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Association between stigma towards HIV and MSM and intimate partner violence among newly HIV-diagnosed Chinese men who have sex with men

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Abstract

Background: HIV- and MSM-related stigma are well documented as common for Chinese men who have sex with men (MSM) living with HIV, yet there is sparse literature on intimate partner violence (IPV) and its relationship with stigma in this vulnerable population. To evaluate the association between HIV-stigma and stigma related to homosexuality and IPV among newly HIV-diagnosed MSM in China.

Methods: Data were collected in the baseline survey among newly HIV-diagnosed Chinese MSM in a randomized clinical trial via face-to-face interviews. Univariate logistic and multivariate logistic regression analyses were performed to assess the associations between IPV and HIV- and MSM-related stigma.

Results: Of 367 newly HIV-diagnosed Chinese MSM, 23.7% experienced any IPV, including 16.6% physical, 7.4% psychological and 5.2% sexual IPV. Positive associations were found between HIV- and MSM-related stigma and IPV. Men with high HIV-related stigma (score ≥ 27) were 1.67 times as likely to experience any IPV as those with low stigma (adjusted odds ratio [AOR]: 1.67, 95% confidence interval [CI]: 1.02–2.76). Men with high MSM-related stigma (score ≥ 6) were 1.99 times as likely to experience any IPV as those with low stigma (AOR: 1.99, 95% CI: 1.18–3.36).

Conclusions: HIV- and MSM-related stigmas was positively associated with IPV experiences among newly diagnosed MSM in China. The manner in which stigma may exacerbate IPV, and/or the influence of IPV on worsening stigma should be further evaluated. The high prevalence of IPV and stigma in this population suggests that interventions should be taken to reduce stigma and prevent this risky behavior among MSM.

Keywords: HIV-related stigma, MSM-related stigma, Intimate partner violence, Men who have sex with men, HIV

Background

Intimate partner violence (IPV) generally can occur between current or former spouses, common-law spouses, and nonmarital dating partners, whether of the same opposite sex [1]. Studies of IPV commonly consider physical, sexual, and/or psychological violence in the context of intimate partnership [2]. Men who have sex with men (MSM) in America are more likely to experience IPV during their lifetime than heterosexual men [3, 4]. Globally,

prevalence rates among MSM range from 32 to 78% for experiencing any form of IPV [5, 6], 12 to 45% for physical IPV [7, 8], 5 to 33% for sexual IPV [8, 9], and 28 to 64% for emotional/psychological IPV [10, 11]. IPV has been associated with higher levels of potentially risky sexual behaviors, such as condomless sex [5, 12, 13], group sex [14], commercial and casual sex, as well as increased risks for substance abuse [15] and sexually transmitted infection [16].

The experience of IPV may be common among MSM who are HIV-positive in America [9, 12, 17]. HIV-status and related HIV stigma may play an important role in IPV within intimate partnerships among MSM. HIV-related stigma can be defined as the procession of

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prejudice, discounting, discrediting, and discrimination toward people living with HIV and the individuals, groups, and communities they are connected with [18–20]. HIV stigma can further involve labeling, segregating, stereotyping or discriminating towards people living with HIV via social, economic, or political means [21]. Experiencing HIV-related stigma is not uncommon for MSM living with HIV/AIDS [22, 23], and may play a role in IPV. Among pregnant women living with HIV in South Africa, for example, greater HIV-related stigma was associated with greater combined physical and psychological IPV [24], and women living with HIV reporting high HIV-related stigma reported more frequent physical IPV, social isolation and helplessness [25]. Despite the large number of MSM in China, little is known about the IPV experience among those living with HIV.

In China, stigma concerning HIV can be coupled with stigma concerning same-sex sexual identity. Stigma towards same-sex sexual identity is common in China [26, 27]. Same-sex partnerships challenge the traditional Chinese emphasis on heterosexual child bearing for continuity of family “lines” [28]. Moreover, a person with higher stigma consciousness may be more likely to perceive discrimination towards one’s self [29]. Gay men who in violent relationships may be more likely to keep the intimate partner abuse experience in silence and stay in the violent relationship when stigma consciousness is high [30].

