

Original Article

Impact of Sexual History and Life Skills on Unprotected Anal Sex: A Cross-sectional Study Among Men Who Have Sex with Men in Mandalay, Myanmar

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Objectives: To study the impact of sexual history and life skills on unprotected anal sex among men who have sex with men (MSM) in Mandalay, Myanmar.

Materials and Methods: Using a cross-sectional study design, 309 MSM between the ages of 15 and 50 participated in the study. The seven townships of Mandalay city in Myanmar were purposely chosen, and the snowball sampling technique was applied to recruit MSM. The study took place between August 2011 and May 2012.

Results: Two thirds of MSM (76.1%) reported having their first anal sex with a man without using a condom. The ability to consistently refuse unwanted sex was reported by a large percent of MSM (84.5%). About 17.5% of MSM admitted to engaging in anal sex without using a condom when their partner proposed it. "Using a condom during anal sex in the previous four months" was statistically strongly associated with life skills to proposing action if partner refuses to use a condom (p < 0.001).

Conclusion: Regarding sexual behavior, life skills, and condom use, MSM in Myanmar has relatively little information. Focus should be placed on developing and conducting life skills training because it is crucial for MSM to engage in safe sex activity. Additionally, it is critical to expand the accessibility of services targeted at MSM, such as sex education, condom distribution and promotion.

Keywords: Life skills, Men who have sex with men, Myanmar, Sexual history, Unprotected anal sex

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INTRODUCTION

Males who have sexual interactions with same sex are known as men who have sex with men (MSM), irrespective of whether they personally or socially identify as homosexual, bisexual, or both [1]. A disproportionate amount of the burden of the worldwide

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human immunodeficiency virus (HIV) epidemic falls on MSM, with homosexual men and other MSM globally accounting for 23% of new HIV infection cases [2]. Due to their sexual networks, behavior, or biological characteristics, such as the number of concurrent partners, condom-free intercourse, anal sex, or drug

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usage, MSM may have a higher risk of contracting HIV and other sexually transmitted infections (STI) [3].

HIV remains a serious significant public health issue, with low- and middle-income countries enduring a huge proportion of the epidemic's burden. An estimated 940,000 deaths from HIV-related causes occurred in the world in 2017 [4]. In 1988, a person who injected drugs first tested HIV positive in Myanmar. AIDS was initially identified in a patient in 1991 [5]. According to World Health Organization (WHO) data, as of 2017, Myanmar had an HIV prevalence of 0.57%. Throughout the year, there were a total of 11,000 new infections, and about 220,000 people are HIV-positive. Approximately 7,000 people died from HIV-related causes [4]. Myanmar's HIV prevalence estimates for 2019 reported that key populations had the highest prevalence of HIV, with people who inject drugs (19%), MSM (8%), female sex workers (8%), and prisoners (4%).

It is estimated that there are 250, 000 MSM and transgender women in Myanmar, and up to 50% of them may hide their same-sex attractions and behavior [6]. Age at first sexual encounter, unwanted sex experiences, condom use at last intercourse, and accessibility to HIVrelated services have all been connected to sexual and gender identities of MSM in Myanmar [7]. When an infected and susceptible person come into contact, using a condom reduces the risk of HIV and STIs [8]. One of the most significant risk reduction strategies for HIV prevention among MSM is consistent condom use during anal sexual intercourse. The availability of condoms and HIV testing are particularly important, as key populations in Myanmar are more susceptible to discrimination and stigma as well as obstacles to receiving HIV services [9].

According to the WHO, life skills are "abilities for adaptive and positive behavior that enable individuals to deal effectively with the demands and challenges of everyday life" [10]. Health issues that young people could encounter, such as the use of drugs, tobacco, alcohol, and unprotected sex, can be identified or prevented with the use of life skills. The improvement of knowledge, communication, critical thinking, self-esteem, negotiation skills and decision-making competences necessary for young people to lead healthy lifestyles and lessen risk-taking behavior has been proven beneficial through life skills programs, particularly for especially for reducing sexual risk behavior [11, 12]. There is still a lack of information on the sexual history and life skills of MSM in Myanmar. This present study aimed to study the impact of sexual history and life skills on unprotected anal sex among MSM in Mandalay, Myanmar.

MATERIALS AND METHODS

Study design, Study population and Study period

This present study applied a cross-sectional study design. A total of seven townships in Mandalay city in Myanmar were purposely chosen. The selection of MSM was then made using the snowball sampling technique, which is a useful technique for conducting research on populations that may be challenging to reach or identify [13]. A total of 309 MSM between the ages of 15 and 50 participated. Due to barriers in Myanmar's cultural and social norms, MSM under the age of 15 were permitted to respond to the questionnaire without parental consent. The study was carried out between August 2011 and May 2012.

