Knowledge, attitude, and preventive practices concerning HIV/AIDS among men who have sex with men (MSM) in Yangon, Myanmar

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Abstract

Purpose - This study aimed to provide information for both governmental and non-governmental organizations on knowledge, attitude, and preventive practices concerning HIV/AIDS among Men Who Have Sex with Men (MSM) in Yangon city, Myanmar.
Design/methodology/approach - A cross-sectional survey with a self-administered questionnaire was applied in this study. Yangon city and Medecins du Monde Organization (MdM) were selected using purposive sampling. Four hundred and twenty-two MSM aged 18 to 59 years old with both health service users and non-users from the organization were recruited by using convenience and snowball sampling methods.
Findings - Out of 422 MSM, majority of them (51.4%) were in 25 -35 years of age. Among three characteristics of MSM respondents, 32.5% was Apone (Masculine MSM), 51.2% was Apwint (Feminine MSM), and 16.4% was Tha Nge (Bisexual). Majority of them had high level of knowledge (49.1%), and moderate level of knowledge (41.9%). Most of them (61.8%) had neutral attitude toward HIV/AIDS and barriers on HIV/AIDS prevention. Half of the MSM respondents (51.9%) had moderate practice level, and 25.4% had good practice level. In multivariate analysis, knowledge and attitude were significantly associated with practices on HIV/AIDS prevention in the past three months (p-value <0.05).
Originality/value - Although knowledge and attitudes toward HIV/AIDS have been good among MSM, preventive behaviors were not practiced by most of respondents, particularly among those with low level of knowledge and negative attitude toward HIV/AIDS.

Keywords HIV/AIDS, MSM, Knowledge, Attitude, Preventive Practices, Myanmar

Paper type Research paper

Introduction

HIV/AIDS is one of the world's most serious health problem. Although HIV prevalence among general population is decreasing in most of the world, the prevalence among men who have sex with men keeps rising in Asia. HIV prevalence was particularly high in many cities and urban areas: it was 28.6% in Bangkok (Thailand), 2014, 26.6% in Yangon (Myanmar), 2015, and 20.3% in Yogyakarta (Indonesia) 2014 [1]. Study shows that MSM are facing a higher risk of HIV infection than men in the general population and their behavior is contributing to increasing the number of new infections [2, 3].

In Myanmar HIV prevalence in some locations is among the highest in the Asia Pacific region. In Yangon, among men who have sex with men, the HIV prevalence at 26.6 is the highest in a specific geographical location in the Asia-Pacific region, higher than Bangkok at 24.4% in 2012 [4]. There are a higher rate of multiple partners, sex workers and injecting drug users, lower knowledge on HIV transmission and prevention, lower contact by outreach workers and a lower rate of condom use, resulting in high HIV prevalence among these populations. Stigma and discrimination are also critical barriers to access HIV/AIDS health care services in Yangon [1].

In Yangon, there are a few NGOs which provide HIV/AIDS care and support for MSM populations. Medecins du Monde organization (MdM) is one of them implementing HIV/AIDS care services for high risk population: MSM, and Sex Workers in Yangon. The organization also helps to protect their rights and their

needs. These populations are supported medically, psychologically, and socially in clinics, but also through outreach work in the field. MdM collaborate with country health representatives to increase access to HIV prevention, care, and support services for MSM, FSW, and IDUs to reduce HIV transmission across the country.

In Myanmar, proper knowledge on HIV transmission and prevention among MSM populations is critical for preventing HIV/AIDS infection, as many MSM come from rural and conservative backgrounds that deny them adequate exposure and access to safer sex knowledge, attitudes and practices. In Myanmar, only few studies have been conducted on HIV prevention and MSM because there is no accurate data, information on MSM, and they are considered as a hard to reach population [5]. Therefore, it is important to explore the HIV prevention knowledge, attitudes and practices among MSM in order to increase knowledge and understanding among health care providers, to be aware about this risk group and to prepare information and intervention programs of HIV prevention for MSM.

Methods

Data collection

Yangon was chosen by purposive sampling because of its high prevalence of HIV infection among MSM. This cross-sectional survey was conducted in Medecins du Monde Organization (MdM) in Yangon using purposive sampling method. Four hundred and twenty two MSM respondents aged between 18 and 59 who were willing to participate in MdM were recruited in this study, using convenience and snowball sampling methods. The data collection used self-administered questionnaires with the help of three research assistants who already had experience with HIV projects for MSM. The research assistants were trained and explained about the research one day before data collection. Data collection was processed in clinic opening hour between April and May, 2018. In this survey, MSM with or without HIV aged 18 years and above who used health care services, who were willing to participate, and who can read and write Myanmar language were included. Those who were physically and mentally ill, who did not understand Myanmar language, and who had tuberculosis infection were excluded.

