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Association between lifetime sexual violence victimization and selected health conditions and risk behaviors among 13–24-year-olds in Lesotho: Results from the Violence Against Children and Youth Survey (VACS), 2018

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Abstract

Background: Sexual violence is a serious public health concern worldwide. In Lesotho, one in seven women and one in twenty men aged 18 years and older experienced sexual violence during childhood. Sexual violence victimization may lead to long-term mental and physical health issues among victims, regardless of gender.

Objective: To estimate the prevalence of lifetime sexual violence victimization (SV) among 13–24-year-olds in Lesotho and assess its association with selected health conditions and risk behaviors.

Participants and setting: Data from 13 to 24-year-old participants (n = 8568) of the 2018 Lesotho Violence Against Children and Youth Survey were analyzed.

Methods: SV was defined as reporting one or more types of sexual violence at any age. Logistic regression analyses measured associations between SV and selected health conditions (suicidal thoughts, self-harm behaviors, mental distress, STIs, and HIV), and risk behaviors (binge drinking in the past 30 days, drug use in the past 30 days, infrequent condom use in the past 12 months, multiple sex partners in the past 12 months, and transactional sex in the past 12 months).

Results: After controlling for study covariates, SV was significantly associated with self-harm behaviors, suicidal thoughts, ever having an STI, binge drinking in the past 30 days, infrequent condom use in the past 12 months, and multiple sex partners in the past 12 months for both males and females; and mental distress and transactional sex in the past 12 months for females.

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Disclaimer

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

Declaration of competing interest

No authors have any conflicts of interest to declare.

Conclusions: Preventing SV against children and youth in Lesotho may improve their health and wellbeing.

Keywords

Sexual violence; Violence against children; STI; HIV; Risk behaviors; Lesotho

1. Introduction

Sexual violence is common and a serious public health concern worldwide (Abrahams et al., 2014; Barth et al., 2013; Borumandnia et al., 2020; Moody et al., 2018). An estimated 120 million females under 20 years of age (10 %) around the world have experienced some form of sexual violence in their lifetime (United Nations Children's Fund, 2014). Males also experience sexual violence (Chynoweth et al., 2020; Sumner et al., 2016), although it is less commonly reported. In Lesotho, one in seven women and one in twenty men aged 18 years and older experienced sexual violence at least once in their childhood (Ministry of Social Development of Lesotho et al., 2020). In addition, 7.3 % of girls aged 13–17 years experienced sexual violence in the past year (Ministry of Social Development of Lesotho et al., 2020).

Sexual violence victimization may lead to long-term mental and physical health issues among victims, regardless of gender (Abajobir et al., 2017; Choudhary et al., 2012). For example, sexual violence is associated with mental distress, self-harm behaviors, suicidal ideation, and substance misuse throughout the victim's life course (Choudhary et al., 2012; Khadr et al., 2018; Mgoqi-Mbalo et al., 2017; Nguyen, Padilla, Villaveces, Patel, Atuchukwu, Onotu, Apondi, Aluzimbi, Chipimo, Kancheya, and Kress, 2019b; Villalba et al., 2020). Experiencing sexual violence during childhood among males is also associated with intimate partner violence perpetration later in life (Cubellis et al., 2016; Teitelman et al., 2017; VanderEnde et al., 2016). Sexual violence is also associated with an increased risk for HIV and other sexually transmitted infections (STIs) (Hassen & Deyassa, 2013; Richter et al., 2014; Seña et al., 2015 For example, compared with nonvictims, children who are victims of sexual violence are more likely to engage in behaviors (e.g., alcohol misuse, drug use, and unprotected sex) that increase risk for HIV and STIs (Abajobir et al., 2017; Chiang et al., 2015; Chiang et al., 2021; Rogstad et al., 2016; VanderEnde et al., 2018). Forced sex with an infected person can also increase the likelihood of HIV acquisition in females due to vaginal tears and lacerations (Abbai et al., 2016; Hassen & Deyassa, 2013) and in males through forced anal sex (Hernandez et al., 2017).

With the high burden of HIV in Lesotho, a country with the second-highest HIV prevalence globally in 2019 (23.1 %) and an estimated 29,000 people aged 15–24 years living with HIV (The World Factbook, 2021; UNAIDS, 2021), it is crucial to understand the factors associated with sexual violence, which can directly and indirectly contribute to the HIV epidemic in the country. Current research on the associations between sexual violence victimization and health outcomes among children and youth in Lesotho is limited; most of the literature on the physical and mental health impacts of sexual violence reflects research conducted in Western high-income countries. The Lesotho VACS provides the

first nationally representative data on sexual violence victimization and its association with HIV among children and youth in Lesotho, establishing a unique opportunity to examine the associations among sexual violence and health outcomes within this context. In this analysis, we aim to: (1) estimate the prevalence of lifetime sexual violence victimization among females and males aged 13–24 years in Lesotho, and (2) assess its association with selected health conditions (suicidal thoughts, self-harm behaviors, mental distress, STIs, and HIV) and risk behaviors (binge drinking in the past 30 days, drug use in the past 30 days, infrequent condom use in the past 12 months, multiple sex partners in the past 12 months, and transactional sex in the past 12 months). We hypothesize that lifetime sexual violence victimization is associated with selected health conditions and risk behaviors in males and females.

2. Methods

2.1. Data source

The 2018 Lesotho Violence Against Children and Youth Survey (VACS) was a nationally representative, cross-sectional household survey designed to assess the burden of violence against children and youth aged 13–24 years (Ministry of Social Development of Lesotho et al., 2020). The purpose of the Lesotho VACS was to measure the prevalence of sexual, physical, and emotional violence against children and youth, and to determine specific risk and protective factors for violence to help guide the development and implementation of HIV and violence prevention and response programs and policies (Ministry of Social Development of Lesotho et al.,2020).

