex, as they may face intersecting sexual, HIV-related and sex work stigmas.\textsuperscript{25} A cross-sectional study with female sex workers ($n = 450$) in Jamaica found that 9% were living with HIV and 39% had ever been diagnosed with an STI.\textsuperscript{26} Yet this study did not include sexual orientation data, reflecting larger knowledge gaps regarding lesbian and bisexual women’s sexual health and engagement in selling sex in Jamaica. This may be particularly salient to explore in the Jamaican context where there are reported high rates of sexual stigma that intersects with sex work criminalisation.

Social-ecological models contextualise the dynamic interplay between individual, interpersonal and structural dimensions that shape health outcomes, such as STI vulnerability.\textsuperscript{27} At the intrapersonal level, a study in Malawi\textsuperscript{28} reported that safer sex self-efficacy is associated with STI testing among the general population. At the interpersonal level, a sense of connectedness to LGBT communities can help individuals navigate health care systems,\textsuperscript{29} such as STI screening. Conversely, WSW who sell sex may be at increased vulnerability to forced sex,\textsuperscript{22} and a history of forced sex is associated with STI diagnosis among lesbian, bisexual and WSW ($n = 591$) in Southern Africa.\textsuperscript{16} Forced sex may also shape sexual health practices due to the lingering physical and psychological consequences of violence.\textsuperscript{30} At the structural level, sexual stigma may increase STI vulnerability by compromising access to treatment,\textsuperscript{18} harming mental health\textsuperscript{31,32} and reducing safer sex self-efficacy.\textsuperscript{32} Scant research has examined social-ecological factors related to sexual health practices among lesbian and bisexual women in Caribbean contexts such as Jamaica. The present study aims to address these gaps by examining social-ecological factors associated with STI testing and selling sex among lesbian and bisexual women in Jamaica.

**Methods**

**Participant recruitment and data collection**

We conducted a sequential multi-methods study. Lesbian and bisexual women were recruited for a
focus group and in-depth, semi-structured inter-
views in Kingston, Jamaica. Following this, we con-
ducted a cross-sectional survey in Kingston,
Montego Bay, Ocho Rios and surrounding areas
in Jamaica. We collaborated with a national com-
munity-based AIDS Service Organization in Jamaica
in study design, data collection, analysis and
interpretation, and manuscript preparation. Self-
identified lesbian and bisexual women were
hired as peer research assistants (PRAs). PRAs con-
tributed to the interview guide, survey develop-
ment, participant recruitment, and qualitative
and quantitative data collection. For the qualitative
data collection, the PRAs identified participants
through their social networks, and advertised the
study by word-of-mouth at LGBT and HIV commu-
nity services. Participants who met the inclusion
criteria were invited to participate in a focus
group and/or a 60-minute individual interview in
Kingston. We first conducted a focus group to elicit
community dialogue and to understand lived
experiences regarding sexuality and sexual health.
Not all persons feel comfortable discussing sexu-
ality and sexual health in a group setting, and
our team had challenges with recruitment and
rescheduled several times to be able to hold one
focus group with 5 persons, suggesting that stigma
may pose a challenge for holding focus groups with
lesbian and bisexual women in Jamaica. The focus
group and individual interviews used a similar
interview guide; questions were semi-structured,
open-ended, and developed in collaboration with
Jamaican-based community agencies. Interview
guides included questions about typical experi-
ences of lesbian and bisexual women in Jamaica,
including in sexual health care settings. For
instance, participants were asked: “What does
being a ‘woman’ mean here in Jamaica?”, “What
is it like being a young lesbian or bisexual
woman?”, “How do you protect yourself from HIV
and other STIs?” and “Where do you go to seek
sexual health care?” Participants were provided
with US$15 for their time and to cover the cost
of transportation.

The tablet-based PRA-administered survey took
approximately 35–40 minutes to complete.
Respondents received an honorarium ($1000
Jamaican dollars, approximately US$8) for com-
pleting the survey. We employed chain-referral
sampling, a technique to access marginalised
populations,33 to recruit survey participants. Sur-
vey participants were issued a coupon with a
unique participation identification (ID) number
and were invited to refer a maximum of five les-
bian and bisexual women in their social networks
to participate in the study. Respondents were
given one to five coupons to recruit other lesbian
and bisexual women and received $500 Jamaican
dollars (~US$4 USD) for each participant that
they recruited, up to a maximum of 5 persons.
Research ethics approval was granted from the
University of Toronto, Canada and the University
of the West Indies, Mona Campus, Jamaica.

Measures
Main survey outcome measures: lifetime STI
testing, last time of STI testing, and sex work
involvement
Lifetime STI testing was measured using self-
reports of ever having an STI test. The last time
of an STI test was assessed by the question:
“When was the last time you received an STI test
(not including HIV)?” (1 = Less than 3 months
ago, 2 = 3–5 months, 3 = 6–12 months, 4 = more
than 1 year ago). “Last time of STI test” was used
continuously for ordinal logistic regression ana-
lyses. For the purpose of the multivariate analysis,
HIV testing was not included. To assess selling sex,
participants were asked if they had exchanged sex
for money, shelter, food, transportation, or drugs/
alcohol in the last 12 months (no/yes). Sex work
involvement was used dichotomously for binary
logistic regression analyses.

Explanatory variables
We assessed socio-demographic factors including
age, education, and city of residence. Intrapersonal
variables included perceived STI risk, depression,
and internalised sexual stigma. Perceived STI risk
was measured with the item: “How much do you
think you are at risk for sexually transmitted infec-
tions (not including HIV)” from scale 1 (no risk) to 4
(high risk). Depressive symptoms in the last 2
weeks (continuous; measured with Patient Health
Questionnaire-2 [PHQ-2];34 range: 2–8, Cronbach’s
α = 0.688) were assessed. Internalised sexual
stigma was measured with the Internalised Homo-
phobia scale developed by Currie et al35 (range 16–
72, Cronbach’s α = 0.77).

Interpersonal variables included relationship
status, safer-sex self-efficacy, social support, and
LGBT connectedness. Relationship status was trea-
ted as a categorical variable and included: in a
relationship, casual dating, no partner, and con-
current partners. We measured safer sex self-effi-
cacy using Kalichman et al’s safer sex negotiation
Cronbach’s alpha = 0.87). Social support was measured with Bernard’s short scale that assessed the need for social support (range 7–35, Cronbach’s α = 0.74) and satisfaction with social support (range 2–10, Cronbach’s α =0.86). LGBT connectedness was adapted from Frost and Meyer’s scale (continuous, range 5–20, Cronbach’s α = 0.89), which asks questions such as “if we work together, LGBT people can solve problems in [insert geographic location]’s LGBT community” and “you feel a bond with the LGBT community”.

Structural variables included sexual stigma, food and housing insecurity, if participants had a regular healthcare provider, and experiences of violence. We used Diaz et al’s homophobia scale to assess sexual stigma (range 13–52, Cronbach’s α = 0.83). We assessed food insecurity (continuous, range 1–4) as the frequency of going to bed hungry because persons did not have enough food to eat each week. We categorised unstable housing in the past month (no/yes; if they usually slept outside, in a shelter, or at a friend or relative’s house vs. their own apartment or house). We asked participants if they had a regular healthcare provider (no/yes). We assessed lifetime history of 4 types of violence: forced sex, intimate partner violence, physical violence, and sexual violence.

Sexual health variables included condom and barrier use with men and women sex partners (“did you usually use a barrier/condom in the past 3 months when having sex”: no/yes), and gender of partner (men only, women only, both women and men). We used Fishman et al’s Safer Sex Practices Among Women Scale to assess sexual risk practices with women sex partners (range 12–40, Cronbach’s alpha = 0.71).

