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Elevated trauma exposure and mental health burden among men who have sex with men in Vietnam

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Abstract

The purpose of this study was to characterize trauma exposure and mental health burden among men who have sex with men (MSM) in Hanoi, Vietnam. Participants comprise 100 HIV-positive and 98 high-risk, HIV-negative MSM, ranging from 18 to 29 years of age. Data were collected using the Childhood Trauma Questionnaire, Traumatic Events Inventory, Patient Health Questionnaire-9, Generalized Anxiety Disorder-7, and PTSD Symptom Scale. A subset of participants (n = 12) were also interviewed to evaluate community perception of the prevalence, causation, and available treatment options for mental health issues within the MSM community in Vietnam. In our sample, 23.2% reported having experienced moderate-to-severe childhood physical abuse; 18.7% physical neglect; 13.6% emotional abuse; 11.1% emotional neglect; and 26.8% sexual abuse. Such trauma exposure continued into adulthood and manifested most commonly in the form of interpersonal violence. Approximately 37.4% of the sample met the criteria for probable PTSD; 26.8% for moderate-to-severe depression; and 20.2% for moderate-to-severe anxiety. Neither exposure nor mental health burden differed by serostatus. Linear regression revealed that childhood emotional abuse was the only sub-type of trauma significantly associated with depression, anxiety, and PTSD symptoms. The majority of interviewees believed that mental health burden was higher among MSM relative to the general population and attributed this to their vulnerability to interpersonal violence and lack of available coping resources. However, few believed that these mental health issues warranted clinical attention, and only one participant was able to identify a mental health service provider. Our findings suggest that trauma exposure and mental health burden are prevalent among MSM, irrespective of serostatus, and much higher than what has been previously reported among the general population in Vietnam.

Keywords

health disparities, HIV, mental health, men who have sex with men, Vietnam

Introduction

A recent meta-analysis of trauma exposure among sexual minorities in the United States suggests that, on average, sexual minorities were two to three times more likely than their heterosexual peers to experience sexual abuse, parental physical abuse, and assault at school (Friedman et al., 2011; Roberts et al., 2010, 2012). This elevated risk of trauma exposure often continued into adulthood and manifested in heightened exposure to interpersonal violence, hate crimes, and ongoing minority stress and socioeconomic strain (Jorm et al., 2002; Roberts et al., 2010; Whetten et al., 2008). Gay, bisexual, and lesbian persons

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who report such discriminatory experiences and interpersonal trauma are at greater risk for suicidal and non-suicidal self-injury (Marshal et al., 2011). Data from the National Epidemiologic Survey on Alcohol and Related Conditions further suggest that sexual minorities are twice as likely to meet the criteria for Post-Traumatic Stress Disorder (PTSD) over their lifetime, which can be largely accounted for by their differential childhood and lifetime trauma exposure (Roberts et al., 2010). Compared to heterosexual men, gay and bisexual men, in particular, appear at an elevated lifetime risk for developing mood (42.3% vs. 19.8%) and anxiety (41.2% vs. 18.6%) disorders (Bostwick et al., 2010).

In contrast to what is known in Western countries, comprehensive data on sexual minority trauma exposure and mental health in other parts of the world appear relatively lacking. Much of what is known draws from the public health literature on "men who have sex with men" (MSM), which refers to a category of men who, irrespective of sexual orientation, have same-sex sexual relations (Young & Meyer, 2005). While limiting, these data provide some of the first, if not the only, glimpses into the disparities existing among this population worldwide. A qualitative study by DiStefano (2008) among young Japanese sexual minorities, for example, noted the high prevalence of PTSD and suicidal ideation among them. Examining the experiences of MSM living in Shanghai, Liu and Choi (2006) drew attention to the entrenched stigma MSM experienced and the complicated, often anxiety-inducing, strategies they must use to navigate their social, familial, and professional relationships. In Thailand, sexual minority students were more likely to endorse depressive symptoms or report suicidal attempt or ideation than their heterosexual peers over an academic semester (Sopitarchasak et al., 2017). Similarly, in India, approximately one-fourth to one-half of sampled MSM have been found to meet the cut-off for clinical depression, which was significantly associated with HIV risk behaviors like having unsafe anal sex and higher number of sexual partners (Safren et al., 2010; Sivasubramanian et al., 2011). Comparable data are lacking for MSM in Vietnam.

In Vietnam, a meta-analysis by García et al. (2012) suggested that HIV prevalence among MSM has increased from 9.4% in 2006 to 20% in 2010, contrasting the decline noted in surrounding Southeast Asian countries. Multiple studies have linked this epidemic to the burden of stigma and mental disorders among sub-groups of MSM (Biello et al., 2013; Goldsamt et al., 2014; Ha et al., 2015; Vu et al., 2016). Similar to the rising visibility of LGBT communities that Liu and Choi (2006) noted in Shanghai, major urban centers in Vietnam like Hanoi and Ho Chi Minh City have witnessed increased LGBT-related activities and community-based activism (Horton, 2014). This sharply contrasts with the climate of the late 1990s and early 2000s when homosexuality was nearly synonymous with the HIV epidemic and the "social evils" targeted by the government for eradication. Still, sexual stigma has been noted in the recent literature to exert ongoing effects on media representation, social and familial evaluation, sex education, and MSM's perceptions of and encounters with HIV prevention services (Horton, 2014; Philbin et al., 2018; Thi et al., 2008; Vu et al., 2016).

While much is known about how sexual stigma shapes the social and healthcare experience of adult MSM, less is known about how it may affect these men's differential lifetime exposure to trauma. Gender and sexual nonconformity, from an early age onwards, can be particularly salient in male-centric contexts like Vietnam where family (*gia đình*) often serves as the economic, social, and affective center for people, and men are seen as the pillars that uphold that structure. In many parts of Vietnam today, threats and acts of physical punishment remain a common means of disciplining boys into their future roles as the carrier of the family's lineage and honor (Rydstrøm, 2016). In the country, heterosexual desire and practices are seen as reflections of masculine characters (*tính cách*) and accomplishments (Horton & Rydstrom, 2011). Therefore, men who are perceived to deviate from these practices are often labeled as "hens," "gasoline mixed with oil" (*xăng pha nhớt*), or homosexual (*bê đê*) (Linh & Harris, 2009). Due to this overall negative perception of homosexuality within Vietnam, those suspected of being homosexual may be at increased risk for discrimination or abuse within the family and school environment (Horton, 2014).