The VACS was the first nationally representative survey of violence against children ever conducted in Lesotho and was led by the Lesotho Ministry of Social Development and implemented by ICAP at Columbia University with technical assistance from the United States Centers for Disease Control and Prevention (CDC) (Ministry of Social Development of Lesotho et al., 2020). A Multi-sectoral Task Force, including members of the National Orphans and Vulnerable Children (OVC) Coordinating Committee, representatives from key relevant ministries of the Government of Lesotho, and national and international agencies (e.g., UNICEF) coordinated the implementation of the survey and led the national action plan for responding to the study findings. The Lesotho VACS followed the World Health Organization's ethical and safety recommendations for studies on violence against women (World Health Organization, 2001). The survey protocol was independently reviewed and approved by the Lesotho Ministry of Health's Research and Ethics Committee, the Columbia University Medical Center Institutional Review Board (IRB), and the CDC IRB to ensure the rights and welfare of human research participants were appropriately protected (Ministry of Social Development of Lesotho et al., 2020). Data was collected via face-to-face computer assisted personal interviews conducted by trained interviewers (Centers for Disease Control and Prevention, 2017; Ministry of Social Development of Lesotho et al., 2020). HIV rapid tests were offered to participants who did not show proof of treatment or report previously testing positive for HIV (Ministry of Social Development of Lesotho et al., 2020). Participants in need for HIV treatment were identified by advising those who tested positive about the availability and benefits of starting HIV treatment early and offering them

active linkage to a clinic for receiving antiretrovirals (ARVs), care, and support. In addition, participants who self-reported being HIV-positive and were not currently on treatment were also provided the same options. Those who declined active linkage to care received the standard Ministry of Health referral to care.

2.2. Sample

The Lesotho VACS used a three-stage cluster sampling design (Ministry of Social Development of Lesotho et al., 2020). Participants were stratified by sex and females were oversampled in two districts with high HIV burden, Berea and Maseru, which account for 39 % of Lesotho's population (Bureau of Statistics, 2016). A split-sampling approach was used to ensure that females and males were interviewed in different enumeration areas (EAs) to increase confidentiality of participants and reduce the possibility that a male perpetrator and their female victim (and vice versa) living in the same community would both be interviewed (Nguyen, Kress, Villaveces, and Massetti, 2019a). During the first stage of sampling, 240 EAs (197 female EAs and 43 male EAs) were selected from the national sampling frame using a probability proportional to size sampling approach. In the second stage, 40 households with at least one eligible household member were randomly selected in each EA using equal probability systematic sampling. Finally, in the third stage, one eligible respondent was randomly selected per household, yielding 7101 completed female interviews (overall response rate was 96.2 %) and 1467 completed male interviews (overall response rate was 96.2 %). Eligibility criteria included being aged 13–24 years, residing in a household, and having the ability to speak one of two survey languages (English or Sesotho). Individuals residing in institutions, such as in prisons or hospitals, or who had cognitive disabilities or severe hearing or speech impairment were not eligible for inclusion. More detailed information on the methodology and design of the Lesotho VACS can be found elsewhere (Ministry of Social Development of Lesotho et al., 2020; Nguyen, Kress, Villaveces, and Massetti, 2019a).

2.3. Measures

2.3.1. Independent variable

2.3.1.1. Sexual violence.: Measured through four questions that asked whether the participant had ever: (1) been touched in a sexual way without their permission, (2) had someone try to force them to have sex without success, (3) been physically forced to have sex, or (4) been pressured in a non-physical way to have sex against their will. Lifetime sexual violence victimization (SV) was defined as reporting one or more of these types of sexual violence at any age.

2.3.2. Dependent variables

2.3.2.1. Health conditions

2.3.2.1.1. Self-harm behaviors.: Assessed by asking whether participants had ever tried to hurt themselves on purpose in any way (answer options were "yes" or "no").

2.3.2.1.2. Suicidal thoughts.: Assessed by asking participants whether they had ever thought about killing themselves (answer options were "yes" or "no").

2.3.2.1.3. Mental distress.: Assessed based on Kessler's K6 scale of psychological distress (Kessler et al., 2002). Participants were asked how frequently in the past 30 days they felt (1) nervous, (2) hopeless, (3) restless, (4) so sad that nothing could cheer them up, (5) that everything was an effort, or (6) worthless. Responses to each question were scored ranging from 0 ('none of the time') to 4 ('all of the time') and responses were summed and categorized into serious (scores of 13–24), moderate (scores of 5–12), and no (scores of 0–4) mental distress (Kessler et al., 2002).

2.3.2.1.4. Sexually transmitted infections (STI).: Measured through two questions that asked whether the participants had ever: (1) been diagnosed with an STI or (2) had a genital sore or ulcer.

2.3.2.1.5. HIV status.: Ascertained through an HIV rapid test, showing proof of treatment, or self-reporting a prior HIV test. Participants who did not report previously testing positive for HIV were offered an HIV rapid test (Ministry of Social Development of Lesotho et al., 2020). In this analysis, being HIV-positive was defined as either testing positive for HIV or having a prior positive HIV test result.

2.3.2.2. Risk behaviors

2.3.2.2.1. Binge drinking in the past 30 days.: Assessed by asking how many days in the past 30 days participants had four or more drinks of alcohol in a row. Binge drinking was defined as having four or more drinks in a row on one or more days (Esser et al., 2017; National Institute of Alcohol Abuse and Alcoholism, 2004).

2.3.2.2.2. Drug use in the past 30 days.: Participants were asked whether they had used drugs such as dagga, prescription pills, injection drugs, ecstasy, or sniffed any chemical such as petrol or glue in the past 30 days. Drug use was defined as responding 'yes' to this question.

2.3.2.2.3. Infrequent condom use in the past 12 months.: Defined as responding 'sometimes' or 'never' to a question about how often participants had used a condom when they had sex in the past 12 months, among those who ever had sex and had at least one sex partner in the past 12 months. In addition, participants who reported (1) 'sometimes' or 'never' using condoms, (2) being married or living with someone as if married, and (3) having only one sex partner in the past 12 months were coded as no infrequent condom use. Those who reported having zero sex partners in the past 12 months were coded as missing and excluded from analyses.