Data analysis

Qualitative
Data were digitally recorded and transcribed verbatim. The transcriptionist provided interpretations of Jamaican patois dialect that was verified by the research coordinator. Transcripts were redacted to remove personal identifying information. Directed content analysis, wherein the quantitative constructs used in our study guided initial, data-driven codes, was used. Each segment of text was in turn assigned a label or “code”. As the analysis progressed, and new themes were identified, each segment of text was re-analysed to determine if it fits within the new code, as it was possible to have multiple themes occur within a given segment of text.

Quantitative
We first conducted descriptive analyses for sociodemographic variables (e.g. age, income) to determine frequencies and proportions for categorical variables and means and standard deviations (SDs) for continuous variables. We also conducted descriptive analyses to indicate frequencies of safer sex strategies used by women. We conducted bivariate analysis (T-tests for continuous variables and Pearson Chi-square analyses for categorical variables) to determine the differences by lifetime STI testing and sex work involvement; only significant variables were included in multivariate analyses. Binary logistic regression analyses were conducted to determine the odds ratio on factors associated with lifetime STI testing and sex work involvement. Ordinal and binary logistic analysis was conducted to estimate the odds ratio of the last time of STI testing. Categorical variables were coded into dummy variables for regression analyses. Missing responses were excluded from the analyses; the number of complete responses was reported for each variable. All statistical analyses were performed using STATA (version 13.0).

Results

Qualitative results
For the focus group (n = 5), the mean participant age was 23.8 years (SD = 3.0, range 18–29). The majority of participants (80%) identified as lesbian and 20% as bisexual. Interview participants’ (n = 20) mean age was 23.4 years (SD = 3.42), and most participants (n = 16; 80%) identified as lesbian, followed by bisexual (n = 3; 15%), and other sexualities (n = 1; 5%). Interviews and the focus group (FG) took place in Kingston, Jamaica. Factors described as important to accessing STI testing included sexual stigma, discrimination from healthcare providers, perceived STI risk, and safer sex self-efficacy.

Sexual stigma
Participants reported experiences of sexual stigma in their communities. Most participants described experiencing enacted sexual stigma on a daily basis, including verbal violence: “Everyday they say we are abnormal” (individual interview 02). Many participants also spoke of sexual violence that targeted gender non-conformity:
“I have known certain people, butches, who have been sexually assaulted because of the way they dress. You can’t tell me that they can’t see that I am a girl, dressed like a guy because, obviously, I like girls. But, you are going to sexually assault me to either prove a point or you are attracted to me.” (individual interview 04)

Violence toward women who are publicly affectionate with one another was also reported and men were described as the main perpetrators of violence:

“You hear of a woman walking home who gets raped and killed because she is a lesbian. Two girls were walking into a place, celebrating some great achievement, probably gyrating in some way, and you hear of them getting shot up just because they were too close.” (FG participant)

Stigma was also demonstrated through an emphasis on heteronormative prevention efforts, such as the use of condoms between men and women partners, with limited attention for prevention efforts for lesbian, bisexual and WSW: “I see condom advertisements like every 10 minutes, but I have never seen advertisements for a dental dam.” (FG participant)

Some women described how these experiences of stigma impacted mental health:

“I feel bad because I am in that category too. So, when I hear them ‘licking out’ (saying negative things) and chatting about lesbians and batty man (derogatory term for gay men). I take my time and get out…I don’t cope with it well. I feel down, depressed, stressed out.” (individual interview 08)

Discrimination by healthcare providers

Discrimination from healthcare providers was a barrier to accessing health care services. Some participants reported preferring to access private rather than public sexual health care: “They discuss people’s business. They will talk and not know that I know the person. At a private doctor, you go in and out.” (individual interview 07)

The experiences of discrimination could be so negative that they prevented some women from seeking future health care. When asked where she seeks health care, one participant stated that she avoids it completely: “Nowhere…I don’t trust doctors” (individual interview 18). Another participant reported how feeling safe from discrimination was an important part of accessing tools for engaging in safer sex: “If you carry certain items and if you have a safe place where you can get those items from, where you don’t feel discriminated, then it would be easy to practice [safe sex].” (individual interview 20)

Perceived STI risk

A number of women expressed low perceived STI risk, which shaped their testing practices and uptake of safer sex strategies. As one participant stated, “My risk right now is pretty low … It’s just a feeling” (individual interview 18). On the other hand, participants at times reported being at risk for STIs, which facilitated testing: “Me and the partners I’ve been with are always tested” (individual interview 03). Similarly, participants reported an awareness of STI risk and benefits of testing:

| Interviewer: | What kind of risk do you think you have for acquiring an STI? |
|-------------|-------------------------------------------------------------|
| Participant:| I would say a medium risk.                                   |
| Interviewer:| What would you do to lower that risk?                       |
| Participant:| I would say get tested and to make sure that you are not going back and forth with too many persons. I do get tested. |

(individual interview 12)

When asked what increases the risk of acquiring STIs and HIV for lesbian and bisexual women in Jamaica, many participants described that the only risk factor was bisexual women: “I think that’s when they are exposed to bisexual females. Females will have sex with male partners, unaware of their status and come back to their female partner. That’s one way.” (individual interview 06)

Other answers contained negative and biphobic undertones: “When you are not true. If you are a lesbian, don’t be fucking men at the same time. That will put me at risk for HIV.” (individual interview 07).

Another participant reinforced the perception that bisexual women - not lesbians - are at risk for STIs:

“I don’t think there is a risk if people are true to themselves and know that they are … lesbians. The risk is posed when people who are supposed to be lesbian are bisexuals and they don’t know what these guys they are with are giving them … But, if women that are true, there would be less of a problem for all lesbians.” (individual interview 14)
A focus group participant equated bisexual individuals and sex workers, revealing stigma directed at both of these identities. While we did not assess participant histories of sex work, this woman’s response suggests a negative attitude toward sex workers: “People would see them [sex workers] as bisexuals; I don’t care who she wants to sleep with, [if] I have paid for my sex she can sleep with a dog if she wants for all I care.” (FG participant)

Safer sex self-efficacy
Participant responses revealed safer sex self-efficacy, which they connected to increased communication with partners regarding safer sex and fewer STI testing barriers. As one participant suggested: “Before I get in bed with someone, I ask their status … I will need proof. We will go and get tested together.” (individual interview 06)

In some cases, having a supportive healthcare provider was connected to safer sex self-efficacy:

“I try to control how much body fluids get around. I check myself to make sure that I don’t have cuts on my mouth on anywhere body fluids will be transferred. I like to check my partner … so, there are continuous checks and accountability. I will communicate that with my partner. It’s easy [to practice safe sex]. I don’t have any hard feelings about it. I have a family doctor who is very open-minded.” (individual interview 17)

Conversely, some women expressed limited ability to practice safer sex. As one woman stated: “I don’t know how to do that [practice safer sex]. There is no way that I could.” (individual interview 14)

For some participants, lower safer sex self-efficacy was also tied to experiencing discrimination when accessing sexual health care. For example, the following participant noted that she accessed sexual health services when she felt she was ill, rather than using protection:

Participant: You know, I don’t use any protection.
Interviewer: So when you think you caught something, that’s when you go to the doctor?
Participant: I know how my body feels. When I feel sick, I know. And if you see things that are not supposed to be there, you need to check it out. Once, I went to the clinic and, lawd. A woman said: ‘You sodomite gal, how comes you’re doing an HIV test?’ (individual interview 08)

The above narrative also illustrates the healthcare provider’s derogatory description of lesbian and bisexual women as “sodomites,” along with the perception that HIV tests were unnecessary for lesbian and bisexual women.