HIV- and MSM-related stigma [27, 31] are well documented as common for Chinese MSM living with HIV, yet there is sparse literature on IPV and its relationship with stigma in this vulnerable population [16]. We evaluated the prevalence of lifetime IPV and its relationship with HIV- and MSM-related stigma among newly diagnosed HIV-infected MSM in Beijing, China.

Methods

Study design and participants

The data for this analysis were from the baseline surveys of a randomized clinical trial called the China MP3 Project. This project had two study phases and was described in detail elsewhere [32]. In brief, men who lived in Beijing, self reported having sex with another man, were 18 years or older and willing to provide written informed consent were recruited (via short message service, website advertisement, gay-frequented venue outreach and peer referral) and tested for HIV in the Phase I and completed a cross-sectional survey. Participants were compensated 30 Chinese yuan (nearly US\$15) for completing the survey. Phase I participants who were diagnosed with HIV were invited to participate in the Phase II randomized intervention clinical trial (RCT) evaluating the efficacy of text messaging and peer-led counseling on linkage to HIV care and initiation of antiretroviral therapy. Phase II participants were compensated 100 Yuan (about 15 dollars) per

study survey completion. A total of 367 newly diagnosed MSM consented and were enrolled in the Phase II RCT. Data from both Phase I cross-sectional survey and Phase II baseline survey were used in this analysis.

This study was approved by the institutional review boards of the National Center for AIDS/STD Control and Prevention of the Chinese Center for Disease Control (No. X120331206) and Prevention and Vanderbilt University with the number (IRB# 111144).

Data collection and measurement

Sociodemographic and behavioral data, including age, ethnicity, marital status, current living status, education, employment, health insurance plan, personal monthly income, place of birth, registered Beijing household (or *Hukou*), length of residence in Beijing, illicit drug and alcohol use, IPV, and HIV- and MSM-related stigma were collected through face-to-face interviews by trained clinical nurse. Drug use was assessed as type of substance used (ever) and a follow-up for any substance used for frequency of use in past 3-months (never to 4 or more times a week). For alcohol use, participants were asked the item on frequency of use. Participants were then categorized for use in the past 3 months at ever versus (vs) never use.

HIV-related stigma was measured with Steward’s HIV stigma scale, which includes four subscales: enacted stigma (e.g., “Have you been refused housing because people suspect you have HIV?”); felt stigma (e.g., “How many people think people with HIV are paying for their karma or sins?”); vicarious stigma (e.g., “A village/community ostracizes someone because they have HIV?”); and internalized stigma (e.g., “that you are paying for karma or sins because you have HIV?”) [33]. In the present study, 37% of 367 newly HIV-diagnosed Chinese MSM did not respond to five or more of 10 enacted stigma items. Thus, the enacted stigma items were disregarded, and the remaining three subscales were included in the data analysis. Cronbach’s alpha values were 0.97, 0.92 and 0.94 for felt, vicarious, and internalized stigma, respectively.

Each subscale contains 10 items, and each item was scored from 0 (“never” or “no one” or “not at all”) to 3 (“frequently” or “most people” or “a great deal”), with Total possible scores thus ranged from 0 to 90, with higher scores indicative of more HIV-related stigma we created a dichotomous variable of below vs. at or above the mean. For dichotomous representation of this variable, we defined high as at or above the sample mean.

MSM-related stigma was measured with Neilands’ homosexual stigma scale [34]. This scale was initially published in English by Diaz and was translated into Mandarin [35]. Its Chinese version further reviewed by two study team members who are fluent in both Chinese

and English. This scale consists of perceived stigma (e.g., “How often have you felt that your homosexuality hurt and embarrassed your family?”) and enacted stigma (e.g., “How often have you lost your friends because of your homosexuality?”).

This scale contains 10 items, each scoring from 0 (“never”), 1 (“once or twice”), 2 (“a few times”), to 3 (“many times”). Cronbach’s alpha values were 0.71, 0.81 and 0.76 for perceived, enacted and total MSM-related stigma, respectively. The total score of MSM-related stigma ranges from 0 to 30, with higher scores reflecting more MSM-related stigma. For analyses, we created a dichotomous variable of below vs. above the mean.

