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Gender Differences in the Association Between Childhood Sexual Abuse and Risk Behaviors Among People Living with HIV in Haiti

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Abstract

Research shows that in the Caribbean one-third of people living with HIV continue to engage in unprotected sexual practices. Childhood sexual abuse (CSA) and HIV-related risk behaviors have been found to play a contributory role in HIV transmission. We aimed to analyze gender differences in the association between CSA and substance use and sexual risk behaviors among Haitians living with HIV. A total of 276 HIV-positive individuals participated in this study with 56% experiencing sexual abuse during childhood. Results showed that participants who experienced CSA had increased odds of hazardous drinking compared to those who did not experience CSA; men (OR 2.9, 95% CI 1.2–7.3) and women (OR 2.5, 95% CI 1.2–5.6). While, marijuana use was only significantly associated in women (OR 5.2, 95% CI 2.1–13.5). For sexual risk behaviors, unprotected sex was significantly associated in both men (OR 3.0, 95% CI 1.3–7.1) and women (OR 2.0, 95% CI 1.5–7.7) who experienced CSA. Results of this study underscore the need for further research to better understand the role of gender in the relationship between CSA and risky behaviors among PLWH.

Introduction

Advancements in the treatment of HIV infection have reduced the number of AIDS-related deaths in Haiti in the last decade. This can be attributed to the changes in the antiretroviral treatment guidelines and increased availability which have improved the efficacy of the implementation of the HIV care continuum in the Caribbean resulting in an increased number of people living with HIV (PLWH) (Costa et al., 2018). In Haiti, 67% of PLWH

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know their status and 85% are taking antiretroviral medication (UNAIDS, 2018). Although many PLWH have reduced their transmission risk, evidence has shown that close to a third may still be engaging in unprotected sexual practices (Teitelman et al., 2016); however, the proportion of PLWH that are virally suppressed and potentially not at risk for transmitting the virus is unknown. According to Angulo-Arreola and Colleagues, sexual transmission continues to account for 90% of new HIV cases in Haiti (Angulo-Arreola, Bastos, & Strathdee, 2017). There are no current estimates on the percentage of PLWH who remain sexually active in Haiti, but a recent study in Jamaica reported that 35% of HIV-positive persons continue to engage in unprotected sexual practices after testing positive (Ncube et al., 2017).

In Haiti, social and behavioral factors play an important role in the spread of HIV. Some of these factors include multiple sexual partners, transactional sex, inadequate condom use and substance abuse (Carver, 2014; Duncan, 2010). These behaviors have the potential to increase the risk for HIV transmission among HIV-negative partners as well as the risk for re-infection with a new HIV strain among PLWH (Kalichman, 2011). Similarly, traditional gender roles may also drive the HIV epidemic in this region. The theory of gender and power states that sexual division of power increases women's vulnerability for acquiring HIV (Wingood & DiClemente, 2000); and evidence shows that Haitian women living with HIV who are aware of the risks of unprotected sex may fear their partners' violent behavior if they initiate a discussion about condoms (Purcell, 2012).

Worldwide, 18% of females and 8% of males have suffered sexual abuse prior to age 18 (WHO, 2017). The data on the rates of childhood sexual abuse (CSA) in Haiti is limited, and relatively little has been published on the relationship between CSA and HIV-related risk behavior in the country. In 2012, results from a large scale survey on lifetime childhood sexual violence concluded that Haiti had the highest prevalence rates of sexual abuse for both females (25.7%) and males (21.2%) (CDC, 2015). CSA may increase the risk of HIV transmission and it is estimated that between 30% and 53% of PLWH have experienced sexual violence during their childhood and adolescence (Henny et al., 2012). Moreover, CSA increases the risk for substance abuse and sexual risk behaviors (Scheidell et al., 2017), multiple sex partners (Do & Meekers, 2009), impulsive sexual behavior and unprotected sex (Thompson et al., 1997). A systematic review demonstrated that sexual risk behaviors were almost two times more common among adults who experienced CSA compared to their counterparts (Abajobir et al., 2017).