Quantitative results
Participant characteristics
Table 1 displays the overall socio-demographic characteristics of survey participants and those characteristics in relation to lifetime STI testing and sex work involvement. Out of 205 participants, 57.56% (n = 118) reported ever taking an STI test, and the majority who tested for STI reported receiving a result (114/118, 96.61%). Of these who 114, 6.1% (n = 7) reported a lifetime STI diagnosis. Participants who ever took an STI test, and those who had not, were significantly different in socio-demographics (age, residential location), intrapersonal (perceived STI risk), interpersonal (safer sex self-efficacy), and structural (unstable housing, having experienced forced sex) dimensions. Participants who reported a lifetime STI diagnosis (n = 7) had the following characteristics: lower education, with less completion of high school (n = 5/7 vs. 102/107, p < .05); less likely to have a regular care provider (4/7 vs. 62/107, p < .01); and more likely to report selling sex in the past year (4/7 vs. 3/107, p < .05) (not shown in table).

Of 205 participants, one-fifth (21.95%) reported selling sex in the past 12 months. Participants who reported sex work involvement were significantly different in socio-demographic (education, location, sex of partner), intrapersonal (perceived STI risk, depression, internalised sexual stigma), interpersonal (relationship status, social support needs, social support satisfaction, LGBT connectedness), structural (sexual stigma, food insecurity, unstable housing, having a regular healthcare provider, forced sex), and sexual health (lifetime STI diagnosis, safe sex practices with female partners) factors.

Binary logistic regression on lifetime STI test among lesbian and bisexual women in Jamaica
Table 2 displays the unadjusted and adjusted odds ratio of lifetime STI testing among lesbian and bisexual women in Jamaica. Adjusted logistic
Table 1. Characteristics of lesbian and bisexual women survey participants in Jamaica, by lifetime STI testing and sex work involvement (n = 205)

| Characteristic                        | N (%) | Missing | N (%) | p-value | N (%) | N (%) | p-value |
|---------------------------------------|-------|---------|-------|---------|-------|-------|---------|
|                                       | (n = 205) |        |       |         |       |       |         |
|                                       |       |         |       |         |       |       |         |
| Ever had a STI test                  |       |         |       |         |       |       |         |
| Never had a STI test                 |       |         |       |         |       |       |         |
| p-value                              |       |         |       |         |       |       |         |
| Selling sex                          |       |         |       |         |       |       |         |
| Not selling sex                      |       |         |       |         |       |       |         |
| Socio-demographic factors            |       |         |       |         |       |       |         |
| Age, years (Mean, SD, range)         | 26.22 (4.86) | 17 | 27.04 (4.86) | 25.01 (4.63) | 0.005 | 27.24 (6.02) | 25.92 (4.45) | 0.123 |
| Education, high school graduate or beyond | 191 (93.17) |       | 111 (94.07) | 80 (91.95) | 0.553 | 35 (77.78) | 156 (97.50) | <0.001 |
| Selling sex                          | 45 (21.95) |       | 30 (25.42) | 15 (17.24) | 0.162 |       |       |         |
| Location (city)                      | 1 |       | 50 (42.74) | 53 (60.92) | <0.001 |       |       | <0.001 |
| Kingston                              | 103 (50.49) |       | 4 (3.42) | 8 (9.20) | 0 | 14 (31.82) | 89 (55.62) |         |
| Montego Bay                           | 12 (5.88) |       | 44 (37.61) | 5 (5.75) | 0 | 12 (7.50) |       |         |
| Ocho Rios                             | 49 (24.02) |       | 19 (16.24) | 21 (24.14) | 27 (61.36) | 22 (13.75) |       |         |
| Other                                 | 40 (19.61) |       |       |       |       |       |       |         |
| Gender of partner                     |       |         |       |         |       |       |         |
| Men only                              | 8 (3.98) |       | 3 (2.59) | 5 (5.88) | 0 | 8 (5.13) |       |         |
| Women only                            | 134 (66.67) |       | 73 (62.93) | 61 (71.76) | 23 (51.11) | 111 (71.15) |       |         |
| Both women and men                    | 59 (29.35) |       | 40 (34.48) | 19 (22.35) | 22 (48.89) | 37 (23.72) |       |         |
| Sexual orientation                    |       |         |       |         | 0.073 | 0.007 |         |
| Lesbian                               | 122 (59.51) |       | 64 (54.24) | 58 (66.67) | 19 (42.22) | 103 (64.38) |       |         |
| Bisexual                              | 83 (40.49) |       | 54 (45.76) | 29 (33.33) | 26 (57.78) | 57 (35.62) |       |         |

(Continued)
### Table 1. Continued

| Characteristic                                      | $N$ (%) | Missing | Ever had a STI test | Never had a STI test | $p$-value | Selling sex | Not selling sex | $p$-value |
|-----------------------------------------------------|---------|---------|---------------------|----------------------|-----------|-------------|----------------|-----------|
| **Intrapersonal factors**                           |         |         |                     |                      |           |             |                |           |
| Perceived STI risk score ($Mean, SD$)               | 2.22 (0.84) (range = 1–4) | 2.36 (0.85) (range = 1–4) | 2.02 (0.79) (range = 1–4) | 0.004 | 2.64 (0.80) (range = 1–4) | 2.10 (0.82) (range = 1–4) | <0.001 |
| Depressive symptoms in the past 2 weeks             | 4.76 (1.73) (range = 2–8) | 4.82 (1.60) (range = 2–8) | 4.67 (1.90) (range = 2–8) | 0.528 | 5.33 (1.65) (range = 2–8) | 4.59 (1.73) (range = 2–8) | 0.011 |
| Internalised sexual stigma ($Mean, SD$)             | 38.47 (10.49) (range = 16–72) | 1 | 38.44 (9.68) (range = 16–65) | 38.51 (11.54) (range = 17–72) | 0.967 | 43.89 (10.27) (range = 22–72) | 36.98 (10.08) (range = 16–65) | <0.001 |
| **Interpersonal factors**                           |         |         |                     |                      |           |             |                |           |
| Relationship status                                 |         |         |                     |                      |           |             |                |           |
| In a relationship                                   | 140 (68.29) | 78 (66.10) | 62 (71.26) | 0.074 | 26 (57.78) | 114 (71.25) |
| Casual dating                                       | 27 (13.17) | 13 (11.02) | 14 (16.09) | 9 (20.00) | 18 (11.25) |
| No partner                                          | 31 (15.12) | 20 (16.95) | 11 (12.64) | 4 (8.89) | 27 (16.88) |
| Concurrent partnerships                              | 7 (3.41) | 7 (5.93) | 0 | 6 (13.33) | 1 (0.62) |
| Consistent condom use with men in the past 3 months ($n = 52$) | 35 (67.31) | 21 (72.41) | 14 (60.87) | 0.378 | 14 (77.78) | 21 (61.76) | 0.242 |
| Need for social support                             | 21.13 (5.77) | 21.46 (5.48) | 20.68 (6.14) | 0.341 | 23.33 (5.47) (range = 12–35) | 20.51 (5.72) (range = 7–33) | 0.004 |
| Satisfaction with social support ($Mean, SD$)       | 7.05 (2.27) (range = 2–10) | 7.20 (2.12) (range = 2–10) | 6.84 (2.46) (range = 2–10) | 0.258 | 6.20 (2.07) (range = 2–10) | 7.29 (2.28) (range = 2–10) | 0.003 |
| LGBT connectedness                                  | 5.00 (2.30) (range = 2–8) | 5.04 (2.38) (range = 2–8) | 4.93 (2.19) (range = 2–8) | 0.732 | 5.60 (2.47) (range = 2–8) | 4.83 (2.22) (range = 2–8) | 0.045 |