Physical IPV experience was defined as ever being in an intimate relationship with a person who physically hurt the participant, including pushing, hitting you, holding you down, attempting to strangle or attacking with a weapon. Psychological IPV experience was defined as ever being in an intimate relationship with a person who imparted threats, insults, maltreatments, or fears. Sexual IPV experience was defined as ever being in an intimate relationship with a person who forced to have sexual activities that were uncomfortable or undesired. Any IPV was defined as any one of the above. All IPV variables were dichotomous (ever vs. never).

Statistical analysis

The primary dependent variable was any IPV. The main predictors of any IPV were HIV-related stigma and MSM-related stigma. HIV-related stigma and MSM-related stigma were each classified into two categories: high if a score is greater than or equal to the mean and low if the score is less than the mean [36, 37]. Simple descriptive statistics (mean, standard deviation [SD], proportion) of the main outcome variables and predictors were calculated. Chi-square tests were used to evaluate factors associated with IPV, HIV-related stigma, and MSM-related stigma in univariate analyses. Univariate logistic regression was used to assess the association between HIV-related stigma and MSM-related stigma and IPV. Multivariate logistic regression was performed to evaluate the association while adjusted for other factors including age, marital status, health insurance and place of birth. Considering the possible interaction between HIV-related stigma and MSM-related stigma, we further ran the model with an interaction term to see if there is an interaction. All analyses were performed using SAS (SAS 9.4, SAS Institute, Inc., Cary, NC).

Results

Demographic and behavioral characteristics

Of 367 newly HIV-diagnosed Chinese MSM participants, the majority were ≤ 30 years old (65%), Han ethnic (93%), single (88%), college educated (77%), employed

(83%), born in an urban region (71%), and migrants (82%). About half had health insurance (55%). In the past 3 months, half reported alcohol use (55%) and one third reported illicit drugs use (33%).

The mean score of HIV-related stigma among the study population was 26.9 (standard deviation [SD]: 20.9), 14.7 (SD: 11.2) for felt stigma, 4.9 (SD: 6.5) for vicarious stigma, and 8.1 (SD: 9.0) for internalized stigma, respectively. The mean score of MSM-related stigma for participants were 6.1 (SD: 4.3), 4.6 (SD: 2.8) for perceived stigma, and 1.02 (SD: 2.1) for enacted stigma, respectively. Participants who experienced IPV were less likely to have health insurance. Single men were more likely to have a higher HIV-related stigma (score ≥ 27). Younger age (≤ 30 year) and being born in the countryside were associated with a ‘high’ MSM-related stigma score (≥ 6) (Table 1).

Prevalence of intimate partner violence and HIV- and MSM-related stigma

Nearly a quarter (23.7%) of participants reported ever experienced IPV. The most common type of IPV was physical IPV (16.6%) and followed by psychological (7.4%) and sexual (5.2%). Nearly half (50.4%) of participants were categorized in the ‘high HIV-related stigma’ group (score ≥ 27), 53.1, 35.7 and 42.0% in the ‘high felt stigma’ group (≥ 15), ‘high vicarious stigma’ group (≥ 5) and ‘high internalized stigma’ group (≥ 8), separately. Totally 56.4% had high MSM-related stigma (score ≥ 6), 53.7% had high perceived stigma (≥ 5), 33.8% had high enacted stigma (≥ 1) (Table 2).

Crude analyses suggested that any IPV experiences including physical, psychological and sexual were higher among participants with high HIV- and MSM-related stigma than among those with low stigma, but the differences were statistically significant only for any IPV and not for any individual types of IPV. For the subgroups of HIV- and MSM related stigma, sexual IPV experience was higher among participants with higher vicarious HIV-related stigma and enacted MSM-related stigma, and psychological IPV and any IPV experiences were higher among participants with higher enacted MSM-related stigma (Table 2).