PLWH with a history of CSA are more likely to abuse drugs and alcohol than adults without a history of CSA (Shin et al., 2009). A study comparing gender differences on alcohol use among people with a history of childhood abuse showed that men had an eight fold increased risk and women a seven fold increased risk for heavy alcohol use compared to those who had not been abused (Bensley et al., 2000). While another study showed that impulsive behavior was significantly associated with alcohol abuse and revictimization among women (Barahmand et al., 2016). In general, studies have identified associations between CSA and alcohol use (Draucker & Mazurczyk, 2013) with few in the Caribbean (Jeremiah et al., 2017; Longman-Mills et al., 2013) and one study in Haiti that showed alcohol abuse was one of the drivers for the HIV epidemic in Haiti (Malow et al., 2013).

The literature suggests that the long-term effects of CSA vary by gender. Studies analyzing the effect of gender on the relationship between CSA and substance use have yielded mixed results, with some studies finding a relationship between these variables only among women (Lansford et al., 2010; Tonmyr & Shields, 2017) while others have found significant relationship only among men (Schilling et al., 2007; Widom, 2007). Studies analyzing the role of sexual risk behaviors also show gender differences with one study demonstrating physical abuse being associated with sexual risk behaviors in men but not in women (Yoon et al., 2018). Similarly, a meta-analysis and review article examined the association between CSA and sexual risk behaviors by gender and found that there were greater odds of sexual risk behaviors among women (OR = 2.72) than men (OR = 1.69) (Abajobir et al., 2017). Studies analyzing gender differences in the association between CSA and HIV-related risk behaviors in Haiti have not been conducted.

Currently, there are no studies analyzing the impacts of CSA on sexual risk and substance use among PLWH in Haiti. The following exploratory study analyzed the associations between CSA and HIV-related risk behaviors (substance use and sexual risk behaviors) among Haitian men and women living with HIV. We expect that people who had experienced CSA will report greater degrees of hazardous drinking, drug use, and sexual risk behaviors and that gender differences will be observed.

Methods

Study Population

A total of 276 HIV positive Haitian men and women completed baseline data collection between 2009 and 2013 as part of a longitudinal study conducted in Port-au-Prince, Haiti. A total of 49% of men and 63% of women reported CSA. To be eligible, participants had to be between 18 and 60 years old, have documentation of HIV seropositivity, report at least one episode of unprotected anal or vaginal sex and recent alcohol consumption in the past 90 days. This study was approved by the Institutional Review Board of Florida International University and the Ethics Committee of the GHESKIO Centers.

Measures

The survey instruments used were translated into Creole then back-translated and reviewed by a Cultural Linguistic Group to ensure cultural appropriateness and relevance.

Childhood Sexual Abuse—The main outcome was measured using the Childhood Trauma Questionnaire (CTQ); for this study, only the sexual abuse subscale consisting of five items was used (Fink, 1995). Participants were asked about their experiences with sexual abuse during their childhood. All questions utilized a five-point Likert scale yielding a maximum score of 25. Scores were dichotomized into moderate/severe (8–13) versus all others (0–7), based on previous studies among drug-using populations. Cronbach's alpha for this scale in the present sample was .86.

Alcohol Abuse—The Alcohol Use Disorders Identification Test (AUDIT) is a 10-item survey that measures alcohol consumption and drinking behavior over the past 30 days

(Saunders, 1993). Responses on this 10-item measure are scored from 0 to 4, with a maximum possible score of 40; higher scores indicate problematic drinking. The scores were dichotomized with numbers 8 categorized as hazardous drinking. Cronbach's alpha for this scale in the present sample was .94.

Drug Abuse—Drug abuse was measured using the following questions: “*Have you ever used [substance] in the last 30 days?*” (Y/N). The following drugs were measured using this format: marijuana, cocaine, heroin, and glue inhalation.