2.3.2.2.4. Multiple sex partners in the past 12 months.: Defined as reporting two or more sex partners in the past 12 months, among those who ever had sex. Those who reported only one sex partner were defined as no multiple sex partners in the past 12 months. Those who reported having zero sex partners in the past 12 months were coded as missing and excluded from analyses.

2.3.2.2.5. Transactional sex in the past 12 months.: Participants were asked three questions about whether they had sex with a person to get things like money, gifts, or

other things in the past 12 months. An additional question asked how many times in the past 12 months they had done this. Transactional sex in the past 12 months was defined as responding 'yes' to one or more of the three questions or responding they had done this at least one time in the past 12 months, among those who ever had sex. Those who reported having zero sex partners in the past 12 months were coded as missing and excluded from analyses.

2.3.3. Covariates—Demographics such as age (13–17 years; 18–24 years), educational level (currently attending or completed less than secondary education; currently attending or completed secondary education or more), marital status (ever married or living with a partner; never married or lived with a partner), and food insecurity (living in a household that did not have enough money for food) were included as covariates.

2.3.4. Missing data—For all variables included in this analysis, participants who (1) had a combination of Don't know and declined responses in all questions, (2) answered Don't know to all questions, or (3) declined responding to all questions were coded as missing and excluded from analyses.

2.4. Data analysis

2.4.1. Descriptive analysis—We calculated weighted prevalence and 95 % confidence intervals (CI) to summarize demographic characteristics (i.e., age, educational level, marital status, and food insecurity), SV, selected health conditions, and risk behaviors of males and females in the sample.

2.4.2. Inferential analysis—We conducted chi-square tests of independence to determine the association between SV and each demographic characteristic, selected health condition, and risk behavior stratified by sex. We also conducted logistic regression analyses to measure unadjusted and adjusted associations between SV and each selected health condition and risk behavior. For this, two models were built for each selected health condition and risk behavior based on the literature or statistically significant results from the chi-square analyses. The first model (unadjusted) did not control for any covariate. The second model (adjusted) controlled for demographics variables (age, educational level, marital status, and food insecurity). Unadjusted and adjusted odds ratios (aOR), 95 % CI, and *p*-values were calculated. Both the *p*-value ($p < 0.05$) and the 95 % CI were considered in determining statistical significance of each association. We performed all statistical analyses using SAS version 9.4 software while considering the complex survey design of the Lesotho VACS.

3. Results

3.1. Descriptive analysis results

A total of 7101 females and 1467 males participated in the 2018 Lesotho VACS (Table 1). Most children and youth were aged 18–24 years old (females, 57.3 %; males, 56.8 %), were currently attending or completed a secondary education or more (females, 73.2 %; males, 60.4 %) and had never been married or lived with a partner (females, 76.3 %;

males, 94.2 %). About one-third of females (33.6 %) and males (31.0 %) experienced food insecurity. One in five females (19.0 %) and 7.3 % of males experienced SV. Females more frequently reported suicidal thoughts (females, 8.2 %; males, 2.9 %), experienced severe mental distress (females, 4.0 %; males, 1.3 %), were HIV-positive (females, 6.6 %; males, 2.1 %), and engaged in transactional sex in the past 12 months (females, 5.0 %; males, 1.6 %). Males more frequently reported binge drinking in the past 30 days (males, 16.1 %; females, 4.8 %), drug use in the past 30 days (males, 8.1 %; females, 1.1 %), and multiple sex partners in the past 12 months (males, 37.4 %; females, 10.8 %).

3.2. Inferential analysis results

3.2.1. Chi square analysis—Females who experienced SV were significantly more likely to be older, currently attending or completed a secondary education or higher, and to have ever been married or lived with a partner compared with females who did not experience SV (Table 2). All health conditions (except no mental distress and being HIV-positive) and all risk behaviors (except drug use in the past 30 days) were significantly more frequent among females who experienced SV than among those who did not.

Males who experienced SV were significantly more likely to be older and to currently be attending or have completed a secondary education or more (Table 2). Suicidal thoughts, self-harm behaviors, ever having an STI, and all risk behaviors (except transactional sex in the past 12 months) were significantly more frequent among males who experienced SV when compared with those who did not experience SV.

3.2.2. Logistic regression analysis—Results from the logistic regression are presented in Table 3. Although chi-square test results indicated there were no statistically significant associations between SV and HIV among females or males, we still included HIV in the adjusted model because previous researchers have found significant associations between SV and increased risk for HIV (Baral et al., 2012; Hassen & Deyassa, 2013; Henny et al., 2012; Machtinger et al., 2012; Reisner et al., 2011). Among females, in the final adjusted model, SV was significantly associated with all health conditions, except for being HIV-positive. Compared to females who did not experience SV, females who experienced SV had significantly higher odds of reporting serious or moderate mental distress (serious: aOR = 4.8; 95 % CI = 3.5–6.7; moderate: aOR = 2.2; 95 % CI = 1.8–2.7), self-harm behaviors (aOR = 7.8; 95 % CI = 5.2–11.6), suicidal thoughts (aOR = 3.9; 95 % CI = 3.1–4.9), ever having an STI (aOR = 1.7; 95 % CI = 1.3–2.2), binge drinking in the past 30 days (aOR = 1.8; 95 % CI = 1.3–2.7), infrequent condom use in the past 12 months (aOR = 1.4; 95 % CI = 1.1–1.9), multiple sex partners in the past 12 months (aOR = 1.7; 95 % CI = 1.3–2.1), and transactional sex in the past 12 months (aOR = 2.0; 95 % CI = 1.3–3.1). No statistically significant associations were found between SV and HIV or drug use in the past 30 days among females.