Associations between HIV- and MSM-related stigma and any IPV experience

The interaction between HIV-related stigma and MSM-related stigma terms in the multiple variate modeling was not statistically significant. Both HIV- and MSM-related stigmas were positively associated with any IPV in univariate logistic regression analyses. After controlling for age, marital status, health insurance and place of birth, high HIV-related stigma (score ≥ 27) was associated with a 67% increase in the odds of any IPV experience (adjusted OR [AOR]: 1.67, 95% confidence interval [CI]: 1.02–2.76);

Table 1 Sociodemographic and behavioral associates of any IPV and stigma among 367 participants

Factors	Any IPV N (%)	P	HIV-related stigma(≥27) N (%)	P	MSM- related stigma (≥6) N (%)	P
Age, year		0.24		0.83		0.04
≤ 30	61 (25.6)		119 (50.0)		125 (52.5)	
> 30	26 (20.2)		66 (51.2)		82 (63.6)	
Ethnicity		0.97		0.51		0.71
Han	81 (23.7)		174 (50.9)		192 (56.1)	
Other	6 (24.0)		11 (44.0)		15 (60.0)	
Marital status		0.59		0.05		0.56
Single	78 (24.2)		169 (52.3)		184 (57.0)	
Currently married	9 (20.5)		16 (36.4)		23 (52.3)	
Currently living with		0.83		0.58		0.36
Male sexual partner	18 (22.8)		42 (53.2)		41 (51.9)	
Others	69 (24.0)		143 (49.7)		166 (57.6)	
Education		0.12		0.47		0.96
< High school	15 (30.0)		23 (46.0)		29 (58.0)	
High school	12 (34.3)		15 (42.9)		20 (57.1)	
College	60 (21.3)		147 (52.1)		158 (56.0)	
Employment		0.38		0.97		0.11
Employed	72 (23.7)		154 (50.7)		178 (58.6)	
Unemployed	7 (18.0)		19 (48.7)		16 (41.0)	
Student	8 (33.3)		12 (50.0)		13 (54.2)	
Personal monthly income, Chinese yuan		0.14		0.54		0.19
< 5000	58 (26.4)		108 (49.1)		118 (53.6)	
≥ 5000	29 (19.7)		77 (52.4)		89 (60.5)	
Have a health insurance plan		0.04		0.58		0.60
Yes	40 (19.7)		105 (51.7)		117 (57.6)	
No	47 (28.7)		80 (48.8)		90 (54.9)	
Place of birth		0.52		0.20		< 0.01
Urban	59 (22.8)		125 (48.3)		133 (51.4)	
Rural	28 (25.9)		60 (55.6)		74 (68.5)	
Registered Beijing household (<i>Hukou</i>)		0.91		0.31		0.95
Yes	16 (24.2)		37 (56.1)		37 (56.1)	
No	71 (23.6)		148 (49.2)		170 (56.5)	
Time living in Beijing, year		0.15		0.43		0.11
< 5	49 (26.9)		88 (48.4)		95 (52.2)	
≥ 5	38 (20.5)		97 (52.4)		112 (60.5)	
Drinking alcohol in the past 3 months		0.64		0.65		0.13
Yes	46 (22.8)		104 (51.5)		121 (59.9)	
No	41 (24.9)		81 (49.1)		86 (52.1)	
Using illicit drugs in the past 3 months		0.48		0.37		0.29
Yes	26 (21.5)		65 (53.7)		73 (60.3)	
No	61 (24.8)		120 (48.8)		134 (54.5)	