Sexual Risk Behaviors—Multiple sexual partners were dichotomized as participants reporting 0 – 1 or 2 sexual partners in the last 90 days. Unprotected sexual acts were dichotomized into those reporting none versus at least one vaginal or anal sex episode without using a condom in the last 90 days.

Analysis

All statistical analyses were performed using SPSS Statistics pack version 25.0 Chicago, IL. Pearson's correlations, student's t-test (for means), and median tests were used to compare characteristics between people with and without CSA. Chi-square was used to determine whether there were differences between men and women in terms of their experiences of childhood sexual abuse, sexual risk and alcohol and drug use. Logistic regression was used to calculate adjusted odds ratios and 95% CI for associations between CSA and HIV-related risk behaviors (sexual risk, alcohol and drug use) by gender. Gender was also tested as an effect modifier on the associations between CSA and HIV-related risk behaviors. We controlled for age, education and AIDS diagnosis.

Results

Sample Characteristics of PLWH with CSA by gender

Both men and women reported sexual abuse (men 49% vs. women 63%), with age and number of sexual partners in the last 90 days as the only two demographic variables that were significantly different between these two groups. The mean age for men was 38 ($SD = 9.5$) years old and for women was 35 ($SD = 7.8$) years old. The mean number of sexual partners for men was 2.2 ($SD = 2.3$) and for women was 4.3 ($SD = 7.9$). We did not find gender differences in education, reporting a regular place to live, or HIV characteristics (ever being diagnosed with AIDS and currently taking antiretroviral medication). Similarly, hazardous drinking was not significantly different between men (40%) and women (54%). See Table 1.

Associations between CSA and HIV-related risk behavior outcomes by gender

When the association between CSA and alcohol use was analyzed, men and women who experienced CSA showed an increased risk for hazardous drinking compared to those who did not experience CSA with the risk for hazardous drinking being greater among men (OR=2.9; 95% CI: 1.2, 7.3) than women (OR=2.5; 95% CI; 1.2, 5.6). For the association between CSA and drug use, marijuana use was only significant in women (OR 5.2, 95% CI 2.1 –13.5) but not in men (OR 2.3, 95% CI .08–7.2). CSA was not significantly associated

with heroin, cocaine and glue inhalation in men or women. For the association between CSA and sexual risk behaviors, CSA was significantly associated with unprotected sex in men (OR 3.0, 95% CI 1.3–7.1) and women (OR 2.0, 95% CI 1.5–7.1). But was not significantly associated with number of sexual partners for both men and women. Gender did not modify CSA and HIV-related risk behaviors (sexual risk and alcohol and drug use).

Discussion

The present study examined the associations between CSA and HIV-related risk behaviors (sexual risk and alcohol and drug use) among Haitian men and women living with HIV. Our findings indicate that women who experienced CSA are at greater risk for marijuana use than men who experienced CSA. Our results also showed that both men and women who experienced CSA are at risk for hazardous alcohol use and sexual risk behaviors in adulthood.

This study found a significant relationship between CSA and hazardous alcohol use among men and women living with HIV. This finding is in line with several studies reporting CSA as a risk factor for alcohol abuse among men and women (Cerezo & Pérez-García, 2019). Including, a study done in the Caribbean which showed that child maltreatment increased the risk for alcohol abuse in adulthood (Longman-Mills et al., 2013). However, no studies have analyzed this relationship among PLWH in Haiti. These results are in accordance with the self-medication theory suggesting that people who suffered sexual trauma use alcohol and drugs as a means of escaping aversive emotional symptoms, thus reinforcing substance use as a negative self-regulation reinforcement model (Garey et al., 2015). Additionally, adults with a history of CSA may experience long-term difficulties with emotional regulation and more often engage in emotionally avoidant coping behaviors including drug and alcohol abuse (Tull et al., 2015).