*CH Logie et al. Reproductive Health Matters 2018;26(52):109–127*
Table 1. Continued

| Characteristic                        | N (%) | Missing | Ever had a STI test | Never had a STI test | p-value | Selling sex | Not selling sex | p-value |
|---------------------------------------|-------|---------|---------------------|----------------------|---------|-------------|-----------------|---------|
| (n = 205)                             |       |         |                     |                      |         |             |                 |         |
| Safer sex self-efficacy (Mean, SD)    | 16.08 (4.05) | 6  | 16.77 (3.63)       | 15.11 (4.41)         | 0.004   | 15.20 (4.14) | 16.33 (4.00)    | 0.099   |
| (range = 5–20)                        |       |         | (range = 5–20)     | (range = 5–20)       |         | (range = 5–20)| (range = 5–20)  |         |
| Safer sex with women                  | 27.55 (5.41) | 52 | 28.27 (5.41)       | 26.59 (5.22)         | 0.061   | 29.24 (6.27) | 26.92 (4.94)    | 0.018   |
| (range = 12–40)                       |       |         | (range = 12–40)   | (range = 14–36)      |         | (range = 14–40)| (range = 12–36) |         |
| Forced sex                            | 91 (44.39)  | 60 | 31 (35.63)         | 30 (66.67)           | 0.030   | 61 (38.12)  | 47 (29.94)      | <0.001  |
| Physical violence experience          | 77 (38.31)  | 50 | 27 (32.53)         | 30 (68.18)           | 0.158   | 47 (29.94)  | 47 (29.94)      | <0.001  |
| Intimate partner violence             | 63 (30.73)  | 45 | 18 (20.69)         | 31 (68.89)           | 0.007   | 32 (20.00)  | 32 (20.00)      | <0.001  |
| Sexual violence experience            | 82 (40.80)  | 52 | 30 (35.71)         | 28 (63.64)           | 0.214   | 54 (34.39)  | 54 (34.39)      | <0.001  |
| Any adulthood abuse                   | 119 (58.05) | 73 | 46 (52.87)         | 35 (77.78)           | 0.197   | 84 (52.50)  | 84 (52.50)      | 0.002   |
| Childhood sexual abuse                | 67 (33.17)  | 38 | 29 (34.12)         | 20 (45.45)           | 0.807   | 45 (28.66)  | 45 (28.66)      | 0.032   |
| Structural factors                    |       |       |                     |                      |         |             |                 |         |
| Sexual stigma (Mean, SD)              | 26.50 (7.30) | 1  | 25.80 (6.89)       | 27.43 (7.77)         | 0.117   | 30.93 (6.34) | 25.28 (7.09)    | <0.001  |
| (range = 13–42)                       |       |       | (range = 15–52)   | (range = 15–48)      |         | (range = 15–52)| (range = 13–52) |         |
| HIV stigma                            | 72.35 (18.66) | 7  | 73.17 (18.08)     | 71.24 (19.48)        | 0.474   | 75.86 (17.81) | 71.34 (18.83)   | 0.157   |
| (range = 10–100)                      |       |       | (range = 10–100)  | (range = 10–100)     |         | (range = 10–100)| (range = 10–100)|         |
| Food insecurity                       | 1.50 (0.71)  | 1  | 1.46 (0.65)        | 1.56 (0.79)          | 0.315   | 1.91 (0.77)  | 1.39 (0.66)     | <0.001  |
| (range = 1–3)                         |       |       | (range = 1–4)     | (range = 1–4)        |         | (range = 1–3) | (range = 1–4)  |         |
| Unstable housing                      | 31 (15.50)  | 18 | 13 (15.12)         | 12 (27.27)           | 0.017   | 19 (12.18)  | 19 (12.18)      | 0.015   |
| Have a regular healthcare provider    | 116 (56.59) | 68 | 48 (55.17)         | 48 (55.17)           | 0.123   | 48 (55.17)  | 99 (61.88)      | 0.004   |

(Continued)
regression results indicate that the likelihood of lifetime STI testing was positively associated with living in Ocho Rios (vs. Kingston) (AOR: 6.24, 95% CI: 2.21–17.70, \( p = .001 \)), perceived higher STI risk (AOR: 1.49, 95% CI: 1.00–2.22, \( p = .049 \)), and higher safer sex self-efficacy (AOR: 1.11, 95% CI: 1.02–1.21, \( p = .012 \)).

**Ordinal logistic regression on last time of STI test among WSW in Jamaica**

Participants reporting on the time since their last STI test (\( n = 113 \)) were included in analyses. In Table 3, we present the unadjusted and adjusted odds ratio of last time of STI testing. The odds of a longer time since the last STI test was positively associated with depressive symptoms (AOR: 1.30, 95% CI: 1.03–1.67, \( p = .049 \)), sexual stigma (AOR: 1.08, 95% CI: 1.01–1.14, \( p = .004 \)), and a history of forced sex (AOR: 2.66, 95% CI: 1.17–6.02, \( p = .039 \)), and was negatively associated with residential location (Ochos Rios vs. Kingston) (AOR: 0.17, 95% CI: 0.07–0.44, \( p < .001 \)), safer sex self-efficacy (AOR: 0.89, 95% CI: 0.80–0.99, \( p = .049 \)), and LGBT connectedness (AOR: 0.81, 95% CI: 0.69–0.96, \( p = .042 \)).

**Binary logistic regression on sex work involvement in WSW in Jamaica**

Table 4 illustrates the unadjusted and adjusted odds ratio of sex work involvement. Higher odds of sex work involvement were associated with the following: perceived higher STI risk (AOR: 3.20, 95% CI: 1.81–5.64, \( p < .001 \)), casual dating and concurrent partnerships (AOR: 3.55, 95% CI: 1.10–11.48, \( p = .040 \)) (AOR: 40.27, 95% CI: 1.08–1703.77, \( p = .045 \)), higher sexual stigma (AOR: 1.08, 95% CI: 1.01–1.15, \( p = .037 \)), higher internalised sexual stigma (AOR: 1.06, 95% CI: 1.02–1.11, \( p = .002 \)), experiencing food insecurity (AOR: 1.97, 95% CI: 1.10–3.54, \( p = .026 \)) and experience of forced sex (AOR: 2.85, 95% CI: 1.14–7.11, \( p = .049 \)).

**Safer sex practices with women among lesbian and bisexual women in Jamaica**

Table 5 illustrates findings regarding safer sex practices with women. Among 150 women who reported having sex with women, approximately half never used latex gloves (\( n = 74, 49.33\% \)), dental dams (\( n = 74, 49.33\% \)), or cling wrap (\( n = 82, 54.67\% \)). Two-thirds (\( n = 99, 66.00\% \)) never used condoms for oral sex. Only one-third (\( n = 49, 32.67\% \)) reported always using personal toys without sharing them.
Discussion

Our study reports social-ecological contextual factors associated with sexual health among lesbian and bisexual women in Jamaica. Qualitative findings reveal experiences of pervasive sexual stigma in health care and community settings, including sexual violence perpetrated by men. Women who perceived themselves to be at risk for STIs described getting tested regularly, practising safer sex, and communicating with sex partners. The quantitative data corroborated and expanded upon these qualitative findings. Two-thirds of participants reported sex with women only, and 30% with both men and women. Approximately half of the sample had used barrier methods when having sex with women, including latex gloves, dental dams, and condoms on sex toys. Among those who had sex with men in the past 3 months, two-thirds reported consistent condom use with men. We found that depression, sexual stigma, and a forced sex history were associated with delayed time since the last STI test. Conversely, safer sex self-efficacy, perceived STI risk, and LGBT connectedness – how close participants feel to LGBT persons, how positive their connections are, and if they felt their connections were rewarding and had problem-solving potential – were associated with more recent STI testing. Participants who reported selling sex in the past 12 months experienced increased social marginalisation, including higher sexual stigma, food insecurity, forced sex, lifetime STI diagnosis, and lower likelihood of having a regular healthcare provider. These findings support previous research in North America indicating that women who sell sex often do so in order to pay for food and housing, and may experience constrained ability to negotiate safer sex.