Note: IPV Intimate partner violence, MSM Men who have sex with men

Table 2 HIV- and MSM-related stigma by IPV type among 367 participants

Stigma	Participants N(%)	Any IPV		Physical IPV		Psychological IPV		Sexual IPV	
		N(%)	P	N(%)	P	N(%)	P	N(%)	P
HIV-related stigma			0.05		0.36		0.18		0.11
< 27	182 (49.6)	35 (19.2)		27 (14.8)		10 (5.5)		6 (3.3)	
≥ 27	185 (50.4)	52 (28.1)		34 (18.4)		17 (9.2)		13 (7.0)	
Felt stigma			0.24		0.66		0.29		0.17
< 15	172 (46.9)	36 (20.9)		27 (15.7)		10 (5.8)		6 (3.5)	
≥ 15	195 (53.1)	51 (26.2)		34 (17.4)		17 (8.7)		13 (6.7)	
Vicarious stigma			0.13		0.95		0.07		0.04
< 5	236 (64.3)	50 (21.2)		39 (16.5)		13 (5.5)		8 (3.4)	
≥ 5	131 (35.7)	37 (28.2)		22 (16.8)		14 (10.7)		11 (8.4)	
Internalized stigma			0.11		0.12		0.79		0.33
< 8	213 (58.0)	44 (20.7)		30 (14.1)		15 (7.0)		9 (4.2)	
≥ 8	154 (42.0)	43 (27.9)		31 (20.1)		12 (7.8)		10 (6.5)	
MSM-related stigma			0.01		0.11		0.05		0.28
< 6	160 (43.6)	28 (17.5)		21 (13.1)		7 (4.4)		6 (3.8)	
≥ 6	207 (56.4)	59 (28.5)		40 (19.3)		20 (9.7)		13 (6.3)	
Perceived stigma(vs.)			0.19		0.14		0.55		0.71
< 5	170 (46.3)	35 (20.6)		23 (13.5)		11 (6.5)		8 (4.7)	
≥ 5	197 (53.7)	52 (26.4)		38 (19.3)		16 (8.1)		11 (5.6)	
Enacted stigma			< 0.01		0.32		< 0.01		< 0.01
< 1	243 (66.2)	46 (18.9)		37 (15.2)		10 (4.1)		6 (2.5)	
≥ 1	124 (33.8)	41 (33.1)		24 (19.4)		17 (13.7)		13 (10.5)	

Note: IPV Intimate partner violence, MSM Men who have sex with men

high MSM-related stigma (score ≥ 6) was associated with double odds of any IPV experience (AOR: 1.99, 95% CI: 1.18–3.36). In subgroup analysis, higher enacted MSM-related stigma was associated with double odds of any IPV experience (AOR: 2.13, 95% CI: 1.29–3.50) (Table 3);

Table 3 Associations between HIV- and MSM-related stigma and any IPV among 367 participants

Covariate	Any IPV	
	Crude OR (95% CI)	AOR(95% CI)
HIV-related stigma (< 27 vs. ≥ 27)	1.64 (1.01–2.68)*	1.67 (1.02–2.76)*
Felt stigma (< 15 vs. ≥ 15)	1.34 (0.82–2.18)	1.38 (0.84–2.27)
Vicarious stigma (< 5 vs. ≥ 5)	1.46 (0.90–2.40)	1.50 (0.91–2.47)
Internalized stigma (< 8 vs. ≥ 8)	1.49 (0.92–2.41)	1.53 (0.93–2.51)
MSM-related stigma (< 6 vs. ≥ 6)	1.88 (1.13–3.12)*	1.99 (1.18–3.36)**
Perceived stigma (< 5 vs. ≥ 5)	1.38 (0.85–2.25)	1.46 (0.89–2.39)
Enacted stigma (< 1 vs. ≥ 1)	2.12 (1.29–3.46)**	2.13 (1.29–3.50)**
HIV-related stigma*MSM-related stigma	0.56 (0.20–1.59)	0.54 (0.19–1.54)

Note: IPV Intimate partner violence, OR Odds ratio, AOR Adjusted odds ratio (adjusted for age, marital status, health insurance and place of birth); CI

Confidence interval, MSM Men who have sex with men

*Significant at $P < 0.05$; **Significant at $P < 0.01$

Discussion

In this study, we found that there was a significant association between any IPV experience and stigma among newly HIV-diagnosed Chinese MSM. Higher levels of both HIV- and MSM-related stigma indicated significantly increased odds of reporting any form of IPV after adjusted for potential confounders. Higher level of HIV-related stigma may play a role in social isolation and helplessness among victims of IPV [25]. Sexual minority MSM who are acutely aware of stigma (high stigma consciousness) may fear discrimination and negative treatment from others in the community, limiting accessing resources or seeking outside help [30]. Previous studies have identified the relationship between IPV and internalized homophobia, homophobic discrimination among MSM [38, 39], European American lesbian and bisexual women [40], gay and lesbian [30], and gay, bisexual, transgender, and queer people [41]. The association between stigma and IPV also can be elucidated since stigma consciousness is positively correlated with depression [42, 43], which is strongly associated with IPV [5, 44–47]. Individuals who experience IPV may report internalized stigma as the most common source of stigma. Anticipated stigma may occur when they expect

to be negatively judged or devalued if they disclose IPV experiences to others [48]. It remains unclear whether IPV precedes or follows stigma or if the two co-occur, creating environments that perpetuate a cycle of isolation and abuse. Further mixed methods research could provide critical information about the patterning of these experiences with MSM living with HIV.