To elucidate the childhood and lifetime effects of sexual minority status among this population, this cross-sectional, mixed-method study assessed exposure to major traumatic events and mental health outcomes (depression, anxiety, and PTSD) among high-risk, HIV-negative MSM, and HIV-positive MSM. A subset of these men was then interviewed about their perceptions of trauma prevalence within the Vietnamese MSM community and its effects on mental well-being. In doing so, this article aimed not only to contribute towards our nascent understanding of trauma exposure and mental health burden among Vietnamese MSM, but also to identify the potential discrepancies between actual and perceived trauma and mental health burden, which may influence treatment-seeking behaviors.

Methods

Study site

Vietnam is home to approximately 97 million people (World Bank, 2019a). Since the country's adoption of *Doi Moi* (renovation), which transitioned the country into a market-based economy, Vietnam has witnessed tremendous socioeconomic changes that have led to the country being touted as a "development success story" (Bodewig et al., 2014: xvii). Against this changing landscape of

sexual mores and opportunities (Phinney, 2009), the first case of HIV was diagnosed in Ho Chi Minh City in December 1990 (Montoya, 2010). In its infancy, the epidemic was concentrated among intravenous drug users (IDUs), female sex workers, homosexual men, and foreigners, which contributed to the image of HIV as a Western contamination resulting from social and moral inadequacies that could be and had to be surveilled and disciplined (Montoya, 2012). This changed in 2004 when Vietnam became the first country in Asia to receive funding from the President's Emergency Plan for AIDS Relief (PEPFAR). Funding from PEPFAR contributed towards the expansion of community-based prevention programs and a shift towards treatment of HIV/AIDS as a human rights issue, rather than as a social evil (Montoya, 2018; Sabin et al., 2019). In 2019, the prevalence of HIV in Vietnam was estimated to be 0.25% among the general population (President's Emergency Plan for AIDS Relief 2019). This percentage, however, masks the disproportionate burden among key populations like MSM and the complex social dynamics that shape the HIV epidemic within the country today (Dao et al., 2013).

Table 1. Demographic and behavioral characteristics of 198 men who have sex with men who completed survey interviews in Hanoi, Vietnam.

Variable	n	Percentage (%)
Sex		
Male	195	98.5
Trans woman	3	1.5
Age		
18–20	27	13.6
21–25	129	15.2
25–29	42	21.2
Migrant		
Yes	127	64.1
No	71	35.9
Education		
Some high school	5	2.5
High school graduate	49	24.9
Some university	74	37.6
Graduated university	69	35.0
Sexual orientation		
Đồng tính or gay	150	75.8
Bisexual, lúống tính, song tính	28	14.1
Chuyển giới (transgender)	3	1.5
Other (center, bottom, top, asexual)	17	8.6
Sexual identification		
Heterosexual only	2	1.0
Heterosexual mostly	–	–
Heterosexual somewhat more	1	0.5
Heterosexual/gay equally	10	5.1
Gay somewhat more	43	21.7
Gay mostly	44	22.2
Gay only	98	49.5
Religion		
Buddhist	11	5.6
Catholic/Protestant/Other	8	4.1
No religion	178	90.4
Salary (annual)		
0–35,000,000 đồng	33	16.8
35,000,000–55,000,000 đồng	50	25.5
55,000,0000–75,000,000 đồng	48	24.5
75,000,000–100,000,000 đồng	34	17.4
≥100,000,000 đồng	31	15.8

LGBT-related events and organizations proliferate in Hanoi, the country's capital. Research foundations and key population-led organizations like Lighthouse Enterprise have spearheaded numerous pride and community-strengthening events to de-stigmatize homosexuality and sensitize healthcare providers to the needs of key populations. Critical to this campaign has been the use of social media (Nguyen, 2019). In Hanoi, Facebook pages like G-Town (12,704 likes) and Gay Hà Nội Confessions (43,846 likes) are highly active platforms on which young MSM seek psychosocial support, health information, camaraderie, and perhaps even love. At the same time, as Horton (2014) has argued, representations of LGBT youths in mainstream media and in everyday life continue to be limited and often misinformed when present. Qualitative research conducted in Hanoi to-date suggests that even in a city in which abundant social spaces afforded to LGBT-identified individuals are available, many MSM continue to experience significant familial pressure to marry heterosexually and, while many may desire to live openly, most conceal their friendships in the LGBT community (*thế giới thứ ba*) from others (Bengtsson et al., 2013; Philbin et al., 2018).

Participants

This study was approved by the Institutional Review Boards for Emory University (IRB00097736) and Hanoi Medical University (HMU). Participants were recruited from out-patient clinics and community-based organizations, using venue-based sampling. In total, 198 participants (n = 100 HIV-positive, n = 98 HIV-negative) were recruited. The interviews were conducted by the first author and local research assistants in Vietnamese. All participants: (i) were 18–29 of age; (ii) were born biologically male; and (iii) reported having had anal sex with another man in the past six months. HIV-positive individuals qualified for the study if they tested positive for the HIV antibody and were receiving ART treatment at the time of enrollment. HIV-negative MSM qualified for participation if they tested negative for the HIV antibody and reported use of injection drugs, diagnosis of a sexually transmitted disease, and/or at least one incidence of unprotected receptive anal intercourse with a casual or sero-discordant main male sex partner in the past six months. As this study was nested within a larger study looking at HIV and PTSD

comorbidity, these selection criteria were chosen to identify individuals either living with or at high risk for contracting HIV. Evaluation of risk for contracting HIV was based on the MSM Risk Index (Smith et al., 2012), which is an instrument recommended by the Centers for Disease Control and Prevention (2018) for screening MSM.

Twelve participants, chosen to maximize differences in trauma exposure and mental health outcomes, were asked to return for a semi-structured interview, lasting 20–30 min, in which they reflected on the perceived trauma exposure and mental health burden of those in the MSM demographic relative to the general population. Half of these individuals were HIV-positive.

Demographics

Basic demographic information, including age, income, educational attainment, and migrant status, was collected via interview. Sexual orientation was assessed by having participants self-identify using the terminology with which they felt most comfortable. Using questions from the Klein Sexual Orientation Grid (Klein, 1978), participants also ranked their sexual attraction and sexual activity on a seven-point Likert scale, ranging from opposite-sex partners only (1) to same-sex sexual partners only (7). These data are summarized in Table 1.