Study findings highlight an association between sexual stigma and delayed time of STI testing among lesbian and bisexual women in Jamaica. There is no legal protection from discrimination based on sexual orientation or gender expression in Jamaica and study participants described healthcare provider discrimination as a barrier to sexual health care. Prior cross-sectional research...

Table 2. Binary logistic regression on STI testing, ever among lesbian and bisexual women survey participants in Jamaica (n = 205)

|                                | Unadjusted OR (95% CI) | P-value | Adjusted OR (95% CI) | p-value |
|--------------------------------|------------------------|---------|----------------------|---------|
| Sociodemographic factors       |                        |         |                      |         |
| Age, years                     | 1.10 (1.03–1.18)       | 0.006   | Not Selected         |         |
| Location (city)                |                        |         |                      |         |
| Kingston (ref)                 | 1                      |         |                      |         |
| Montego Bay                    | 0.53 (0.15–1.87)       | 0.324   |                      |         |
| Ocho Rios                      | 9.33 (3.42–25.42)      | <0.001  | 6.24 (2.21–17.70)    | 0.001   |
| Other                          | 0.96 (0.46–1.99)       | 0.911   |                      |         |
| Intrapersonal factor           |                        |         |                      |         |
| Perceived STI risk             | 1.65 (1.17–2.33)       | 0.005   | 1.49 (1.00–2.22)     | 0.049   |
| Interpersonal factors          |                        |         |                      |         |
| Safer sex self-efficacy        | 1.11 (1.03–1.19)       | 0.005   | 1.11 (1.02–1.21)     | 0.012   |
| Gender of sex partner: women only vs. men or/and women |            |         |                      |         |
| Structural factors             |                        |         |                      |         |
| Unstable housing               | 1.05 (1.02–2.29)       | 0.020   | Not Selected         |         |
**Table 3. Ordinal logistic regression on last time of STI test among lesbian and bisexual women survey participants in Jamaica (n = 113)**

|                                | Unadjusted OR (95% CI) | P-value | Adjusted OR (95% CI) | p-value |
|--------------------------------|------------------------|---------|----------------------|---------|
| **Sociodemographic factors**   |                        |         |                      |         |
| Age, years                     | 0.95 (0.89–1.02)       | 0.215   | Not Selected         |         |
| Location (city)                |                        |         |                      |         |
| Kingston (ref)                 | 1                      | 1       |                      |         |
| Montego Bay                    | 2.57 (0.23–28.49)      | 0.417   |                      |         |
| Ocho Rios                      | 0.23 (0.11–0.49)       | <0.001  | 0.17 (0.07–0.44)     | <0.001  |
| Other                          | 0.27 (0.09–0.75)       | 0.007   |                      |         |
| HIV status                     | 2.43 (0.18–32.07)      | 0.501   | Not Selected         |         |
| Sex work involvement          | 0.02 (−0.71–0.74)      | 0.961   | Not Selected         |         |
| **Intrapersonal factors**      |                        |         |                      |         |
| Perceived STI risk             | 0.60 (0.40–0.88)       | 0.005   | Not Selected         |         |
| Depressive symptoms in the last 2 weeks | 1.32 (1.07–1.63)   | 0.018   | 1.30 (1.03–1.67)     | 0.049   |
| **Interpersonal factors**      |                        |         |                      |         |
| Relationship status            |                        |         |                      |         |
| In a relationship (ref)        | 1                      |         |                      |         |
| Casual dating                  | 3.93 (1.21–12.79)      | 0.018   |                      |         |
| No partner                     | 0.81 (0.31–2.16)       | 0.762   |                      |         |
| Concurrent partnerships        | 0.98 (0.28–3.48)       | 0.966   |                      |         |
| Need for social support        | 1.03 (0.97–1.09)       | 0.434   | Not Selected         |         |
| Satisfaction with social support | 1.20 (1.02–1.40)   | 0.038   | Not Selected         |         |
| LGBT connectedness             | 0.82 (0.71–0.94)       | 0.006   | 0.81 (0.69–0.96)     | 0.042   |
| Safer sex self-efficacy        | 0.85 (0.76–0.94)       | 0.005   | 0.89 (0.80–0.99)     | 0.049   |
| Gender of sex partner: women only vs. men or/and women | 0.42 (0.21–0.84) | 0.015   | Not Selected         |         |
| **Structural factors**         |                        |         |                      |         |
| Forced sex                     | 1.87 (1.06–3.30)       | 0.029   | 2.66 (1.17–6.02)     | 0.039   |
| Sexual stigma                  | 1.07 (1.02–1.12)*      | 0.008   | 1.08 (1.01–1.14)     | 0.004   |
| Food insecurity                | 1.64 (1.03–2.72)       | 0.025   | Not Selected         |         |
| Unstable housing               | 1.05 (0.45–2.46)       | 0.832   | Not Selected         |         |
| Have a regular healthcare provider | 0.77 (0.40–1.48) | 0.392   | Not Selected         |         |
Table 4. Binary logistic regression on sex work involvement among lesbian and bisexual women survey participants in Jamaica (n = 205)

|                      | Unadjusted OR (95% CI) | P-value | Adjusted OR (95% CI) | p-value |
|----------------------|------------------------|---------|----------------------|---------|
| Age, years           | 1.05 (0.99–1.13)       | 0.126   | Not Selected         |         |
| Location (city)      |                        |         |                      |         |
| Kingston (ref)       | 1                      |         | Not Selected         |         |
| Montego Bay          | 1 (empty)              |         |                      |         |
| Ocho Rios            | 7.80 (3.52–17.30)      | <0.001  |                      |         |
| Other                | 0.52 (0.14–1.90)       | 0.319   |                      |         |
| **Intrapersonal Factors** |                    |         |                      |         |
| Perceived STI risk   | 2.42 (1.46–3.45)       | <0.001  | 3.20 (1.81–5.64)     | <0.001  |
| Depression in last 2 week | 1.29 (1.06–1.57)    | 0.013   | Not Selected         |         |
| Internalised sexual stigma | 1.07 (1.03–1.11)     | <0.001  | 1.06 (1.02–1.11)     | 0.002   |
| **Interpersonal Factors** |                    |         |                      |         |
| Need for social support | 1.09 (1.03–1.16)     | 0.004   | Not Selected         |         |
| Relationship status  |                        |         |                      |         |
| In a relationship (ref) | 1                      |         | 1                    |         |
| Casual dating        | 2.19 (0.89–5.43)       | 0.090   | 3.55 (1.10–11.48)    | 0.040   |
| No partner           | 0.65 (0.21–2.02)       | 0.456   |                      |         |
| Concurrent partnerships | 26.31 (3.04–227.99)  | 0.003   | 40.27 (1.08–1703.77) | 0.045   |
| Satisfaction with social support | 0.81 (0.69–0.94)   | 0.004   | Not Selected         |         |
| LGBT connectedness   | 1.16 (1.00–1.35)       | 0.047   | Not Selected         |         |
| Sexual stigma        | 1.11 (1.06–1.17)       | <0.001  | 1.08 (1.01–1.15)     | 0.037   |
| Gender of sex partner: women only vs. men or/and women | 2.36 (1.20–4.65)    | 0.013   | Not Selected         |         |
| Safer sex self-efficacy | 0.94 (0.87–1.01)    | 0.102   |                      |         |
| Safer sex with women | 1.09 (1.01–1.17)       | 0.021   | Not Selected         |         |
| **Structural factors** |                        |         |                      |         |
| Physical violence    | 5.02 (2.44–10.31)      | <0.001  | Not Selected         |         |
| Intimate partner violence | 8.86 (4.22–18.57)  | <0.001  | Not Selected         |         |