When we analyzed the association between CSA and drug use women were at a greater risk for marijuana use compared to men. Epidemiological data from Haiti shows that the most commonly used drugs are marijuana, cocaine, and to a lesser extent, heroin (Angulo-Arreola et al., 2017). In this study, the reasons for marijuana use among PLWH were not determined, and no published study has explored attitudes and beliefs about marijuana use among women. It would be interesting to understand the main drivers of marijuana use in this setting, especially since U.S. studies show higher marijuana consumption among men than women (CDC, 2015); however, recent epidemiological data in the U.S. is showing that the gap is narrowing (NIDA, 2015). Research on marijuana use among women shows that the increasing marijuana consumption may be due to greater levels of anxiety, stress or depression (Calakos et al., 2017).

In this study, close to 13% of men and 35% of women reported unprotected anal or vaginal sexual acts. These individuals were less likely to have used condoms in the last 90 days, thereby increasing the risk of HIV transmission. Although the data on sexual risk behaviors in the Caribbean is limited, our results are similar to a study done in Jamaica where 11% of PLWH reported no condom use during sex, putting their partners at risk for HIV transmission (Ncube et al., 2017). Similarly, but not statistically significant, women reported

a higher number of sexual partners than men. Given that traditional gender roles play a significant factor in power and control, which may increase sexual and other forms of violence by intimate partners in Haiti (Gage & Hutchinson, 2006); the higher number of sexual partners among women may be associated with substance abuse, violence and HIV. Similar to a study on gender violence which showed that sexual violence, alcohol abuse, and low perceived risk of HIV infection among women was associated with a greater number of sexual partners (Pitpitan, 2012; Steffenson, 2008).

Results from this study suggest that PLWH who experienced CSA are more likely to engage in sexual risk behaviors. This finding is well-established in the literature, exposure to sexual abuse during childhood increases the risk for sexual risk behaviors later in life (Abajobir et al., 2017). The developmental traumatology model proposes that maltreatment-related stress leads to behavioral, cognitive and biological changes in sexually abused children, increasing the risk for internalizing disorders (behavioral disinhibition), externalizing disorders (difficulties with negative emotions and coping with stressful situations), and substance use throughout the lifespan of the individual (De Bellis, 2001). This theory demonstrates that risky sexual behaviors may be used as a coping mechanism to deal with negative emotions when confronted with stressful situations in adulthood increasing the likelihood of using maladaptive coping mechanisms, such as alcohol and drugs, to cope with the trauma leading to sexual risk behaviors, including unprotected sexual encounters (Senn, 2007; Yoon et al., 2018). The social cognitive theory also suggests that adults who suffered sexual abuse have reduced self-efficacy for negotiating safe sex with a partner or feel that condom negotiations will produce negative expectations with a partner thus, putting themselves at a greater risk for HIV transmission (Thompson et al., 1997).

There is limited research on effective interventions for high-risk HIV populations of PLWH and even less for the ones who experienced CSA. Only two interventions have been developed in the U.S., one aimed at reducing HIV risk behavior and increasing medication adherence among men and women who had experienced CSA (Wyatt, 2013), and a second that compared trauma-focused versus present-focused interventions among women who reported CSA (Spiegel, 2004). To our knowledge, interventions for high-risk HIV populations who had experienced CSA have not been developed in the Caribbean. In Haiti, gender inequality, economic dependence on men, low levels of education, traditional gender roles and early sexual debut increase the risk for HIV infection (Angulo-Arreola et al., 2017). The outcomes of this study may pave the way to develop a targeted intervention incorporating trauma-informed approaches to reduce substance use and sexual risk behaviors as well as taking into consideration the social and cultural environment in Haiti.

Our study had several limitations including the use of convenience sampling and missing data for several variables. All participants were recruited from a health care facility in Haiti. Thus, these findings may not be generalizable to PLWH in Haiti. Since the data were based on self-report, participants were asked to recall events dating back to their childhood, which may have resulted in confusion or inaccurate responses. Also, participants may have responded to questions in a manner that reflected social desirability bias. However, our study findings have brought new insights on substance use and sexual risk behaviors among HIV-positive men and women in Haiti and contribute to the body of literature.