Before data collection, the researcher and research assistants explained the participants about consent form, anonymity, freedom to participation, right to withdraw, confidentiality, access to final report and no use the data for other purposes. After explaining the process, the participants who agreed to participate had to sign on the written consent form. The self-administered questionnaire were answered by themselves, and the researcher kept their information confidentially. The process continued until the target sample size of 422 has been reached.

The self-administered questionnaire were made up of five sections: socio-demographic characteristics, history of sexual activities, knowledge on HIV/AIDS, attitude towards HIV/AIDS, and preventive practices on HIV/AIDS in the past three months. The content validity of the overall questionnaire was 0.95. For reliability of the questionnaires, the results from Cronbach's alpha for pre-test showed 0.823 for 20 attitude questions, and 0.734 for preventive practices questions.

Measures

This survey covered socio-demographic characteristics, knowledge on HIV/AIDS transmission, prevention and information, attitude towards HIV/AIDS and barriers on HIV/AIDS prevention, and preventive practices on HIV/AIDS among MSM respondents. Knowledge on HIV/AIDS was assessed among the respondents using Bloom's cut off point, with three level of knowledge; (1) low level of knowledge (<60%), (2) moderate level of knowledge (60-80%), and (3) high level

of knowledge (>80%). For scoring, a correct answer was given 1 score, and 0 score for wrong answer and do not know.

The part of attitude questions asked the respondents about their attitudes towards HIV/AIDS and barriers on HIV/AIDS prevention by using a Likert Scale (1= Strongly disagree to 5=Strongly agree) with participants' mean cut-off point. The level of attitude was defined as negative attitude when the score was less than or equal mean - standard deviation (SD), as positive attitude when the score was greater than or equal mean + standard deviation (SD), and as neutral when the score was between mean ± standard deviation.

The primary outcome preventive practices on HIV/AIDS was also assessed among the respondents using a Likert Scale (1=Never, 2=Sometimes, 3=Always) with participants' mean cut-off point. The level of preventive practices was defined as poor practice when the score was less than mean-standard deviation, as good practice when the score was greater than mean+standard deviation, and as moderate practice when the score was between mean ± standard deviation. To use binary logistic regression model, dependent variable preventive practice level was changed to dichotomous outcome. The score of preventive practices was defined as poor practice level when the score was less than or equal participants' mean score, and as good practice level when the score was greater than participants' mean score.

Data Analysis

Descriptive statistics such as mean, standard deviation, median and range were used for continuous data, percentage and frequencies were calculated for categorical data, and described by tables. Bivariate and multivariate analyses were used for analyzing the data. Each of the independent variables was coded into categorical variables for bivariate analysis using Chi-square test. The Chi-square test was initially employed to examine whether there was an association between the dependent variable preventive practices on HIV/AIDS and the independent variables. For those variables with frequency less than 5 in more than 20% of cells, Fisher's exact test was used to find the associations. Significant variables on bivariate analysis were further analyzed by multivariate analysis using binary logistic regression. At this stage, the value of $p<0.2$ in bivariate analysis was applied. Binary logistic regression was used to explore whether each independent variable associated with the preventive practices on HIV/AIDS in the past three months when controlling other confounding variables at significant level of 0.05.

Ethical Consideration

The research proposal was taken from the ethical committee of Chulalongkorn University. The code number of ethical approval was 129/2018. The written informed consent was provided and included the information of confidentiality, free to participate or withdraw, and no use of data for other purposes and will assure anonymity.

Results

Table 1 shows the socio-demographic characteristics of the respondents in Medecins du Monde organization, Yangon, Myanmar. The mean age of the respondents was 28 years which range from 18-59 years. The majority of the respondents, 51.4%, were between 25 – 35 years of age, 74.4% were never married, 35.8% attended high school. One third of them (34.4%) worked in the fashion sectors. 53.3% had sufficient monthly income. More than 25% of the respondents lived with their friends, and lived almost alone. Among 422 respondents, half of them (51.2%) was self-identified as Apwint, and 64.2% were HIV negative,

Table 1. Respondents by Socio-demographic Characteristics (n=422)