(Continued)
Table 4. Continued

|                                                                 | Unadjusted OR (95% CI) | P-value | Adjusted OR (95% CI) | P-value |
|-----------------------------------------------------------------|------------------------|---------|----------------------|---------|
| Adulthood sexual violence                                       | 3.34 (1.66–6.70)       | 0.001   | Not Selected         |         |
| Childhood sexual abuse                                          | 2.07 (1.04–4.12)       | 0.001   | Not Selected         |         |
| Food insecurity                                                 | 2.52 (1.61–3.96)       | <0.001  | 1.97 (1.10–3.54)     | 0.026   |
| Unstable housing                                                | 2.70 (1.19–6.13)       | 0.017   | Not Selected         |         |
| Have a regular health care provider                              | 2.67 (1.35–5.29)       | 0.005   | Not Selected         |         |
| Forced sex                                                      | 3.25 (1.62–6.52)       | 0.001   | 2.85 (1.14–7.11)     | 0.049   |

with lesbian, bisexual and WSW in Canada reported that sexual stigma, and the belief that healthcare providers were uncomfortable addressing sexual orientation, were associated with increased odds of a lifetime STI diagnosis. Our findings suggest that sexual stigma may also compromise STI

Table 5. Frequencies of safer sex practices with women among lesbian and bisexual women survey participants in Jamaica (n = 150)

| When you are having sex with women, how often would you say these statements are true about yourself? | Always N (%) | Sometimes N (%) | Tried it once N (%) | Never N (%) | I don’t know about this N (%) |
|------------------------------------------------------------------------------------------------------|--------------|-----------------|--------------------|-------------|-----------------------------|
| I use latex gloves                                                                                   | 5 (3.33)     | 33 (22.00)      | 8 (5.33)           | 74 (49.33)  | 30 (20.00)                  |
| I use dental dams                                                                                    | 2 (1.33)     | 36 (24.00)      | 14 (9.33)          | 74 (49.33)  | 24 (16.00)                  |
| I use saran wrap (cling wrap)                                                                          | 5 (3.33)     | 24 (16.00)      | 9 (6.00)           | 82 (54.67)  | 30 (20.00)                  |
| I use condoms cut open for oral sex                                                                  | 2 (1.33)     | 22 (14.67)      | 4 (2.67)           | 99 (66.00)  | 23 (15.33)                  |
| I use condoms on sex toys (e.g. dildo, vibrator)                                                       | 21 (14.00)   | 71 (47.33)      | 7 (4.67)           | 40 (26.67)  | 11 (7.33)                   |
| I use personal toys (e.g. dildo, vibrator): not shared                                               | 49 (32.67)   | 64 (42.67)      | 9 (6.00)           | 23 (15.33)  | 5 (3.33)                    |
| I brush or floss teeth before oral sex                                                                | 35 (23.33)   | 70 (46.67)      | 7 (4.67)           | 25 (16.67)  | 13 (8.67)                   |
| I have sex during period/ menstruation                                                                | 0            | 15 (10.00)      | 15 (10.00)         | 115 (76.67) | 5 (3.33)                    |
| I do safe BDSM (bondage, domination, submission, sadism, masochism)                                  | 10 (6.67)    | 49 (32.67)      | 10 (6.67)          | 56 (37.33)  | 25 (16.67)                  |
| I share razors for shaving                                                                            | 7 (4.67)     | 19 (12.67)      | 3 (2.00)           | 120 (80.00) | 1 (0.67)                    |
testing uptake. Qualitative findings from the present study corroborated this: women reported sexual stigma and discrimination from healthcare providers that influenced access to, and uptake of, sexual health care. These findings support qualitative data with studies of lesbian, bisexual and WSW in Lesotho and South Africa, that also found social-ecological contexts compromised sexual health care access and uptake. Moreover, we found that depressive symptoms were associated with longer time since STI testing. Chronic stress resulting from stigma can increase depression in LGBT populations, which in turn can present a barrier to accessing sexual health care.

WSW living in Ocho Rios were more likely to report selling sex, which may be in part because Ocho Rios is a popular sex tourism destination, therefore, the demand may be higher. We also found that selling sex was associated with internalised and enacted sexual stigma, and WSW engaged in selling sex did not differ in recency of STI testing, despite higher STI exposure. Intersecting stigmas against WSW who sell sex, including biphobic stigma within lesbian communities, may interfere with safer sex practices and sexual health care access. Future qualitative research should seek to understand sexual health care needs and barriers for WSW who sell sex.

While some participants in our study perceived that they were at risk for STIs, and this, in turn, motivated them to get tested, others were unsure about STI transmission between women and did not view testing as a necessity. This has been demonstrated in other qualitative studies, such as an ethnographic study conducted among young women in Brazil, which found that perceived STI risk was low among those who reported only having sex with women. Safer sex self-efficacy facilitated testing in our study, which is supported by previous cross-sectional research in Malawi among the general population. Finally, LGBT connectedness was associated with recency of STI testing among participants. Due to stigma, discrimination and lack of visibility in health care settings, lesbian, bisexual and other WSW may lack knowledge about STI risks and/or tailored prevention strategies. Thus, connection and affiliation with other lesbian and bisexual women or community organisations may facilitate discussion about how to engage in and access safer sex strategies. Fostering connectedness to LGBT communities through community initiatives may be an important way of increasing testing uptake in stigmatised populations.

**Limitations, implications and future directions**

Non-random sampling limits the generalisability of our findings to all lesbian, bisexual and other WSW in Jamaica, however, our use of chain-referral sampling allowed us to access a marginalised population to recruit survey participants. The cross-sectional design limits attributions of causality. Data were self-reported and may be influenced by recall bias or social desirability. Yet our quantitative findings were corroborated by qualitative data, which was a key methodological strength. While recruitment through a community-based organisation may have biased our sample towards those more likely to have access to health care and community resources, and greater connectedness to the LGBT community, PRAs also recruited participants through their own networks, with the potential to include participants who do not regularly access care. Future studies may utilise serological STI testing and respondent-driven sampling to explore social network factors and STI testing. We also did not primarily focus on sex work in the study, and future studies could further explore the dynamics of sex work, including gender of paid sex partners, among WSW in Jamaica to understand experiences of condom use and violence with clients.

Our study is unique in assessing social-ecological factors associated with STI testing practices and selling sex in a sample of WSW in Jamaica. We found multi-level factors such as mental health, sexual stigma, and violence associated with delayed STI testing and that WSW who sell sex report greater vulnerability to social marginalisation and negative health outcomes. We also provide insight into protective factors that may facilitate STI testing, including connectedness to the LGBT community, safer sex self-efficacy, and perceived STI risk that can inform the development of interventions such as LGBT healthcare provider training, community building and stigma reduction, public knowledge campaigns, and group-based STI interventions. Our findings also emphasise the importance of collecting sexual orientation data when researching sex work or transactional sex. Finally, we report rates of safer sex practices among WSW, indicating that at least half of our sample had never used barrier methods. Targeted public knowledge campaigns that address specific strategies for STI prevention among WSW may increase awareness and uptake of safer sex strategies. Future research may also
draw on the limited but emerging research on interventions to increase STI testing among lesbian and bisexual women, such as self-testing, and strategies to increase safer-sex self-efficacy and reduce sexual stigma, such as group-based psycho-educational HIV/STI interventions.