Among males, in the final adjusted model, SV was significantly associated with self-harm behaviors (aOR = 4.4; 95 % CI = 1.1–17.8), suicidal thoughts (aOR = 2.5; 95 % CI = 1.0–6.3), ever having an STI (aOR = 5.7; 95 % CI = 2.5–12.9), binge drinking in the past 30 days (aOR = 2.2; 95 % CI = 1.1–4.5), infrequent condom use in the past 12 months (aOR

= 2.9; 95 % CI = 1.5–5.5), and multiple sex partners in the past 12 months (aOR = 2.0; 95 % CI = 1.1–3.7). No statistically significant associations were found between SV and other health conditions or risk behaviors in males, including HIV.

4. Discussion

In this analysis, we estimated the association between SV and selected health conditions (suicidal thoughts, self-harm behaviors, mental distress, STIs, and HIV) and risk behaviors (binge drinking in the past 30 days, drug use in the past 30 days, infrequent condom use in the past 12 months, multiple sex partners in the past 12 months, and transactional sex in the past 12 months) among females and males aged 13–24 years in Lesotho. SV was more commonly reported among females than males. Among females, SV was significantly associated with almost all the health conditions and risk behaviors examined, except for HIV and drug use in the past 30 days. In males, SV was significantly associated with self-harm behaviors, suicidal thoughts, ever having an STI, binge drinking in the past 30 days, infrequent condom use in the past 12 months, and multiple sex partners in the past 12 months.

Our findings that SV was more commonly reported by females than males is consistent with previous reports from other African countries (i.e., Malawi, South Africa, Kenya, and Tanzania), Cambodia, and Haiti (Mwangi et al., 2015; Stark et al., 2019; Vagi et al., 2016; VanderEnde et al., 2018; Ward et al., 2018). SV is considered one of the most prevalent traumas worldwide, with girls and women being disproportionately affected. Until relatively recently, there has been a dearth of research on the epidemiology of sexual violence among boys and men (Forde & Duvvury, 2017). Further, there is growing evidence that experiences of SV as well as disclosure and help-seeking behavior is highly gendered (Easton et al., 2014; Lomans et al., 2022; Pereira et al., 2020). As such, inclusion of males in our analysis represents an important contribution to the field. The higher prevalence of SV in young females may be due to factors like social and gender norms that prescribe male dominance and right to control females. For example, some have proposed that SV against females is a demonstration of patriarchal dominance over females by males based on gender and power inequality (Lawson, 2012). Norms related to gender and masculinity contribute to patriarchal social contexts in some African countries (Adegoke & David, 2007; Amoakohene, 2004; Ilika, 2005; Jewkes et al., 2005). The present study found similarities in patterns of associations between SV and health outcomes for males and females, with few differences in adjusted analyses: the associations between SV and mental distress and transactional sex were not significant for males, but significant for females. For all other outcomes examined, similar patterns emerged for females and males. This underscores the substantial and enduring impacts of SV and suggests that these impacts do not vary by sex, on the whole.

Gender transformative programming to shift gender norms should be a component of violence prevention initiatives (Abramsky et al., 2014; Kerr-Wilson et al., 2020; Levtov et al., 2014; Pulerwitz et al., 2019).

Females who experienced SV had significantly greater odds of experiencing serious or moderate mental distress, suicidal thoughts, and self-harm behaviors than those who did not experience SV. We also found statistically significant associations between SV and these health conditions, except for serious or moderate mental distress, in males. Consistent with these findings, in a study among adolescents in Brazil, Schäfer et al. (2017) found that females who experienced SV were three times more likely to have suicidal thoughts than those who did not experience SV. In Nigeria, Omigbodun et al. (2008) reported that SV was a significant predictor of suicidal thoughts among females attending secondary school. SV was found to be significantly associated with self-harm behaviors in adolescents and youth in Nigeria, Zambia, and Uganda (Nguyen, Padilla, Villaveces, Patel, Atuchukwu, Onotu, Apondi, Aluzimbi, Chipimo, Kancheya, and Kress, 2019b). Experiences of SV can negatively impact an individual's mental health throughout their life course (Choudhary et al., 2012). For example, serious mental distress has been associated with risky behaviors, including drug use (Substance Abuse and Mental Health Services Administration, 2013), lower income (Davison et al., 2020; Leary et al., 2021), unemployment, poor physical health, and chronic illness (Davison et al., 2020). Though SV was associated with increased odds for mental distress in females, this association was not statistically significant for males. Additional research on mental health consequences of SV among males in Lesotho is needed to refine measurement among this population and understand impacts of SV and implications for prevention.

Participants who experienced SV had twice the odds of binge drinking in the past 30 days than those who did not experience SV, consistent with research on SV and alcohol misuse among adolescents (Kirk-Provencher et al., 2020) and between childhood sexual violence and hazardous drinking among adults (Bello et al., 2017; Lown et al., 2011; Tonmyr & Shields, 2017). This association may be explained in part by the self-medication theory, which states that individuals use substances (e.g., alcohol or drugs) to relieve painful feelings or memories (Khantzian, 1997).

Participants who experienced SV had significantly higher odds of reporting infrequent condom use in the past 12 months than those who did not experience SV. Females who experienced SV had 1.4 times the odds of engaging in infrequent condom use in the past 12 months, while males who experienced SV had almost three times the odds of engaging in infrequent condom use in the past 12 months when compared with those who did not experience SV. This association suggests that primary prevention of SV may be an opportunity to prevent the occurrence of STI/HIV risk behaviors, as a pathway to interrupting spread of STIs and HIV in Lesotho. Similarly, SV was significantly associated with infrequent condom use in a cohort study of HIV-infected individuals in the United States (Chuang et al., 2006). SV increases risk for HIV both directly through forced genital or anal intercourse, as well as indirectly through high-risk sexual behaviors (e.g., no or infrequent condom use; (Chuang et al., 2006).