Socio-demographic characteristics	n	%
Age (years)		
≤19	40	9.5
20 – 24	116	27.5
25 – 35	217	51.4
≥ 36	49	11.6
Mean (±Std. Deviation) = 27.61 (±7.19)		
Median = 26.50		
Minimum – Maximum =18.00 – 59.00		
Marital status		
Never married	314	74.4
Formally married	22	5.2
Live in with a partner but not married	86	20.4
Education		
Primary school	24	5.7
Secondary school	146	34.6
High school	151	35.8
University graduate	101	23.9
Occupation		
Private/Government employee	98	23.2
NGO/INGO staff	49	11.6
Own business	66	15.6
Work in the fashion sector (Hair style, Make-up, Dress designer)	145	34.4
Natkataw (Spirit medium)	32	7.6
Others	32	7.6
Monthly income		
Sufficient	225	53.3
Not sufficient	151	35.8
Have saving	46	10.9
Current living condition		
Almost living alone	112	26.5
With parents	70	16.6
With wife	22	5.2
With a male partner	104	24.6
With friends	114	27.0
Characteristics of MSM		
Apone (Masculine MSM)	137	32.5
Apwint (Feminine MSM)	216	51.2
Tha Nge (Bisexual MSM)	69	16.4
Ever tested for HIV		
Yes	416	98.6
No	6	1.4
HIV test result (n=416)		
HIV positive	62	14.9
HIV negative	267	64.2
Undisclosed	87	20.9
Ever received a sexually transmitted infection check-up in the last 12 months		
Yes	407	96.4
No	15	3.6
Respondents who have been told he had a STD in the last 12 months (n=407)		
Yes	229	56.3
No	178	43.7
Currently, regular receive HIV/STI-related health care services in MdM		
Yes	326	77.3
No	96	22.7

Table 2. Respondents by level of preventive practices on HIV/AIDS among the respondents in the past three months

Level of preventive practices	n=422	%
Poor practice level (≤ 28 score)	96	22.7
Moderate practice level (29 – 35 score)	219	51.9
Good practice level (≥ 36 score)	107	25.4

Table 3. Binary logistic regression analysis of socio-demographic characteristics associated with preventive practices on HIV/AIDS in the past three months

Variables	Preventive practices on HIV/AIDS in the past three months			
	B	S.E	Crude OR (95% CI)	*p*-value
Age group				
≥36 (ref :)				0.004*
≤19	-2.183	0.699	0.11(0.03 - 0.44)	0.002
20-24	-1.510	0.651	0.22(0.06 -0.79)	0.020
25-35	-1.075	0.639	0.34(0.10 - 1.19)	0.092
Education				
University graduate (ref :)				0.019*
Primary School	-1.679	0.575	0.19(0.06-0.58)	0.003
Secondary School	-1.021	0.403	0.36(0.16-0.79)	0.011
High School	-0.791	0.405	0.45(0.21-1.00)	0.051
Ever tested for HIV				
Yes (ref :)				0.021*
No	-2.021	0.875	0.13(0.02-0.74)	
Ever received a sexually transmitted infection check-up in the last 12 months				
Yes (ref :)				
No	-1.462	0.532	0.23(0.08-0.66)	0.006*
Currently, regular receive HIV/STI-related health care services in MdM (n=422)				
Yes (ref :)				
No	-1.260	0.271	0.28(0.17-0.48)	0.000*

Note: *p<0.05

while 56.3% had a sexually transmitted disease in the last 12 months. Currently, 77.3% of the respondents attending MdM regularly received HIV/STI-related health care services in Medecins du Monde organization (MdM).

Table 2 shows that more than half of the respondents, 51.9% performed moderate practice on HIV/AIDS prevention, 25.4% performed high practice on HIV/AIDS prevention, and 22.7% performed poor practice on HIV/AIDS prevention in the past three months.

Table 3 shows that age group was significantly and negatively associated with preventive practices on HIV/AIDS in the past three months (*p*-value = 0.004). The respondents with ≤ 19 years old were less likely to have preventive practices by 0.11 times than those with ≥ 36 years old. Similarly, education was significantly associated with preventive practices (*p*-value = 0.019), the respondents who attended primary school were less likely to have preventive practices by 0.19 times than those who attended university. Ever tested for HIV was strongly and negatively associated with preventive practices on HIV/AIDS (*p*-value = 0.021), the respondents who have never tested for HIV were less likely to use preventive practices on HIV/AIDS by 0.13 times than those with ever tested for HIV. Receiving a sexually transmitted infection check-up in the last 12 months was also strongly and negatively associated with preventive practices on HIV/AIDS (*p*-value = 0.006).

Table 4. Binary logistic regression analysis of level of knowledge associated with preventive practices on HIV/AIDS in the past three months

Variables	Preventive practices on HIV/AIDS in the past three months			
	B	S.E	Crude OR (95% CI)	*p*-value
Level of knowledge				
Low level of knowledge (ref :)				0.005*
Moderate level of knowledge	0.818	0.372	2.27(1.09-4.70)	0.028
High level of knowledge	1.206	0.375	3.34(1.60-6.97)	0.001

Note: *p<0.05

Table 5. Binary logistic regression analysis of level of attitude associated with preventive practices on HIV/AIDS in the past three months

Variables	Preventive practices on HIV/AIDS in the past three months			
	B	S.E	Crude OR (95% CI)	*p*-value
Level of attitude				
Negative attitude (ref :)				0.011*
Neutral attitude	0.777	0.280	2.18(1.26-3.77)	0.006
Positive attitude	0.965	0.411	2.63(1.17-5.88)	0.019

Note: *p<0.05

Respondents who have not received a sexually transmitted infection check-up in the last 12 months were less likely to have practices on HIV/AIDS prevention by 0.23 times than those who have received it in the last 12 months. Currently, regular receiving HIV/STI-related health care services in MdM also associated with preventive practices (p-value < 0.001). The respondents who have not received HIV/STI-related health care services in MdM were less likely to have preventive practices by 0.28 times than those who have received the services in MdM regularly.