Conclusions
Risk factors such as stigma, mental health, and violence, and protective factors such as self-efficacy, perceived risk, and connectedness to LGBT communities, shape sexual health practices, including STI testing and selling sex, among lesbian, bisexual, and WSW in Jamaica. Multi-level interventions that address stigma, depression, STI knowledge and awareness, foster connectedness to LGBT communities and reduce healthcare provider discrimination, are needed in tandem with larger human rights protections to advance sexual health and sexual rights among lesbian and bisexual women in Jamaica.

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References
1. Bauer GR, Welles SL. Beyond assumptions of negligible risk: sexually transmitted diseases and women who have sex with women. Am J Public Health. 2001;91(8):1282–1286.
2. Logie CH, Gibson MF. A mark that is no mark? Queer women and violence in HIV discourse. Cult Health Sex. 2013;15(1):29–43.
3. Pinto VM, Tancredi MV, Neto AT, et al. Sexually transmitted disease/HIV risk behaviour among women who have sex with women. AIDS. 2005;19(Suppl 4):S64–S69.
4. Muzny CA, Sunesara IR, Martin DH, et al. Sexually transmitted infections and risk behaviors among African American women who have sex with women: does sex with men make a difference? Sex Transm Dis. 2011;38(12):1118–1125.
5. Marrazzo JM, Gorgos LM. Emerging sexual health issues among women who have sex with women. Curr Infect Dis Rep. 2012;14(2):204–211.
6. Kaestle CE, Waller MW. Bacterial STDs and perceived risk among sexual minority young adults. Perspect Sex Reprod Health. 2011;43(3):158–163.
7. Power J, McNair R, Carr S. Absent sexual scripts: lesbian and bisexual women’s knowledge, attitudes and action regarding safer sex and sexual health information. Cult Health Sex. 2009;11(1):67–81.
8. Matebeni Z, Reddy V, Sandfort T, et al. “I thought we are safe”: Southern African lesbians’ experiences of living with HIV. Cult Health Sex. 2013;15(Suppl):34–47.
9. J-FLAG WfW. Heartland Alliance for Human Rights and Human Dignity, IGLHRC, AFW, George Washington University Law School International Human Rights Clinic.

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References
1. Bauer GR, Welles SL. Beyond assumptions of negligible risk: sexually transmitted diseases and women who have sex with women. Am J Public Health. 2001;91(8):1282–1286.
2. Logie CH, Gibson MF. A mark that is no mark? Queer women and violence in HIV discourse. Cult Health Sex. 2013;15(1):29–43.
3. Pinto VM, Tancredi MV, Neto AT, et al. Sexually transmitted disease/HIV risk behaviour among women who have sex with women. AIDS. 2005;19(Suppl 4):S64–S69.
4. Muzny CA, Sunesara IR, Martin DH, et al. Sexually transmitted infections and risk behaviors among African American women who have sex with women: does sex with men make a difference? Sex Transm Dis. 2011;38(12):1118–1125.
5. Marrazzo JM, Gorgos LM. Emerging sexual health issues among women who have sex with women. Curr Infect Dis Rep. 2012;14(2):204–211.
6. Kaestle CE, Waller MW. Bacterial STDs and perceived risk among sexual minority young adults. Perspect Sex Reprod Health. 2011;43(3):158–163.
7. Power J, McNair R, Carr S. Absent sexual scripts: lesbian and bisexual women’s knowledge, attitudes and action regarding safer sex and sexual health information. Cult Health Sex. 2009;11(1):67–81.
8. Matebeni Z, Reddy V, Sandfort T, et al. “I thought we are safe”: Southern African lesbians’ experiences of living with HIV. Cult Health Sex. 2013;15(Suppl):34–47.
9. J-FLAG WfW. Heartland Alliance for Human Rights and Human Dignity, IGLHRC, AFW, George Washington University Law School International Human Rights Clinic.
17. Daly F, Spicer N, Willan S. Sexual rights but not the right to health? Lesbian and bisexual women in South Africa’s National Strategic Plans on HIV and STIs. Reprod Health Matters. 2016;24(47):185–194.

18. Poteat TC, Logie CH, Adams D, et al. Stigma, sexual health, and human rights among women who have sex with women in Lesotho. Reprod Health Matters. 2015;23(46):107–116.

19. Shannon K, Kerr T, Strathdee SA, et al. Prevalence and structural correlates of gender based violence among a prospective cohort of female sex workers. BMJ. 2009;339:b2939.

20. Figueroa JP. Review of HIV in the Caribbean: significant progress and outstanding challenges. Curr HIV/AIDS Rep. 2014;11(2):158–167.

21. Logie CH, Lacombe-Duncan A, Wang Y, et al. Sexual orientation differences in health and wellbeing Among women living with HIV in Canada: findings from a national cohort study. AIDS Behav. 2018;22(6):1987–2001.

22. Lyons T, Shannon K, Richardson L, et al. Women who use drugs and have sex with women in a Canadian setting: barriers to treatment enrollment and exposure to violence and homelessness. Arch Sex Behav. 2016;45(6):1403–1410.

23. German D, Latkin CA. HIV risk, health, and social characteristics of sexual minority female injection drug users in Baltimore. AIDS Behav. 2015;19(7):1361–1365.

24. Logie CH, Lacombe-Duncan A, Kenny KS, et al. Social-ecological factors associated with selling sex among men who have sex with men in Jamaica: results from a cross-sectional tablet-based survey. Glob Health Action. 2018;11(1):1–10.

25. Baral S, Holland CE, Shannon K, et al. Enhancing benefits or increasing harms: community responses for HIV among men who have sex with men, transgender women, female sex workers, and people who inject drugs. JAIDS (J Acquir Immune Defic Syndr). 2014;66(5):S319–S528.

26. Duncan J, Gebre Y, Grant Y, et al. HIV prevalence and related behaviors among sex workers in Jamaica. Sex Transm Dis. 2010;37(5):280–288.

27. Baral S, Logie C, Grosso A, Wirtz AL, Beyrer C. Modified social ecological model: a tool to guide the assessment of the risks and risk contexts of HIV epidemics. BMC Public Health. 2013;13:482.

28. Berendes S, Rimal RN. Addressing the slow uptake of HIV testing in Malawi: the role of stigma, self-efficacy, and knowledge in the Malawi BRIDGE Project. J Assoc Nurses AIDS Care. 2011;22(3):215–228.

29. Logie CH, Lacombe-Duncan A, Lee-Foon N, et al. “It’s for us–newcomers, LGBTQ persons, and HIV-positive persons. You feel free to be”: a qualitative study exploring social support group participation among African and Caribbean lesbian, gay, bisexual and transgender newcomers and refugees in Toronto, Canada. BMC Int Health Hum Rights. 2016;16(1):18. DOI:10.1186/s12914-016-0092-0

30. Illangasekare SL, Burke JG, Chander G, et al. Depression and social support among women living with the substance abuse, violence, and HIV/AIDS syndemic: a qualitative exploration. Womens Health Issues. 2014;24(5):551–557.