Participants who experienced SV had significantly greater odds of reporting multiple sex partners in the past 12 months than those who did not experience SV. This aligns with results from prior studies. For example, in Tanzania, females who experienced childhood sexual violence were over two times more likely to report multiple sex partners in the

past 12 months than nonvictims of childhood sexual violence (Chiang et al., 2015). In Quebec, Thibodeau et al. (2017) found a direct association between SV and having multiple sex partners among 13–17-year-old adolescents. This association could be mediated by traumatic sexualization, in which an individual's sexuality (e.g., sexual feelings and attitudes) is developed inappropriately during experiences of sexual violence, resulting in them learning to use sexual behavior to receive rewards or affection (Finkelhor & Browne, 1985; Thibodeau et al., 2017). Thus, adolescents who experience SV may have multiple sex partners in an effort to receive affection and rewards (Thibodeau et al., 2017). This was observed in a study where women who experienced childhood sexual violence reported more traumatic sexualization and higher number of sex partners than those who did not experience childhood sexual violence (Senn et al., 2011).

Females who experienced SV had significantly greater odds of engaging in transactional sex in the past 12 months than those who did not experience SV. Similar findings were reported from the Uganda VACS, where young girls who experienced SV were more likely to engage in transactional sex in the past 12 months than those who did not experience SV (Stamatakis et al., 2021). Among South African adults, experiencing childhood sexual violence was associated with transactional sex in adulthood (Gibbs et al., 2018). Transactional sex is motivated by various factors, such as poverty and the desire for material acquisition (Leclerc-Madlala, 2008; McCloskey et al., 2021; Stoebenau et al., 2011), and is widely accepted by both parents and youth in some countries (Deane & Wamoyi, 2015; Kamndaya et al., 2016; Wamoyi et al., 2011). Transactional sex increases the risk for HIV in young women (Kilburn et al., 2018; Wamoyi et al., 2016) because they may have more sexual partners (Choudhry et al., 2015), use condoms less frequently (Luke, 2006), and report more alcohol misuse (Bello et al., 2017).

Our finding that females who experienced SV had greater odds of engaging in transactional sex in the past 12 months aligns with our finding that females who experienced SV had greater odds of reporting multiple sex partners in the past 12 months. Similarly, results from an analysis of Uganda VACS data indicated that childhood transactional sex was significantly associated with having multiple sex partners in the past 12 months among 18–24-year-old females (Chiang et al., 2021). In a different study, transactional sex was significantly associated with having multiple concurrent sex partners among 15–24-year-old Ugandan females (Choudhry et al., 2015). Food deprivation has been associated with both transactional sex and having multiple sex partners among out-of-school girls in Nigeria (Kunnuji, 2014). Over one-third of females in our sample who experienced SV also experienced food insecurity, which may have contributed to the association observed between SV and transactional sex in the past 12 months.

Females who experienced SV had significantly greater odds of ever having an STI than those who did not experience SV. This aligns with other studies where adolescent and young females who experienced SV were two times more likely to have an STI than those who did not experience SV in Tanzania (Vagi et al., 2016), Kenya, and Zambia (Mathur et al., 2018). This increased risk for STIs among female victims of SV reflects risk through both direct and indirect transmission among female victims of SV (Burgueño et al., 2017; Davis et al., 2018; Silverman et al., 2011). Males who experienced SV were almost six times more

likely to ever have had an STI when compared with those who did not experience SV. These findings align with results from previously published studies. For example, Vagi et al. (2016) found that 13–24-year-old males in Tanzania who experienced SV were over two times more likely to have an STI as compared with those who did not experience SV. If used properly, condoms can prevent STIs and HIV (Beksinska et al., 2020). However, individuals may not use condoms consistently during sex because of poor access, gender norms, religious norms, and stigma (Beksinska et al., 2020).

The higher odds of having an STI among participants who experienced SV in our analysis were consistent with our findings that those who experienced SV were more likely to report infrequent condom use in the past 12 months, multiple sex partners in the past 12 months, transactional sex in the past 12 months (for females only), and binge drinking in the past 30 days than those who did not experience SV. Each of these factors, as well as SV, is associated with an increased risk for HIV (Andersson et al., 2012; Bello et al., 2017; Burgueño et al., 2017; Chiang et al., 2015; Choudhry et al., 2015; Hassen & Deyassa, 2013; Kilburn et al., 2018; McCloskey et al., 2021). In our study, we did not find a statistically significant association between SV and HIV for males, and found a marginally significant association for females. While SV and HIV were not significantly associated, several HIV risk factors were, including infrequent condom use, multiple sex partners, and binge drinking. Due to the age criteria of the study (13–24 years), it is possible that exposure to SV leads to increased risk for HIV, which then can lead to HIV acquisition later in adulthood. The most current HIV incidence data indicates that the 25–35-year age group has the highest incidence compared to any other age group (0.55 for males and 1.55 for females; Lesotho Ministry of Health (MOH), 2022).

As Lesotho aims to sustain HIV epidemic control and prevent new infections, HIV programs should consider expanding sexual violence prevention programming. SV prevention programming, such as that delivered through the United States President’s Emergency Plan for AIDS Relief (PEPFAR) Determined, Resilient, Empowered, AIDS-free, Mentored, and Safe (DREAMS) program (Saul et al., 2018) and other HIV prevention programs can leverage data-driven efforts to target HIV risk-reducing interventions to prevent violence in the context of HIV epidemic control efforts. Reducing sexual violence against children and adolescents could result in healthier individuals and stronger communities.

The findings from our analysis were subject to some limitations. First, the Lesotho VACS did not include 13–24-year-olds who were institutionalized, could not speak the languages of the survey, or had certain disabilities. Therefore, results are not generalizable to these populations. Second, the data used in this analysis were self-reported, which are subject to self-report bias, especially recall and social desirability bias. This may have resulted in underreporting of important variables in this analysis. Finally, the Lesotho VACS was a cross-sectional survey, which did not allow us to establish causality in our analysis and we were not able to determine whether the SV occurred before or after engagement in sexual risk behaviors or the emergence of the selected health conditions. However, we were able to determine associations between SV and the sexual risk behaviors and selected health conditions.