Childhood Trauma Questionnaire (*CTQ*; Bernstein et al., 2003)

The CTQ is a standardized 25-item retrospective self-report instrument assessing exposure to childhood trauma and neglect. Domains assessed include: physical abuse and neglect, emotional abuse and neglect, and sexual abuse. Items are measured on a five-point Likert scale, ranging from "none" to "severe." In this study, the moderate-to-severe threshold was used to index childhood trauma exposure. Higher scores on the CTQ represent greater trauma severity. The CTQ has shown great validity and reliability in a number of clinical and community samples (Bernstein et al., 2003; Bremner et al., 2007; Jovanovic et al., 2009; Lick et al., 2013; Scher et al., 2001). The overall internal reliability of the scale was 0.88. Subscales of the CTQ had Cronbach alpha values ranging .54–.88, with the lower alphas reported for physical neglect ($\alpha = 0.54$) and emotional abuse ($\alpha = 0.67$).

Traumatic Events Inventory (*TEI*; Schwartz et al., 2005)

The TEI assesses lifetime exposure to 13 different traumatic events. For each category, participants are asked to recollect its frequency, earliest and most recent occurrence, and exemplar, including their feelings of terror, horror, or helplessness when that event occurred. Events were only recorded if they met the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) (American Psychiatric Association, 2000), that is, if the person had been directly exposed to or had witnessed actual or threatened death, serious injury, or sexual violence (American Psychiatric Association, 2000). Exposure to each category was dichotomized, with "1" representing exposure and "0" representing non-exposure. Higher scores indicate greater trauma exposure. Events relating to childhood trauma were excluded in the analysis to avoid overlap with the CTQ.

Patient Health Questionnaire-9 (PHQ-9; Spitzer et al., 1999)

The PHQ-9 is a nine-item self-report measure of depressive symptoms experienced over the past two weeks (Spitzer et al., 1999). Symptoms assessed are based on the DSM-IV (American Psychiatric Association, 2000). The PHQ-9 has been validated in primary care settings and in the general population, and has been shown to be sensitive to changes in depression outcomes over time (Löwe et al., 2004). Scores range from 0 to 27 and can be cut into five severity categories, using a recommended algorithm: minimal (0–4), mild (5–9), moderate (10–14), moderately severe (15–19), and severe (20–27). In this sample, internal consistency for the measure was 0.89.

Generalized Anxiety Disorder-7 (GAD-7; Spitzer et al., 2006)

The GAD-7 is a seven-item self-report measure of anxiety symptoms over the past two weeks. It has been shown to reliably screen for a range of anxiety disorders, including generalized anxiety disorder, social anxiety disorder, and panic disorder. The measure has been validated in both primary care patient and general populations (Löwe et al., 2008; Spitzer et al., 2006). Scores range from 0 to 21, and are scored using the following cut-offs: 0–5 (mild), 6–10 (moderate), and 15 and above (severe). In this sample, the calculated Cronbach alpha was .91.

PTSD Symptom Scale (PSS; Falsetti et al., 1993)

The PSS is a psychometrically valid 17-item self-report assessing PTSD symptomatology over the past two weeks (Falsetti et al., 1993). The instrument has been validated against the PTSD – Clinician Administered PTSD Scale, CAPS (Foa & Tolin, 2000; Foa et al., 1993). To meet probable DSM-IV criteria for PTSD, presence of a Criteria A trauma is needed alongside at least one intrusive symptom, three avoidance/numbing symptoms, and two

hyperarousal symptoms that have been present for at least one month. In this sample, Cronbach alpha was .90.

Translation of measures

Given the paucity of mental health research and funding within Vietnam, we decided to adapt existing mental health measures, rather than develop instruments locally. Use of psychiatric categories like PTSD, which are easily interpretable to international funders and researchers, can assist, in this case, in building an evidence base for the integration of mental health into HIV prevention in the country (Kohrt et al., 2011). To adapt the instruments locally, we used van Ommeren et al.'s (2016) five-step translation process, which has been recommended for adapting measures to use in novel contexts. The process has been used to adapt and validate a number of mental health and psychosocial instruments in different contexts like Nepal, Haiti, and Burundi (Kaiser et al., 2013; Kohrt et al., 2011; Ventevogel et al., 2014). The five steps are: a) translation, b) review by mental health professionals, c) focus group discussions, d) back-translation, and e) pilot of the measure. This procedure is intended to maximize conceptual, semantic, technical, and content equivalence of measures for use in a new language or age group (Flaherty et al., 1988). At each step, measures were evaluated for completeness, acceptability, and relevance through consultation with local and international experts who have previously worked with Vietnamese young MSM in both the United States and Vietnam. Following adminstration of the surveys, cognitive interviewing was used to examine how participants complete the instruments and the reasoning behind their responses (Willis, 2005).

Statistical analysis

All analyses were performed using R. To assess the internal reliability of each questionnaire, Cronbach α coefficients were calculated for each measure. Independent t-tests were used to evaluate between-group effects for continuous variables, and chi-square tests were used for categorical variables. To calculate the odds ratio for comorbid mental health conditions, a simple logistic regression was computed. A three-step hierarchical regression was also conducted to evaluate the relationships between trauma exposure and mental health outcomes (depression, anxiety, and PTSD scores). For each mental health outcome, age, migrant status, income (whether someone earned more than 35,000,000 đồng), and education (whether someone had entered university) were entered at the first step. In step 2, childhood and lifetime trauma exposure variables were entered. In step 3, HIV status was added to examine whether mental health outcomes differed in the context of HIV. To compare between the models, change in R^2 was calculated using ANOVA. The results of each subsequent step were only reported below if the change in R^2 was significant. Significance (α) was set at $p = .05$.

To provide additional context to the quantitative findings, interviews were transcribed and analyzed in Vietnamese. Specifically, one analyst (KT) read all interview transcripts and summarized information around prespecified themes.