31. Logie CH, Lacombe-Duncan A, Poteat T, et al. Syndemic factors mediate the relationship between sexual stigma and depression among sexual minority women and gender minorities. Womens Health Issues. 2017;27(5):592–599.

32. Tucker A, Liht J, de Swardt G, et al. Homophobic stigma, depression, self-efficacy and unprotected anal intercourse for peri-urban township men who have sex with men in Cape Town, South Africa: a cross-sectional association model. AIDS Care. 2014;26(7):882–889.

33. Platt L, Wall M, Rhodes T, et al. Methods to recruit hard-to-reach groups: comparing two chain referral sampling methods of recruiting injecting drug users across nine studies in Russia and Estonia. J Urban Health. 2006;83(6 Suppl):39–53.

34. Kroenke K, Spitzer RL, Williams JBW. The Patient Health Questionnaire-2: validity of a two-item depression screener. Med Care. 2003;41(11):1284–1292.

35. Currie MR, Cunningham EG, Findlay BM. The Short Internalized Homonegativity Scale: examination of the factorial structure of a new measure of internalized homophobia. Educ Psychol Meas. 2004;64(6):1053–1067.

36. Kalichman SC, Rompa D, DiFonzo K, et al. Initial development of scales to assess self-efficacy for disclosing HIV status and negotiating safer sex in HIV-positive persons. AIDS and Behavior. 2001;5(3):291–296.

37. Bernal G, Maldonado Molina MM, Scharrrón del Río Mr. Development of a brief scale for social support: reliability and validity in Puerto Rico. Int J Clin Health Psychol. 2003;3(2).

38. Frost DM, Meyer IH. Measuring community connectedness among diverse sexual minority populations. J Sex Res. 2012;49(1):36–49.

39. Diaz RM, Ayala G, Bein E, et al. The impact of homophobia, poverty, and racism on the mental health of gay and bisexual Latino men: findings from 3 US cities. Am J Public Health. 2001;91(6):927–932.

40. Fishman SJ, Anderson EH. Perception of HIV and safer sexual behaviors among lesbians. J Assoc Nurses AIDS Care. 2003;14(6):48–55.

41. Hsieh HF, Shannon SE. Three approaches to qualitative content analysis. Qual Health Res. 2005;15(9):1277–1288.

42. Whittle HJ, Palar K, Naples T, et al. Experiences with food insecurity and risky sex among low-income people living with HIV/AIDS in a resource-rich setting. J Int AIDS Soc. 2015;18(1):20293.

43. Deering KN, Rusch M, Amram O, et al. Piloting a “spatial isolation” index: The built environment and sexual and
44. Mustanski BS, Newcomb ME, Du Bois SN, et al. HIV in young men who have sex with men: a review of epidemiology, risk and protective factors, and interventions. J Sex Res. 2011;48(2–3):218–253.

45. Diamant AL, Wold C. Sexual orientation and variation in physical and mental health status among women. J Womens Health (Larchmt). 2003;12(1):41–49.

46. Anders JT, Antonius-Smits C, Cabezas AL, et al. Sun, sex, and gold: tourism and sex work in the Caribbean. Lanham (MD): Rowman & Littlefield Publishers; 1999.

Résumé

Peu de recherches ont examiné les pratiques de santé sexuelle des lesbiennes et bisexuelles à la Caraïbe, où ces femmes sont en butte à une stigmatisation sexuelle capable de réduire le recours aux soins de santé sexuelle. Nous avons réalisé une étude de recherche à plusieurs méthodes, y compris des entretiens individuels semi-structurés (n=20) et par groupe d’intérêt (n=5), suivis d’une enquête transversale (n=205) avec des lesbiennes et bisexuelles à Kingston, Montego Bay et Ocho Rios, Jamaïque. Des analyses logistiques binaires et une régression logistique ordinaire ont été menées pour estimer les rapports de cotes pour les facteurs écologiques sociaux associés au dépistage des IST pendant la durée de vie, à la pratique du commerce du sexe et au plus récent dépistage des IST. Plus de la moitié des participantes ont indiqué qu’elles avaient effectué un dépistage des IST pendant leur vie, qui a abouti pour 6,1% d’entre elles au diagnostic d’une IST. Un cinquième de l’échantillon a reconnu avoir déjà pratiqué le commerce du sexe. L’analyse des récits des femmes a montré que la stigmatisation et la discrimination de la part des prestataires de soins de santé, associées au faible risque perçu d’IST, limitaient l’accès au dépistage des IST et les pratiques sexuelles sûres. Les participantes ont décrit comment l’auto-efficacité des rapports sexuels sûrs augmentait leurs pratiques sexuelles sûres. Les résultats quantitatifs ont révélé qu’une plus longue période écoulée depuis le dernier dépistage des IST était associée positivement à la dépression, à la stigmatisation sexuelle et aux rapports sexuels forcés, et associée négativement au lieu de résidence, au risque perçu d’IST, à l’auto-efficacité des rapports sexuels sûrs et à la connexion avec les réseaux LGBT. Le

Resumen

Limitados estudios de investigación han examinado las prácticas de salud sexual de mujeres lesbianas y bisexuales en el Caribe, donde las mujeres lesbianas y bisexuales sufren estigma sexual que podría reducir el uso de servicios de salud sexual. Realizamos un estudio de investigación secuencial multimétodo, que incluyó entrevistas individuales semiestructuradas (n=20) y un grupo focal (n=5), seguidos de una encuesta transversal (n=205) con mujeres lesbianas y bisexuales en Kingston, Montego Bay y Ocho Ríos, Jamaica. Realizamos análisis de regresión logística binaria y regresión logística ordinal para calcular la razón de momios de factores socioecológicos asociados con pruebas de detección de ITS a lo largo de su vida, participación en trabajo sexual y la última prueba de ITS. Más de la mitad de las participantes informaron haberse sometido a pruebas de ITS a lo largo de su vida; de éstas, 6.1% informó diagnóstico de ITS. Una quinta parte de la muestra informó haber vendido sexo alguna vez en su vida. El análisis de contenido dirigido de las narrativas de las mujeres destacó que el estigma y la discriminación por parte de prestadores de servicios de salud, en combinación con bajo riesgo percibido de ITS, limitaban el acceso a pruebas de ITS y prácticas sexuales más seguras. Las participantes describieron cómo la autoeficacia para tener relaciones sexuales más seguras aumentó sus prácticas sexuales más seguras. Los resultados cuantitativos revelaron que un mayor intervalo desde la última prueba de ITS era asociado positivamente con depresión, estigma sexual y sexo forzado, y negativamente con el lugar de residencia, riesgo percibido de ITS, autoeficacia para tener relaciones sexuales más seguras y conectividad de LGBT. Vender sexo
commerce du sexe était associé à un risque perçu d'IST, à la situation sentimentale, à la stigmatisation sexuelle, à l'insécurité alimentaire et aux rapports sexuels forcés. Les pratiques de santé sexuelle chez les lesbiennes et les bisexuelles en Jamaïque sont associées à des facteurs intrapersonnels, interpersonnels et structurels, ce qui souligne la nécessité urgente d'interventions à plusieurs niveaux pour améliorer la santé sexuelle et faire avancer les droits sexuels des lesbiennes et bisexuelles en Jamaïque.

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era asociado con riesgo percibido de ITS, situación sentimental, estigma sexual, inseguridad alimentaria y sexo forzado. Las prácticas de salud sexual entre mujeres lesbianas y bisexuales en Jamaica están asociadas con factores intrapersonales, interpersonales y estructurales, lo cual subraya la necesidad urgente de realizar intervenciones multinivel para mejorar la salud sexual y promover los derechos sexuales entre mujeres lesbianas y bisexuales en Jamaica.