Strengths of the study include a robust methodology with a nationally representative survey with high response rates (>90 %) (Ministry of Social Development of Lesotho et al., 2020). To the best of our knowledge, this is the first analysis of SV and related health conditions and risk behaviors conducted using nationally representative data on violence against children and young adults in Lesotho. Most importantly, to our knowledge, this is the first time this type of analysis has been conducted among adolescent and young males in Lesotho. Our results indicate that violence prevention and response efforts in Lesotho should include targeting and supporting boys and young men in addition to strengthening supports for girls and young women, including implementing community mobilization programs, teaching about positive masculinity and healthy gender norms, and conducting bystander support interventions (Ward et al., 2018). *INSPIRE: Seven Strategies to End Violence Against Children* (World Health Organization, 2016) provides a framework of evidence-based policies, interventions, and programs to prevent and respond to violence. The strategies in INSPIRE include implementation and enforcement of laws, norms and values change, safe environments, parenting and caregiver support, income and economic strengthening, response and support services, and education and life skills. The programs and interventions reflect the bestavailable evidence to prevent violence and avert its negative impacts, with particular emphasis on approaches with proven success in low-resource settings. Based on the results of the present study, evidence-based interventions like those represented in INSPIRE, implemented through multi-sectoral action, can create safe and supportive environments for youth to reduce risk of sexual violence in the schools and community settings where young people live as well as in their homes. In addition, sexual violence victims should be provided linkage to supportive and high quality services including mental health support and other post violence care services such as HIV testing, STI testing and treatment, post-exposure prophylaxis, emergency contraceptives, and any other necessary clinical care. HIV prevention programming can also be leveraged to incorporate violence prevention and reduce risky sexual behavior. Prevention programming through the President's Emergency Plan for AIDS Relief (PEPFAR) focuses on conducting community mobilization campaigns to support healthy gender norms changes and building adolescent-parent relationships as a strategy to reduce adolescent girls' risk of violence and risky sexual behavior (Saul et al., 2018). HIV prevention programs can further integrate violence prevention efforts to promote upstream prevention efforts, and incorporate programming for boys and young men, given the similar patterns between males and females of impacts of sexual violence in the present study. VACS data can help guide the development and adaptation of violence and HIV prevention and response programs to meet the unique needs of children and young adults in Lesotho.

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Data availability

Lesotho VACS data are publicly available and access can be requested through the Together for Girls website: https://www.togetherforgirls.org/request-access-vacs/

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Table 1

Characteristics of 13–24-year-old females and males in Lesotho — Violence Against Children and Youth Survey (VACS), 2018.

Characteristics	Females		Males	
	Unweighted n[a]	[b]Weighted % (95 % CI)	Unweighted n[a]	[b]Weighted % (95 % CI)
Age				
13–17 years	7101	42.7 (41.1–44.2)	1467	43.2 (40.0–46.3)
18–24 years		57.3 (55.8–58.9)		56.8 (53.7–60.0)
Educational level				
Currently attending or less than secondary education	7101	26.8 (24.0–29.6)	1467	39.6 (32.5–46.8)
Currently attending or secondary education or more		73.2 (70.4–76.0)		60.4 (53.2–67.5)
Marital status				
Married or cohabitated[c]	7101	23.7 (21.7–25.7)	1467	5.8 (4.2–7.4)
Never married		76.3 (74.3–78.3)		94.2 (92.6–95.8)
Food insecure[d]	7101	33.6 (31.5–35.8)	1467	31.0 (25.8–36.2)
Lifetime sexual violence	7101	19.0 (17.2–20.9)	1467	7.3 (5.2–9.4)
Ever had suicidal thoughts	7100	8.2 (7.3–9.1)	1466	2.9 (1.7–4.1)
Ever had self-harm behaviors[e]	7101	2.2 (1.8–2.7)	1467	2.4 (1.2–3.6)
Experienced mental distress in the past 30 days[f]				
Severe mental distress	7101	4.0 (3.3–4.8)	1467	1.3 (0.6–1.9)
Moderate mental distress		22.5 (20.5–24.5)		27.2 (21.6–32.9)
No mental distress		73.5 (71.2–75.7)		71.5 (65.9–77.1)
Ever had an STI[l]	7087	9.7 (8.7–10.7)	1467	7.7 (5.6–9.8)
HIV-positive	7010	6.6 (5.7–7.5)	1457	2.1 (1.3–3.0)
Binge drinking in the past 30 days[g]	6970	4.8 (3.9–5.6)	1426	16.1 (13.1–19.1)
Drug use in the past 30 days[h]	7101	1.1 (0.7–1.5)	1467	8.1 (6.0–10.2)
Infrequent condom use in the past 12 months[i]	3011	26.6 (24.2–29.0)	639	32.8 (26.6–39.0)
Multiple sex partners in the past 12 months[j]	3024	10.8 (9.3–12.4)	643	37.4 (31.3–43.6)
Transactional sex in the past 12 months[k]	3024	5.0 (4.0–6.0)	642	1.6 (0.4–2.8)

Acronyms: CI = Confidence interval; STI = Sexually transmitted infection.

Note: All statistical analyses took into account the complex survey design of the Lesotho VACS, 2018.

[a]Unweighted denominators. Denominators may differ due to skip patterns in the questionnaire.

[b]Weighted percentages. Weighted percentages may not total due to rounding.

[c]Includes ever married or lived with a partner.

[d]Includes respondents who did not think their household had enough money for food.

[e]Ever tried to hurt themselves on purpose in any way.

[f]Measured using the Kessler K6 scale by asking respondents series of questions about their mental health during the past 30 days. Moderate mental distress was defined as scoring 5 ≤ K6 scale <13. Serious mental distress was defined as scoring ≥13 on the K6 scale.

[g]Drinking ≥4 drinks of alcohol in a row on one or more days in the past 30 days.

[h]Used drugs such as dagga, prescription pills, injection drugs, ecstasy, or sniffed any chemical such as petrol or glue in the past 30 days.

[i]Sometimes or never using condoms when having sex with someone in the past 12 months (among those who ever had sex and had at least 1 sex partner in the past 12 months).

[j]Having sex with more than one person in the past 12 months (among those who ever had sex).