Results

Demographics

Participants in the final sample were, on average, 23.0 years of age (SD = 2.7). All were born biologically male, but 1.5% of the sample were transgender. Approximately 64.1% of participants were internal migrants to Hanoi. Most had immigrated from provinces bordering Hanoi, including: Thái Bình, Nghệ An, Thanh Hóa, and Sơn La. Income was well-distributed among the five surveyed categories, with the majority (67.4%) earning 35–100 million đồng annually (approximately US$1500–4300). This is comparable to the national average and to what has been reported in other studies focusing on this population (General Statistics Office of Vietnam, 2018; Mimiaga et al., 2015; Vu et al., 2016b). All but 2.5% had graduated from high school, and approximately 72.6% had completed some university education. Relative to the national average (29%) (World Bank, 2019b), our sample was more highly educated, although this may primarily reflect rural–urban differences. When asked to specify their sexual orientation, most (77.8%) identified as being either "gay" or "đồng tính" (homosexual). On the Klein Sexual Orientation Grid, 95.5% reported feeling more attracted to the same sex than to the opposite sex within the past year; and 84.9% reported exclusive sexual activity with the same sex. In the sample, only 2.5% of participants had married heterosexually, although of those who had not, 30.3% expressed that doing so was at least of moderate importance to them. None of these demographic characteristics significantly differed by HIV status.

Childhood and lifetime trauma exposure

Using the recommended moderate-to-severe threshold for the Childhood Trauma Questionnaire (CTQ), 23.2% reported having experienced childhood physical abuse; 18.7% physical neglect; 13.6% emotional abuse; 11.1% emotional neglect; and 26.8% sexual abuse. There were no differences in overall childhood trauma exposure based on serostatus. While those HIV-positive were more likely to have reported childhood physical neglect at the moderate-to-severe level, this difference did not reach significance ($\chi^2(1) = 3.08$, $p = .08$).

Table 2. Means and standard deviations for sample of young men who have sex with men by serostatus.

Variable	Overall (N = 198)		HIV-negative group (n = 98)		HIV-positive group (n = 100)	
	M	SD	M	SD	M	SD
Average PHQ-9	7.5	6.0	7.7	6.4	7.4	5.6
Average GAD-7	5.8	5.3	5.7	5.6	5.3	5.0
Average PSS total	13.3	10.1	13.2	10.2	13.3	10.1
PTSD – Intrusive Symptom Cluster	3.4	3.0	3.4	2.9	3.5	3.1
PTSD – Hyperarousal Symptom Cluster	5.0	3.9	5.0	3.9	5.0	3.9
PTSD – Avoidant/Numbing Symptom Cluster	4.8	4.4	4.9	4.5	4.8	4.3
CTQ Total	41.0	11.7	41.0	11.2	41.0	12.2
Physical abuse	8.0	3.4	7.8	3.2	8.2	3.5
Physical neglect	7.4	2.6	7.1	2.4	7.7	2.8
Emotional abuse	8.8	3.2	8.9	3.0	8.8	3.5
Emotional neglect	9.6	3.7	9.8	3.8	9.3	3.7
Sexual abuse	7.2	3.6	7.4	3.7	7.0	3.6
Trauma exposure after 18	2.4	1.7	2.2	1.7	2.6	1.7

On the TEI, excluding events related to childhood trauma, participants reported an average of 2.4 (SD = 1.7) traumatic life events. The most frequent types of events that were endorsed include: sudden life-threatening illness (30.3%), experiencing or witnessing a serious accident or injury (24.8%), being attacked with or without a weapon by someone other than a significant other (15.2% and 19.2%, respectively), and witnessing family members or close friends getting attacked with or without a weapon (14.7% and 20.2%, respectively). Other types of traumas (15.7%), which were not on the TEI, were also frequently reported. The most common of these often related to parents' reactions when participants had come out as gay. The HIV + and HIV- groups did not differ in total trauma exposure. However, exposure to a sudden life-threatening illness ($\chi^2(1) = 22.09$, $p < .001$) and experience of sexual abuse between the ages of 14–17 ($\chi^2(1) = 5.10$, $p < 0.05$) were more frequently reported by those in the HIV-positive group, whereas experiences of natural disasters were more frequently reported by those HIV-negative ($\chi^2(1) = 5.30$, $p < 0.05$). Averages for the TEI and each CTQ subtype are provided in Table 2.

Mental health outcomes

Approximately 37.4% of the sample met the cut-off for PTSD, based on the DSM-IV criteria. Among those qualifying for a PTSD diagnosis, the mean PSS score was 20.5 (SD = 8.9). Among those who did not meet the criteria, the average was 9.0 (SD = 8.2). Neither the likelihood of qualifying for a PTSD diagnosis ($\chi^2(1) = 0.84$, $p > .05$) nor the severity of PTSD symptoms, $t(196) = -0.05$, $p < .05$, differed by HIV serostatus. Approximately 26.8% and 20.2% of the sample reported moderate-to-severe depression and anxiety symptoms over the past two weeks. Severity of depression, $t(192) = 0.37$, $p > .05$, and anxiety symptoms, $t(193) = 0.56$, $p > .05$, both did not differ by HIV serostatus. Averages for the mental health measures are summarized in Table 2.

Conditions were highly comorbid: participants who had either moderate-to-severe anxiety or depression were nearly three times more likely to meet the criteria for probable PTSD (odds ratio, OR = 3.73; 95% CI = 1.96–7.23, $p < .001$).

Predictors of mental health outcomes

Theoretically important demographic variables were first entered in a multiple regression analysis, including: age, migrant status, income, and university education. Both income and education were significant demographic predictors of their score on the PSS, although they had opposing effects. Specifically, while a higher income was associated with lower scores on the mental health inventories, having had some university education was associated with higher scores. The demographic model accounted for 9.3% of the variance in PTSD symptoms, 10.9% in depression, and 9.2% in anxiety. In the second step, subtypes of childhood trauma and cumulative lifetime trauma exposure were added. Of the trauma variables, only childhood emotional abuse predicted PSS ($\beta = 0.41$, $p < .001$), PHQ-9 ($\beta = 0.43$, $p < .001$), and GAD-7 ($\beta = 0.33$, $p < .01$); although the effect of university education and income remained significant. Step 2 significantly improved the fit of the model to the data compared to Step 1, $p < 0.01$. In the third step, HIV status was entered, but addition of the variable did not explain more of the variance in mental health outcomes, $p > 0.05$. Results of the three models are presented in

Table 3. Summary of hierarchical multiple regression analysis of mental health outcomes among young men who have sex with men (n = 194) recruited from community-based organizations and out-patient centers in Hanoi, Vietnam.