The observed prevalence of any IPV (23.7%) in our study is in accordance with the rates among Chinese MSM in other studies (24–29%) [14, 16], but is higher than general males (7.6%) [49]. The prevalence of physical IPV experience in our study participants is higher than that among MSM in a Shanghai study (16.6% vs. 6.6%), whereas the rates of psychological IPV (7.4% vs. 8.2%) and sexual IPV (5.2% vs. 5.5%) were nearly the same [16]. The primary limitation of this study is the nature of cross-sectional surveys, which precludes assessing the temporal relationship between stigma and IPV. The association between HIV- and MSM-related stigma and IPV experience is likely bidirectional: maybe MSM with HIV- and MSM-related stigma are more likely to experience IPV, and it is also possible that IPV experience makes MSM more concerned about stigma. Either way, further research – preferably longitudinal in nature - is needed to better characterize these phenomena. Second, our study was conducted among newly HIV-diagnosed MSM in one city, and the study conclusion may have limited generalizability among MSM in other parts of China. Data from multi-center large sample study may provide more generalizable evidence. Third, we investigated the IPV experience through a simple item questionnaire and did not investigate IPV perpetration. More comprehensive and refined future studies with multiple items measurement are needed. Furthermore, only 50% of the participants responded to all of the 10 enacted stigma items [43], and enacted stigma was not included in any HIV-related stigma in our study.

Despite the limitations, this study has strengths. Of importance, we found a correlation between HIV- and MSM-related stigma and IPV among newly HIV-diagnosed MSM, who have been largely ignored. We also measured the prevalence of physical, psychological, sexual, and any IPV. The findings on specific types of IPV may be helpful for guiding the development of intervention programs. This study fills in the knowledge gap in this population.

There is no government program in China to prevent IPV among MSM and other HIV high risk groups. Our study suggested that IPV is common and it is positively associated with HIV- and MSM-stigma, HIV prevention intervention programs among MSM should provide information about warning signs for, or consequences of, intimate partner and sexual violence; these programs may also incorporate strategies to teach healthy

relationship skills, promote social norms that protect against violence, and create protective environments. Professional counseling on reduction of stigma and prevention of IPV and supports from family and community should be available for those in need.

Conclusions

Our study found a relationship between HIV- and MSM-related stigma and IPV among newly HIV-diagnosed Chinese MSM. Further studies are needed to elucidate the reasons for and patterning of this relationship. The high prevalence of IPV and stigma in this population suggests that interventions should be taken to reduce stigma and prevent this risky behavior among MSM.

Abbreviations

AIDS: Acquired immunodeficiency syndrome; AOR: Adjusted odds ratio; CI: Confidence interval; HIV: Human immunodeficiency virus; IPV: Intimate partner violence; MSM: Man who has sex with other men; OR: Odds ratio; RCT: Randomized intervention clinical trial

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Authors' contributions

SHV, HZQ, YR and KRA designed the project. YR and NW collected the data. NW and SZ conducted the statistical analysis. NW, HZQ and BH drafted the manuscript. All authors revised and approved the final manuscript.

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Availability of data and materials

The primary data used in the current study will be available from <https://rocket.app.vumc.org/index.php?wg=ws5117>.

Ethics approval and consent to participate

This study was approved by the institutional review boards of National Center for AIDS/STD Control and Prevention of Chinese Center for Disease Control (No. X120331206) and Prevention and Vanderbilt University with the number (IRB# 111144).

Written informed consent was obtained from all individual participants included in the study.

Consent for publication

Not applicable.

Competing interests

The authors declare that they have no competing interests.

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