[k]Having sex with a person mainly in order to get money, gifts, or other things in the past 12 months (among those who ever had sex and had at least 1 sex partner in the past 12 months).

[l]Includes respondents who were ever diagnosed with an STI or ever had a genital sore or ulcer.

Table 2

Prevalence of health conditions and risk behaviors among 13–24-year-old females and males in Lesotho who did and did not experience lifetime sexual violence victimization in Lesotho — Violence Against Children and Youth Survey (VACS), 2018.

Characteristics	Females					Males				
	SV[a]		No SV[a]		*p* value	SV[a]		No SV[a]		
	n[b]	[c]Weighted % (95 % CI)	n[b]	[c]Weighted % (95 % CI)		n[b]	[c]Weighted % (95 % CI)	n[b]	[c]Weighted % (95 % CI)	*p* value
Age										
13–17 years	1210	24.4 (22.0–26.8)	5891	47.0 (45.2–48.7)	**<0.0001**	89	16.7 (7.9–25.5)	1378	45.2 (42.1–48.4)	**<0.0001**
18–24 years	1210	75.6 (73.2–78.0)	5891	53.0 (51.3–54.8)		89	83.3 (74.5–92.1)	1378	54.8 (51.6–57.9)	
Educational level										
Currently attending or less than secondary education	1210	19.1 (16.1–22.0)	5891	28.7 (25.6–31.7)	**<0.0001**	89	16.7 (7.6–25.9)	1378	41.5 (34.3–48.6)	**<0.0001**
Currently attending or secondary education or more	1210	80.9 (78.0–83.9)	5891	71.3 (68.3–74.4)		89	83.3 (74.1–92.4)	1378	58.5 (51.4–65.7)	
Marital status										
Married or cohabitating[e]	1210	31.9 (28.4–35.4)	5891	21.8 (19.7–23.9)	**<0.0001**	89	9.5 (1.8–17.2)	1378	5.5 (3.9–7.1)	0.224
Never married	1210	68.1 (64.6–71.6)	5891	78.2 (76.1–80.3)		89	90.5 (82.8–98.2)	1378	94.5 (92.9–96.1)	
Food insecure[f]	1210	31.8 (28.4–35.2)	5891	34.1 (31.8–36.4)	0.195	89	24.2 (12.4–36.0)	1378	31.6 (26.2–37.0)	0.261
Health conditions										
Ever had suicidal thoughts	1210	20.2 (17.3–23.1)	5890	5.3 (4.6–6.1)	**<0.0001**	89	7.3 (2.0–12.6)	1377	2.5 (1.4–3.7)	**0.005**
Ever had self-harm behaviors[g]	1210	7.2 (5.4–9.1)	5891	1.0 (0.8–1.3)	**<0.0001**	89	8.9 (0.0–19.4)	1378	1.9 (0.9–2.9)	**0.013**
Experienced mental distress in the past 30 days[h]										
Serious mental distress	1210	10.1 (7.8–12.4)	5891	2.6 (2.0–3.2)	**<0.0001**	89	1.1 (0.0–3.4)	1378	1.3 (0.6–1.9)	0.126
Moderate mental distress	1210	33.9 (30.5–37.3)	5891	19.8 (17.7–21.9)		89	38.3 (26.3–50.3)	1378	26.4 (20.3–32.4)	
No mental distress	1210	56.0 (52.1–59.9)	5891	77.6 (75.3–79.8)		89	60.6 (48.6–72.5)	1378	72.4 (66.3–78.4)	
Ever had an STI[i]	1210	15.9 (13.4–18.4)	5877	8.2 (7.2–9.3)	**<0.0001**	89	31.1 (15.0–47.2)	1378	5.9 (4.2–7.6)	**<0.0001**
HIV-positive	1197	8.1 (5.9–10.3)	5813	6.2 (5.3–7.1)	0.050	89	1.5 (0.0–3.7)	1368	2.2 (1.3–3.1)	0.613
Risk behaviors										
Binge drinking in the past 30 days[j]	1183	9.0 (6.3–11.6)	5787	3.8 (3.1–4.5)	**<0.0001**	85	36.4 (21.5–51.2)	1341	14.5 (11.6–17.5)	**0.0002**

Characteristics	Females					Males				
	SV[a]		No SV[a]		*p* value	SV[a]		No SV[a]		
	n[b]	[c]Weighted % (95 % CI)	n[b]	[c]Weighted % (95 % CI)		n[b]	[c]Weighted % (95 % CI)	n[b]	[c]Weighted % (95 % CI)	*p* value
Drug use in the past 30 days[k]	1210	1.4 (0.6–2.2)	5891	1.0 (0.6–1.4)	0.343	89	17.2 (6.5–28.0)	1378	7.4 (5.4–9.3)	**0.009**
Infrequent condom use in the past 12 months[l]	794	32.1 (27.1–37.2)	2217	24.4 (22.1–26.8)	**0.002**	68	55.2 (40.6–69.8)	571	29.8 (23.2–36.4)	**0.001**
Multiple sex partners[m] in the past 12 months	800	15.0 (12.5–17.5)	2224	9.2 (7.7–10.8)	**<0.0001**	68	55.6 (40.9–70.4)	575	35.0 (29.2–40.8)	**0.001**
Transactional sex[n] in the past 12 months	800	7.5 (5.7–9.2)	2224	4.0 (2.8–5.2)	**0.002**	68	2.2 (0.0–5.3)	574	1.5 (0.3–2.7)	0.576

Bold font indicates statistical significance.

Acronyms: CI = Confidence interval; STI = Sexually transmitted infection; SV = lifetime sexual violence.

Note: All statistical analyses took into account the complex survey design of the Lesotho VACS, 2018.

[a]Prevalence estimates and unweighted denominators shown are among those who experienced SV and those who did not experience SV.

[b]Unweighted denominators. Denominators may differ due to skip patterns in the questionnaire.

[c]Weighted percentages. Weighted percentages may not total due to rounding.

[e]Includes ever married or lived with a partner.