	Depression						Anxiety						PTSD					
Predictors	R^2	ΔR^2	F Change (p)	β Step 1	β Step 2	β Step 3	R^2	ΔR^2	F Change (p)	β Step 1	β Step 2	β Step 3	R^2	ΔR^2	F Change (p)	β Step 1	β Step 2	β Step 3
1. Age	0.11						0.09						0.09					
				0.11	0.12	0.12				0.10	0.10	0.11				0.06	0.07	0.07
Migrant				−0.09	−0.03	−0.03				−0.09	−0.05	−0.05				−0.04	0.02	0.02
Education				0.19**	0.17*	0.17*				0.17*	0.15*	0.15*				0.20**	0.19**	0.19**
Income				−0.24***	−0.22***	−0.22**				−0.22**	−0.21**	−0.21**				−0.21**	−0.19**	−0.19**
2. Physical abuse	0.25	0.14	5.71 (p < .001)				0.19	0.10	3.69 (p < .01)				0.21	0.12	4.33 (p < .001)			
					−0.06	−0.06					0.00	0.00					−0.06	−0.06
Physical neglect					0.03	0.03					0.01	0.01					0.03	0.03
Emotional abuse					0.43***	0.43***					0.33**	0.33**					0.41***	0.41***
Emotional neglect					−0.07	−0.07					−0.12	−0.12					−0.05	−0.05
Sexual abuse					−0.01	−0.01					0.04	0.04					−0.11	−0.11
Lifetime Trauma					0.02	0.02					0.05	0.06					−0.01	0.01
3. HIV status	0.25	0.00	0.00 (p > .05)				0.19	0.00	−0.08 (p > .05)				0.21	0.00	0.18 (p > .05)			
						−0.00						−0.02						0.03

Table 4. Summary of men who have sex with men interviewee characteristics (n = 12).

Participant	Group	Age group	CTQ Total	TEI after 18	PHQ-9	GAD-7
Phong	HIV + /PTSD +	20–25	51	4	Moderately Severe	Moderate
Thanh	HIV + /PTSD +	20–25	45	3	Moderately Severe	Mild
Quan	HIV-/PTD +	25–29	67	2	Mild	Negligible
Phuc	HIV-/PTSD-	20–25	44	5	Moderate	Mild
An	HIV-/PTSD +	20–25	43	1	Severe	Severe
Binh	HIV + /PTSD-	20–25	59	3	Minimal	Negligible
Bao	HIV + /PTSD +	20–25	54	5	Mild	Mild
Hao	HIV-/PTSD +	18–20	59	3	Severe	Severe
Chien	HIV-/PTSD-	20–25	54	6	Moderate	Mild
Trúống	HIV-/PTSD-	25–29	38	5	Minimal	Negligible
Dúóng	HIV + /PTSD-	25–29	30	4	Mild	Negligible
Bình	HIV + /PTSD-	18–20	59	5	Severe	Severe

Table 3. The final model (Step 2) explained 20.6% of the variance in PSS scores; 25.0% of the variance in PHQ-9 scores; and 19.0% of the variance in GAD-7 scores.

Perceptions of group trauma exposure and mental health burden

Information about the 12 individuals who had participated in qualitative interviews is presented in Table 4. Among the participants, most believed that mental illness was more prevalent among MSM like themselves because of self-stigma and social and familial stress, including: the pressure to get married and have children, to regulate their behaviors in public, and to manage what were often perceived to be fleeting romantic relationships. While most acknowledged that their sources of stress were not dissimilar from those of heterosexual men, they felt they confronted barriers unique to being MSM while having fewer coping resources available. In particular, nearly half of the interviewees felt that they were more vulnerable to interpersonal violence because their relationships were not legally recognized and, therefore, not socially accountable. Even when participants themselves were ready to come out, their partners often were not, and some worried this meant their partner would find another person or would eventually marry heterosexually. In our sample, interviewees varied in the number of individuals they had in their life who knew about their MSM status. While some were wholly public about their sexual orientation, the majority confided only in a few.

When presented with symptoms of different mental health disorders, participants estimated that the prevalence of depression ranged from 1% to 99%, and anxiety and PTSD from 5% to 99%, within the MSM community. The two individuals who believed that heterosexual men had higher rates of mental illness were unable to provide a reason as to why but noted that they had seen more cases of mental illness among their heterosexual counterparts. One participant also argued that heterosexual men may confront more social and financial stress than MSM because while heterosexual men often had a family to support, MSM did not. Only one participant was able to identify at least one place where MSM could receive psychological services in Hanoi. To increase access, one participant argued that community-based organizations are the linchpins, as young MSM like himself often did not have the resources to search widely, remained financially dependent on their parents, and were reluctant to interact with service providers outside the MSM community out of worry that they may not be understood. However, irrespective of access, five out of the 12 participants expressed that they would not utilize such services because they believed mental health issues should be self-managed and independently overcome.

The reasons motivating the decision to not seek mental health or psychosocial support were various. Reflecting on why he refused to seek help, one participant (An) argued, "I don't want to share my difficulties with others … Because if someone places their trust in another, there is no assurance it'll work out; they may be wounded again." Others drew attention to the difficulties they had in confiding in others and the stigma they felt when someone else knew of their mental distress:

> The time when I went to find a psychologist and couldn't find one, I talked to my boss and told him I needed to go see a psychologist; so, my boss gave me a questionnaire with 54 items to test for depression. My score was rather high. The day after I took the test, I told [my boss] I didn't need to see a doctor anymore. Even though I really needed it, I knew that even in social relationships, I need

> to be close [with the person] to be able to confide in them … Those who are depressed often create a shell for themselves so others will not know how they are. At the time, my boss intended to introduce me to someone, but I said I didn't need one anymore. (Thanh)

When making the decision to disclose, some participants shared that they would choose someone who had little bearing on their daily life as they feared that confiding in a close friend might increase the likelihood of their family members eventually learning not only about their mental distress, but also the causes of that distress:

> If those who were mentally ill can talk about their difficulties, about their thoughts, and about extreme conditions in society [*cực đoan trong xã hội*] and see that others are listening—then I think the mental health conditions … well, they're mental, right? Mental disorders are things in our minds that erupted. They are not things you are born with, so I think that if you can talk about the things [troubling you], then mental disorders would be greatly reduced. (Binh)

When asked to assess which of the traumatic events on the CTQ and TEI were likely to have the most detrimental long-term effects, childhood trauma was unanimously identified as the most impactful overall. This is because the acts are often perpetuated by caregivers, whom hypothetically should be the most trustworthy. Of the subtypes, childhood physical and sexual abuse were identified as the worst:

> When children are sexually abused, they will experience panic in future sexual situations … A normal person will already worry about those things. But when someone doesn't know anything about [sexuality] but has someone else force them do those kinds of things, they will feel scared and experience mental health issues [in the future]. (Bao)

Those who thought emotional abuse and neglect were most psychologically corrosive pointed to its lingering effect on confidence and perceived social support in adulthood:

> As humans, we all need to be loved, protected, [and] cared for to feel … to [find] happiness and meaning in life. But when you don't have family members who love you—when your family members don't care for one another—it will create a feeling of loneliness and isolation. That is, it will create stress, [a feeling of being] trapped, [and] a belief that your family life isn't whole … You will feel that everyone despises you and wants to replace you. That will create a psychological state where … You will feel as though you lost some [key] motivation, some confidence. From there, you will feel hopeless. (Phong)

Childhood trauma exposure was seen as having an added detrimental effect for MSM specifically because they were often left to wonder whether they had those experiences because of their sexual identity:

> A person who has the physical or mental attributes of a "homosexual person" will confront a lot of pressure from their family. Even though their parents may not display it publicly, in their hearts they will not care for the child or will feel tired [of the child]. The parents will create stress for their child by yelling at them, not taking them out to play, or by treating their siblings better. (Chien)

By comparison, being hit by a partner without a weapon (58.3%) and having a serious accident or sudden illness (33.3%) were often considered the least psychologically damaging due to their high frequency and perceived unavoidability. Participants also felt that they had greater control over their interactions with their partner than they did with their parents:

> I think that depending on the other person's personality, you can control what happens between you and that person. You can't hit your parents back, but you can hit your partner back. You can also use other strategies to defend yourself against your partner so that their behaviors exert less effect on you. (Chien)

Discussion

The present study investigated the prevalence of trauma exposure and mental health burden among a population of high-risk young men who have sex with men in Hanoi, Vietnam. Results of this study suggest that the rates of childhood sexual abuse observed in this sample exceed what has been noted in the general Vietnamese population, which is estimated to be around 7.1% on average among schoolchildren and 0.5% among Vietnamese men aged 15–24 (Li et al., 2015; Tran et al., 2017). While the estimates for physical and emotional abuse and neglect among the general population appear higher, as reported by Tran et al. (2017), these estimates should be interpreted in light of the different instruments and cut-off criteria used. In the childhood maltreatment questionnaire used by Tran and colleagues, endorsement of any one item on the maltreatment subscales qualified as exposure, while in our study, a moderate-to-severe threshold was used, leading to underestimation of less severe forms of abuse.

Our report of higher childhood sexual abuse among MSM is congruent with the existing literature, which suggests that male sexual minorities are nearly five times more likely to have experienced childhood sexual abuse compared to their heterosexual counterparts (Friedman et al., 2011). This disparity is much higher than what has

been noted among female sexual minorities. Given the study sample, much of the extant literature has not been able to discern why perpetrators disproportionately victimize sexual minority youths. However, as the worst trauma that sexual minorities report often occurred prior to age 12 (Roberts et al., 2010), when most have not come out, it is unlikely that public group affiliation drives the majority of cases. It is more likely that the gender non-conforming behaviors exhibited by sexual minority youths increase their likelihood of being targeted. Among our study participants, many reported experiencing physical and emotional abuse (e.g., being physically punished, being humiliated) because of their effeminate behaviors (e.g., preferring to play with girls) and being called derogatory names for homosexual men, even before coming out to others or coming to terms with their own sexuality. Thus, gender non-conforming behavior may increase male sexual minorities' vulnerability to other forms of childhood abuse and neglect, particularly in a Vietnamese context in which gender roles are more clearly formalized and segregated (Knodel et al., 2005; Schuler et al., 2006). Within the Vietnamese MSM community, for instance, it is not infrequent that individuals attribute different personality or physical characteristics to those who take on the receptive sexual position (*bot*/*thụ*) compared to those who take on the insertive sexual position (*top*/*công*). Specifically, those who were "top/công" were perceived to be more manly and able to pass as heterosexual, while those who were "bot/thụ" were perceived as more feminine and vulnerable. Future research should investigate cultural models of gender-typical behaviors in Vietnam and the degree to which transgressing these norms predicts childhood maltreatment above and beyond self-identified sexual orientation or same-sex sexual attraction.

Results from the TEI suggested that abuse often continued into adulthood and manifested as increased exposure to intimate partner violence (IPV). The mechanisms by which revictimization occurs among this population are unclear, as much of the IPV research in the country has focused on heterosexual relationships. Estimates of lifetime IPV among heterosexual men in Vietnam range from 36.6% to 60.6% (Luke et al., 2016; Nguyen, 2016; Vung & Krantz, 2009; Vung et al., 2009; Yount et al., 2015). While comparable data on MSM relationships in Vietnam are not available, research suggests that the prevalence of IPV among MSM may be similar, if not higher, than those observed in heterosexual relationships (Finneran & Stephenson, 2012; Greenwood et al., 2002; Houston & McKirnan, 2007; Murray & Mobley, 2009; Pantalone et al., 2011; Relf, 2001). MSM who had been exposed to IPV were more likely to report depression and substance abuse (Houston & McKirnan, 2007; Pantalone et al., 2011). Our results suggested that these issues may also be noted in MSM communities in Vietnam and appeared, from the qualitative data, to be normalized. In interviews, participants contrasted between their relationships and that of a heterosexual couple, believing that the latter carried more social and legal accountability. Given the variance with which these men were "out" to their family and members of the community, it is unclear how they differentially employ coping strategies (e.g., seeking social support, mental or emotional disengagement) in response to IPV and the degree to which IPV influences sexual negotiation within these relationships. Future research is needed to elucidate (i) the pathways through which early life adversity contributes to IPV exposure in adulthood, (ii) the cultural and social resources these men have at hand to manage such situations, and (iii) the possibilities for culturally sensitized interventions.