Conclusions

This study demonstrated that PLWH who experienced CSA are at risk for substance abuse and risky sexual behaviors in adulthood. Although this is well described in the literature, to date, this is the only study to show gender differences on the association between CSA and HIV-related risk behaviors among Haitians living with HIV. These results may shed light on the importance of developing a risk reduction intervention as part of the strategy to reduce the impact of the HIV epidemic in Haiti. Thus, a tailored intervention for Haitians living with HIV targeting not only risky behaviors but also taking into account Haiti's social and cultural system, may have the potential to mitigate HIV transmission rates in this population.

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Table 1

Demographic Characteristics Comparing Men and Women Living with HIV with CSA

Characteristics	Men (n =58)	Women (n = 98)	<i>p</i>
Demographic Characteristics			
Age, mean (SD)	38.3 (9.5)	35.0 (7.8)	.002
Marital Status, No (%)			.92
Single	23 (20%)	39 (25%)	
Married	8 (7%)	10 (6%)	
Separated	13 (11%)	35 (22%)	
Co-habitation	51 (43%)	87 (56%)	
Education, No (%)			.14
6 th grade or less	45 (38%)	104 (67%)	
Some High School	40 (34%)	55 (35%)	
High School Diploma	3 (2%)	6 (4%)	
Some College	4 (3%)	2 (1%)	
Regular place to live, No (%)	27 (23%)	26 (17%)	.91
HIV Characteristics No (%)			
Have you even been diagnosed with AIDS	57 (49%)	96 (62%)	.53
Currently on ART	72 (61%)	130 (84%)	.45
Sexually Abused, No (%)	57 (49%)	98 (63%)	.88
Hazardous Alcohol Use, No (%)	47 (40%)	84 (54%)	.42
Number of sexual partners in the last 90 days, mean (SD)	2.2 (2.3)	4.3 (7.9)	.014

Table 2. Associations Between CSA and Sexual Risk Behaviors Among Men and Women Living with HIV

	MEN				WOMEN				TOTAL			
	CSA		OR (95% CI)		CSA		OR (95% CI)		CSA		OR (95% CI)	
	Yes (n)	No (n)	P value		Yes (n)	No (n)	P value		Yes (n)	No (n)	P value	
Hazardous drinking												
Yes	47	26	.05	2.9 (1.2–7.3)	84	52	.01	2.6 (1.2–5.6)	131	78	.001	3.0 (1.7–5.2)
No	10	16			14	23			24	42		
Marijuana												
Yes	17	6	.12	2.3 (.08–7.2)	34	6	.001	5.2 (2.1–13.5)	51	12	.01	3.3 (2.0–7.7)
No	26	22			6	55			85	77		
Inhalant, glue												
Yes	3	0	.09	1.0 (0.4–3.2)	8	1	1.4	1.1 (.9–9.6)	11	1	1.0	7.7 (1.2–20)
No	40	28			85	60			125	88		
Sex trade												
Yes	22	15	1.4	1.3 (.76–3.1)	21	22	1.7	1.1 (.8–4.5)	97	43	1.4	1.7 (.95–2.7)
No	49	22			68	21			43	44		
Unprotected sexual acts												
Yes	32	12	.05	3.0 (1.3–7.1)	35	48	.04	2.0 (1.5–7.7)	80	61	.05	1.4 (1.9–6.3)
No	24	27			34	49			73	47		
Sexual Partners												
Yes	42	26	.07	.15 (.6–17.1)	84	51	.09	.42 (.10–1.7)	126	77	1.0	.76 (.25–2.1)
No	12	27			35	34			47	61		

Note: Odds Ratios above 1 indicate higher prevalence of HIV risk behaviors among HIV-positive individuals who experienced childhood sexual abuse. Adjusted for age, education and HIV status.