Table 4 shows that the level of knowledge was strongly and positively associated with preventive practices on HIV/AIDS in the past three months (p-value = 0.005). The respondents who had high level of knowledge were more likely to use preventive practices by 3.34 times than those who had low level of knowledge.

Table 5 shows that the level of attitude was strongly and positively associated with preventive practices on HIV/AIDS in the past three months (p-value = 0.011). The respondents who had positive attitude were more likely to use preventive practices on HIV/AIDS by 2.63 times than those who had negative attitude.

Discussion

The principal finding of the preventive practices on HIV/AIDS among MSM respondents indicated that more than half of the respondents (51.9%) had moderate practice, 25.4% had good practice, and 22.7% had poor practice on HIV/AIDS prevention in the past three months. In this study, majority of the respondents were 25 -35 years old (51.4%), never married (74.4%), having high school education (35.8%), worked in the fashion sector (34.4%), having sufficient monthly income (53.3%), current living with friends (27%), self-identified as Apwint (Feminine MSM) (51.2%).

The age group was strongly and negatively associated with preventive practices on HIV/AIDS in the past three months, as the age group become older, the level of preventive practices was higher. This is consistent with the study which shows that as age increased, respondents were more likely to take HIV testing and counselling [6], and more likely to use condoms when having sex [7, 8]. Another significant

association among MSM was educational level (p-value = 0.019). The higher the education level, the higher the preventive practices on HIV/AIDS among the respondents, which is consistent with the study in China, which showed that MSM with high educational level were more likely to have an HIV test by 2.02 times than those with lower educational level [9]. Ever tested for HIV was also associated with preventive practices on HIV/AIDS. The respondents who have never tested for HIV were less likely to use preventive practices on HIV/AIDS by 0.13 times than those with ever tested for HIV. A study in Cambodia explained that MSM who had been tested for HIV were more likely to report using a condom at last sexual intercourse with their sexual partners [10].

There was a strong and negative association between ever received a sexually transmitted infection check-up in the last 12 months and preventive practices on HIV/AIDS. Preventive practices were low in the respondents who had never received a sexually transmitted infection check-up in the last 12 months. Weiss et al. investigated that STI testing patterns and HIV testing frequency were highly associated with each other [11]. Currently, regular receiving HIV/STI-related health care services in MdM was also associated with preventive practices on HIV/AIDS. The respondents without receiving HIV/STI-related health care services in MdM were less likely to have preventive practices on HIV/AIDS than those with receiving the services in MdM regularly.

HIV/AIDS knowledge and attitude were generally good and positively associated with practices on HIV/AIDS prevention in the past three months (p-value <0.05). High level of knowledge and attitude performed more practices on HIV/AIDS prevention among MSM respondents. Although knowledge and attitudes towards HIV/AIDS have been good among the MSM, prevention has not been practiced by most. This study is one of few studies to evaluate preventive practices on HIV/AIDS and its association among MSM population in Yangon, Myanmar.

This study was also limited to a group of MSM using heath care services in MdM, therefore it doesn't represent the whole MSM population in Yangon. The respondents were more likely to be acknowledged MSM. Since it was a cross-sectional study, the causality of studied factors cannot be found.

Conclusion

The result of this study showed that living with a partner but not married, working as NGO/INGO staffs, sufficient monthly income with saving, Apwint MSM used more preventive practices on HIV/AIDS although these variables were not associated. The older age group, higher education level, ever tested for HIV/STI, and regularly receiving HIV/STI services in a health facility also used more preventive practices on HIV/AIDS, moreover, these variables were associated with preventive practices on HIV/AIDS. Although the knowledge and attitudes towards HIV/AIDS has been good among the MSM respondents and they were associated with preventive practices on HIV/AIDS in this study, prevention has not been practiced by most. These findings can help the organizations which provides health prevention and promotion services to the MSM community in Yangon, Myanmar.

Recommendation

We need a better understanding of MSM behavior patterns, risk practices, and improved HIV prevention and control measures. NGOs working with MSM need to organize some interventions focusing on changing the harmful sexual practices into healthy practices among those with low level of knowledge and negative attitudes. In this case, collaboration between community volunteers and peer outreach workers at MSM hotspots play a very important role in improving the health of MSM

community. Further work is needed to reduce barriers related to discrimination and stigma as well as to identify locations where these high-risk MSMs can be accessed.

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