Our mental health results corroborated what has previously been reported among sub-populations of MSM in Vietnam. Among MSM who were also male sex workers, Biello et al. (2013) reported a preponderance of syndemic psychosocial issues, including depression, alcohol dependence, illicit drug use, sexual violence, and childhood sexual abuse. Almost half of their sample study reported two or more psychosocial problems, and each unit increase in psychosocial problems was associated with a 25–30% increase in the likelihood of having engaged in unprotected anal sex. Similarly, Goldsamt et al. (2014) have found that 58.2% and 19.0% of male sex workers in Hanoi, Ho Chi Minh City, and Da Nang met the criteria for clinically moderate levels of depression and anxiety, respectively. To the best of our knowledge, this study is the first to look at multiple mental health outcomes among a general sample of MSM. The rates of depression we found were higher than those previously reported by Vu et al. (2016) but may reflect our targeting of high-risk MSM. It is noteworthy that we found no differences in trauma exposure or mental health outcome among the HIV-positive and HIV-negative groups, which may suggest that risk in the two groups is continuous, rather than discrete.

Of the demographic variables and trauma sub-types, university education, income, and childhood emotional abuse were found to be most strongly associated with all three mental health outcomes. Given the cost of living within Hanoi, an annual salary below 35,000,000₫ may indicate an unstable source of income and/or familial disadvantage. Prospectively, such a significantly lower income may also force individuals to work in jobs or live in environments in which trauma exposure is more likely. Given the cross-sectional nature of this study, these causal relationships cannot be discerned; but future work is needed to track the long-term health outcomes of these men. Interestingly, those with some college education were more likely to have worse mental health outcomes than those without any. It may be that with increased education, individuals are more likely to recognize certain behaviors they had previously considered culturally normal as abusive (Korbin, 1980, 2002), and this new viewing of oneself as a victim may carry negative health consequences (Park et al., 2009).

The finding that childhood emotional abuse was most strongly associated with mental health outcomes statistically contrasts with what many participants themselves believe to be the most psychologically corrosive. One explanation for this disparity could relate to the continuity of trauma. Specifically, while accounts of childhood physical abuse often ended when participants entered adolescence, the emotional abuse participants reported were often enduring, continuing even after participants had moved away through the form of phone calls and visits home. Increasingly, research points to the detrimental effects of childhood emotional abuse, which, in some cases, can exceed those of physical and sexual abuse (Riggs, 2010). In particular, early exposure to insensitive, dismissive, or inconsistent parenting can contribute towards the development of insecure attachment among children and hinder the development of positive self-models, or views of oneself as capable of engendering positive effect on the environment and in others (Riggs, 2010). These negative cognitive models can have a ripple effect through adulthood, influencing personal and social outcomes like experiences of psychological distress, somatization, self-esteem, and the quality of social relationships. It is noteworthy that while emotional abuse often co-occurs with other forms of childhood maltreatment, it independently predicts mental and physical functioning in adulthood (Spertus et al., 2003). What most contrasts emotional abuse with acts of physical and sexual abuse, though, is that its experience is often more diffuse, complicating empirical and individual definition (Stoltenborgh et al., 2012).

While discussion of any trauma exposure may be stigmatizing, the experience of childhood emotional abuse within Vietnam appears even more so depending on the identity of the perpetrator. In her ethnographic research among Vietnamese women experiencing IPV, Gammeltoft (2016, p. 428) differentiated between "deliberate silence" in which the person chose to keep silent and "subconscious silence" in which the person avoided and disengaged with what had occurred (Gammeltoft, 2016). Linh, one of the women Gammeltoft interviewed, for instance, was able to articulate, however reluctantly, the physical and emotional abuse her husband perpetuated, but was seemingly unable to convey in words the distress she felt at her mother's repeated insistence that she remain a good mother and wife. What was silenced in Linh's account, Gammeltoft argued, were the inequalities of engrained gender relations and kinship practices in Vietnam. Concomitantly, the emotional experience of betrayal by a romantic partner may qualitatively differ from that by a parent. In his study of emotional experiences in Vietnam, Tran (2015) differentiated between *cảm xúc*, or private feelings that had become more fashionable to talk about and attend to among the Vietnamese middle class, and *tình cảm*, which refers to the affection between an authority figure (e.g., parent, teacher) and someone of a lower social status (e.g., child, student). Contrasting *cảm xúc*, *tình cảm* is more durable and hierarchically organized, involving the acceptance of a Confucian socio-moral order that prioritizes the parent–child relationship and privileges notions of *hy sinh*, or sacrifice (Shohet, 2013). Where *tình cảm* emphasizes social obligation, *cảm xúc* prioritizes instead self-discovery and individual feelings. Future research should investigate the ways in which cultural models about sentiment and affection influence perception of and response to emotional abuse vis-à-vis the identity of the perpetrator.

While demonstrating the pronounced mental health burden within this population, this study also raises urgent questions relating to their unmet, even unrecognized, needs at a community and healthcare level. Up until 2004, Vietnam's mental health policy centered on providing treatment for epilepsy and schizophrenia (Niemi et al., 2010); and the remnants of this remain today where many MSM themselves associate mental disorder with those two conditions alone. A survey of residents in the greater Hanoi area in 2013 found that the majority of participants held negative attitudes towards psychiatrists, and that this negative bias was more pronounced among males and those who were religious (Ta et al., 2017). Concomitantly, the majority were in favor of compulsory hospitalization for those who were mentally ill (77.4%), forfeit of their voting rights (74.0%), and revocation of their driver's license (67.7%) (Laqua et al., 2018). So, too, most of the participants in our study did not see their mental distress as warranting clinical attention, and many were not even aware of mental health services available in the city. While mirroring the situation in other low- and middle-income countries, the high prevalence of mental disorders among MSM in Vietnam may contribute significantly to the HIV epidemic and drive risk-taking behaviors among this population. Integration of mental health screening into HIV prevention and intervention services may aid in expanding the recognition of mental health issues and linkage to care within the community. Given the trust that MSM place in community-based organizations (CBO), mental health capacity building at the CBO level may be particularly useful not only to expand care but also to destigmatize mental illness among this population.