[f]Includes respondents who did not think their household had enough money for food.

[g]Ever tried to hurt themselves on purpose in any way.

[h]Measured using the Kessler K6 scale by asking respondents series of questions about their mental health during the past 30 days. Moderate mental distress was defined as scoring 5 ≤ K6 scale <13. Serious mental distress was defined as scoring ≥13 on the K6 scale.

[i]Includes respondents who were ever diagnosed with an STI or ever had a genital sore or ulcer.

[j]Drinking ≥4 drinks of alcohol in a row on one or more days in the past 30 days.

[k]Used drugs such as dagga, prescription pills, injection drugs, ecstasy, or sniffed any chemical such as petrol or glue in the past 30 days.

[l]Sometimes or never using condoms when having sex with someone in the past 12 months (among those who ever had sex and had at least 1 sex partner in the past 12 months).

[m]Having sex with more than one person in the past 12 months (among those who ever had sex).

[n]Having sex with a person mainly in order to get money, gifts, or other things in the past 12 months (among those who ever had sex and had at least 1 sex partner in the past 12 months).

Table 3

Associations between lifetime sexual violence victimization and specific health conditions and risk behaviors among 13–24-year-old females and males in Lesotho — Violence Against Children and Youth Survey (VACS), 2018.

Characteristics of interest	Females				Males			
	Unadjusted		Adjusted		Unadjusted		Adjusted	
	OR (95 % CI)	*p* value	aOR (95 % CI)	*p* value	OR (95 % CI)	*p* value	aOR (95 % CI)	*p* value
Health conditions								
Experienced mental distress in the past 30 days[a]								
Serious mental distress (Ref. no mental distress)	5.3 (3.8–7.3)	**<0.0001**	4.8 (3.5–6.7)	**<0.0001**	1.1 (0.1–8.2)	0.941	0.8 (0.1–6.8)	0.872
Moderate mental distress (Ref. no mental distress)	2.3 (2.0–2.8)	**<0.0001**	2.2 (1.8–2.7)	**<0.0001**	1.7 (1.0–3.1)	0.068	1.5 (0.9–2.7)	0.134
Ever had self-harm behaviors[b] (Ref. no self-harm behaviors)	7.3 (5.0–10.8)	**<0.0001**	7.8 (5.2–11.6)	**<0.0001**	5.2 (1.2–22.7)	**0.030**	4.4 (1.1–17.8)	**0.039**
Ever had suicidal thoughts (Ref. no suicidal thoughts)	4.5 (3.5–5.7)	**<0.0001**	3.9 (3.1–4.9)	**<0.0001**	3.0 (1.3–6.9)	**0.008**	2.5 (1.0–6.3)	**0.046**
Ever had an STI[c] (Ref. never had an STI)	2.1 (1.7–2.7)	**<0.0001**	1.7 (1.3–2.2)	**<0.0001**	7.2 (3.2–16.3)	**<0.0001**	5.7 (2.5–12.9)	**<0.0001**
HIV-positive (Ref. not HIV-positive)	1.5 (1.1–2.0)	**0.025**	1.2 (0.9–1.6)	0.323	0.9 (0.2–3.7)	0.981	1.2 (0.3–4.6)	0.808
Risk behaviors								
Binge drinking in the past 30 days[d] (Ref. no binge drinking)	2.5 (1.7–3.6)	**<0.0001**	1.8 (1.3–2.7)	**0.001**	3.4 (1.7–6.8)	**0.001**	2.2 (1.1–4.5)	**0.030**
Drug use in the past 30 days[e] (Ref. no drug use)	1.4 (0.7–2.6)	0.346	1.1 (0.5–2.1)	0.814	2.6 (1.2–5.7)	**0.015**	2.0 (0.9–4.4)	0.099
Infrequent condom use in the past 12 months[f] (Ref. frequent condom use)	1.5 (1.1–1.9)	**0.003**	1.4 (1.1–1.9)	**0.014**	2.9 (1.5–5.6)	**0.001**	2.9 (1.5–5.5)	**0.002**
Multiple sex partners[g] in the past 12 months (Ref. no multiple sex partners)	1.7 (1.4–2.2)	**<0.0001**	1.7 (1.3–2.1)	**<0.0001**	2.3 (1.3–4.2)	**0.006**	2.0 (1.1–3.7)	**0.025**
Transactional sex[h] in the past 12 months (Ref. no transactional sex)	1.9 (1.3–2.9)	**0.002**	2.0 (1.3–3.1)	**0.001**	1.5 (0.3–6.5)	0.581	1.5 (0.3–6.3)	0.594

Bold font indicates statistical significance.

Acronyms: aOR = Adjusted odds ratio; CI = Confidence interval; STI = Sexually transmitted infection.

Note: All statistical analyses took into account the complex survey design of the Lesotho VACS, 2018.

Unadjusted model = Unadjusted association between lifetime sexual violence and outcome of interest.

Adjusted model = Controlled for age group, educational level, marital status, and food insecurity.

[a]Measured using the Kessler K6 scale by asking respondents series of questions about their mental health during the past 30 days. Moderate mental distress was defined as scoring 5 ≤ K6 scale <13. Serious mental distress was defined as scoring ≥13 on the K6 scale.

[b]Ever tried to hurt themselves on purpose in any way.

[c]Includes respondents who were ever diagnosed with an STI or ever had a genital sore or ulcer.

[d] Drinking ≥4 drinks of alcohol in a row on one or more days in the in the past 30 days.

[e] Used drugs such as dagga, prescription pills, injection drugs, ecstasy, or sniffed any chemical such as petrol or glue in the past 30 days.

[f] Sometimes or never using condoms when having sex with someone in the past 12 months (among those who ever had sex and had at least 1 sex partner in the past 12 months).

[g] Having sex with more than one person in the past 12 months (among those who ever had sex).

[h] Having sex with a person mainly in order to get money, gifts, or other things in the past 12 months (among those who ever had sex and had at least 1 sex partner in the past 12 months).