Findings from this study should be interpreted in light of their limitations. First, because participants were drawn from two sexual health clinics and a community-based organization, the study sample may be biased towards those who have better access to healthcare services and are therefore less marginalized. Previous work by Goldsamt et al. (2014) suggests that the majority of male sex workers surveyed in Hanoi and Ho Chi Minh City have never been to a healthcare service. In a community sample of MSM in An Giang, a semirural province in southern Vietnam, Pham et al. (2015) similarly found that only

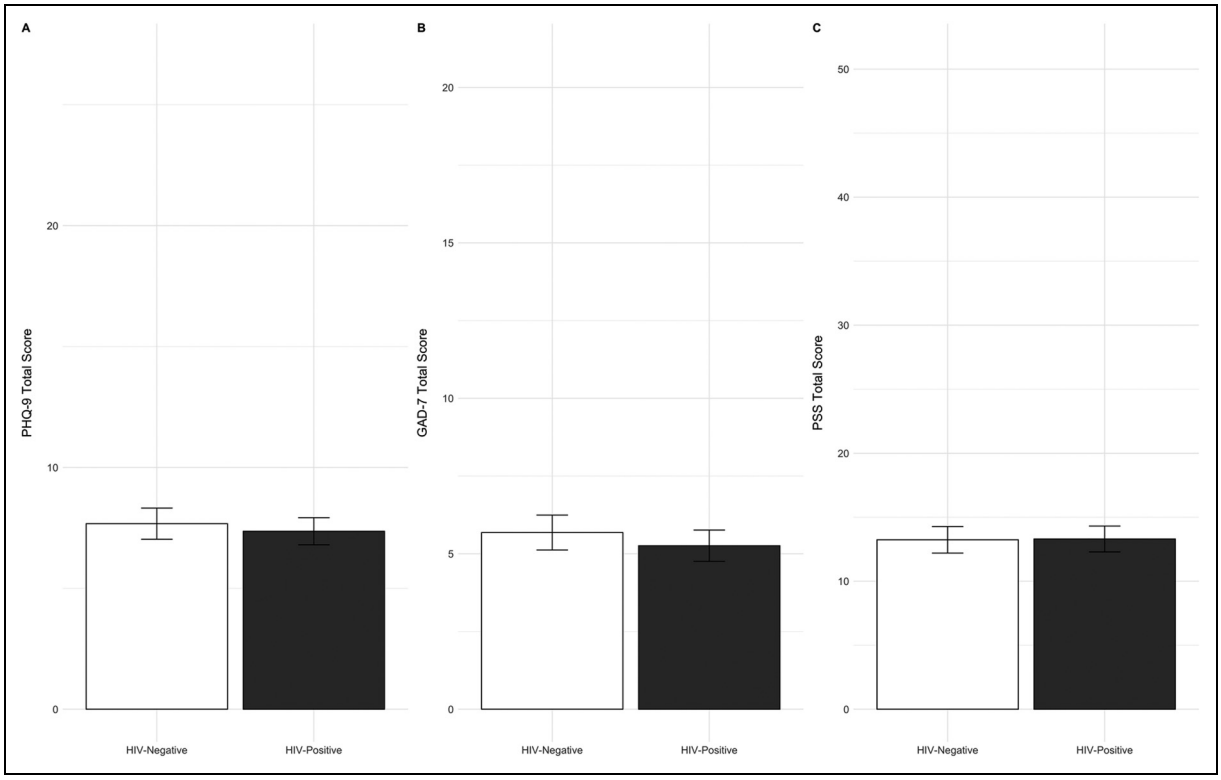

Figure 1. Mean symptoms for a) depression (PHQ-9), b) anxiety (GAD-7), and c) PTSD (PSS) by serostatus among a sample of 198 men who have sex with men. Average score on the PHQ-9 was 7.7 ± 6.4 (± sd) for HIV-negative participants and 7.4 ± 5.6 for HIV-positive participants; 5.7 ± 5.5 on the GAD-7 for HIV-negative participants and 5.3 ± 5.0 for HIV-positive participants; and 13.2 ± 10.2 on the PSS for HIV-negative participants and 13.3 ± 10.1 for HIV-positive participants. Scores did not differ by serostatus. Error bars indicate standard errors of the mean.

19.2% had been tested for HIV in the previous year. Given the sensitivity of the research questions and the reliance on individuals who were already receiving care, there is reason to suspect that our findings are lower bound estimates of trauma exposure and mental health burden among this community.

Second, the low Cronbach alpha values for two of the CTQ sub-scales are of concern, as a cut-off of 0.70 is typically recommended (Streiner, 2003). Cognitive interviews with participants suggested that some items in the physical neglect subscale (e.g., having to wear dirty clothes) were considered inappropriate as they may primarily reflect the family's financial circumstances, rather than malicious intent. Some participants recalled their parents spending most hours of the day, if not days of the week, working in the marketplace and their having to cook and wash for themselves; and this was not considered atypical. Similarly, items understood to constitute emotional abuse (e.g., having their parents say hurtful things to them, including wishing they had never been born) may not carry the same emotional salience as in a Western context. Ethnographic work by Rydstrøm (2016), for instance, suggested that at least in parts of rural Vietnam, fathers are perceived not only to have the right but also the duty to discipline their sons. Not infrequent were threats to beat the child to death (*đánh chết*) or to cut off their hands and legs (*cắt tay chân*). Differences in how trauma is understood, experienced, and processed may thus impact their reported prevalence or strength of association with later mental health outcomes. It is thus imperative to elucidate how particular features of trauma (e.g., duration, onset, identity of perpetrator) differentially tap into existing cognitive and affective models that people have.

Conclusion

From 1995 to 2015, HIV/AIDS worldwide received approximately US$144 in development assistance per disability adjusted life year, while funding for mental health amounted to less than US$1 per disability adjusted life year (Charlson et al., 2017). In spite of the recognized impact of mental disorders on HIV transmission and treatment outcomes, a significant treatment gap for mental disorders exists worldwide (Wainberg et al., 2014). Data from this study underscore the enormity of mental health and trauma exposure among Vietnamese MSM specifically. Among those surveyed, childhood maltreatment—and sexual abuse, particularly—was pronounced and associated

with symptoms of depression, anxiety, and PTSD in adulthood. Approximately a fourth to a fifth of the sample met the cut-off for moderate-to-severe depression and anxiety, and nearly 40% met criteria for probable PTSD diagnosis. In adulthood, trauma exposure manifested most commonly in the form of IPV, which appeared normalized by participants in qualitative interviews. In spite of this pronounced mental health burden, most were not aware of any mental health and psychosocial support programs in Hanoi. Review of the extant literature suggests that this reflects both the nascent mental health infrastructure within the country, as well as the pervasive stigma that surrounds mental illness in Vietnam. Given the success of Vietnamese community-based organizations in recruiting young MSM into HIV prevention and intervention initiatives, future studies should evaluate the feasibility, acceptability, and efficacy of mental health interventions delivered by CBO staff in reducing mental health symptoms and HIV transmission risk behaviors among this population.

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