Research Instrument

The questionnaire employed in this study was semistructured and had four sections: (i) socio-demographic characteristics; (ii) sexual history; (iii) life skills; and (iv) unprotected anal sex in the previous four months. The variables in each question are categorical. The variables: "type of MSM", "use of condom during first anal sex with a man", "using a condom during anal sex in the previous four months" were the extended data from the study: "factors related to unprotected sex in men having sex with men (MSM) in Mandalay, Myanmar". To ensure word correspondence between English and Myanmar, the questions were first produced in English and then translated into Myanmar by an expert with knowledge of both languages who was affiliated with the MSM organization. In the event that there were any inconsistencies for the translations of the questionnaire, a second expert performed a back translation from Myanmar to English before the two experts came to an agreement on a common translation.

Data collection procedure

Face-to-face interviews were conducted with the respondents by the researcher and two additional research assistants. The research assistants were health volunteers from MSM focused service providers who had prior experience utilizing questionnaires to perform face-to-face interviews. Prior to collecting data, the researcher trained the two research assistants on how to ask questions to obtain relevant responses (including, if required, by using MSM slang), encouraging interview MSM to participate, and establishing rapport before the interview. Prior to the data collecting process, participants were informed of the study's objectives and advantages as well as the fact that they could opt out of the interview at any moment and remain anonymous and

confidential. They have also been told that participating in the study or declining to participate carries no risks or negative consequences.

Data processing and analysis

The researcher completed data editing, data entry, data analysis, and data interpretation. On the same day that the data was collected, the information was edited as required. The frequency and percentages were used to interpret all category data. Data analysis was carried out using SPSS version 22. Binary logistic regression was performed and statistically significant associations were defined as those with a p-value less than 0.05.

RESULTS

Socio-demographic characteristics of MSM

In the present study, 309 MSM participated, with 62.1% of them being "Apwint: feminine MSM", 20.4% being "Tha Nge: bisexual", and 17.5% being "Apone: masculine MSM". Nearly half of the MSM (44.0%) were in the 25-35 age group. More than half of MSM (64.7%) lived with their parents, followed by their partners (11.0%), relatives (10.4%), themselves (8.4%), and friends (5.5%).

Sexual History of MSM

Regarding their sexual history in table 1, the first anal sex that more than half of MSM (53.3%) had was with a man between the ages of 15 and 19; this was followed by ages between 7 and 11 (20.1%), 12 and 14 (14.9%), and 20 to 31 (11.7%). About two thirds of MSM (76.1%) had first anal sex with a man without using a condom.

Table 1. Sexual history of MSM.

Sexual history	Frequency	Percentage				
(n=309)	(n)	(%)				
Age of first anal sex with a man (years)						
7 - 11	62	20.1				
12 - 14	46	14.9				
15 - 19	165 53.3					
20 - 31	36	11.7				
Mean = 15.49 ± 4.13						
Use of condom during first anal sex with a man						
Yes	74	23.9				
No	235	76.1				

Life skills of MSM

Table 2 presents life skills for safe sex practice. A high percent of MSM (84.5%) reported having the ability to consistently refuse unwanted sex. When their partner proposed not using a condom during anal sex, about 68.9% of MSM negotiated to use condom, and 17.5% of MSM actually engaged in anal sex without a condom. When under stress, about 53.3% of MSM sought to a trusted friend for help, and 33.7% of MSM looked to friends for drinking.

Table 2. Life skills of MSM.

Life Chille (n=200)	Frequency	Percentage	
Life Skills (n=309)	(n)	(%)	
Life skill to refuse undesired			
Always	261	84.5	
Sometimes	43	13.9	
Never	5	1.6	
Propose action taken if part	ner refuses to	use condom	
Avoid sex	42	13.6	
Negotiate to use condom	213	68.9	
Have sex without condom	54	17.5	
If you are under stress			
Seek friends for drinking	104	33.7	
Seek trusted person for	165	F2 2	
help		53.3	
Drink alcohol alone	12	3.9	
Others#	28	9.1	

[#] Others – Meditation, travelling, listening songs and watching movie

Unprotected anal sex among MSM

Nearly half of MSM (43.4%) had anal sex in the previous four months without using a condom.

Table 3. Unprotected anal sex in the previous four months.

Unprotected anal sexual	Frequency	Percentage				
intercourse (n=309)	(n)	(%)				
Using a condom during anal sex in the previous four						
months						
Yes	175	56.6				
No	134	43.4				

Table 4. Binary analysis of sexual history and life skills with "using a condom during anal sex in the previous four months" (n=309)

	Using a d	Using a condom during anal sex in the previous four months			
Variables	В	SE	Crude OR (95% CI)	p-value	
Age of first anal sex with a man					
7 - 11 years			1 (ref:)	<0.001*	
12 - 19 years	1.276	0.307	3.58 (1.96 - 6.53)	<0.001	
20 - 31 years	1.194	0.437	3.3 (1.4 - 7.77)	0.006	
Use of condom during first anal sex witl	n a man				
No			1 (ref:)	0.272	
Yes	0.300	0.273	1.35 (0.79 - 2.31)		
Life skills to refuse undesired sex					
No			1 (ref:)	0.187	
Yes	0.416	0.315	1.52 (0.82 - 2.81)		
Life skills to proposing action if partner	refuses to use cond	lom			
Avoid sex			1 (ref:)	<0.001*	
Negotiate to use	-0.334	0.362	0.72 (0.35 - 1.46)	0.357	
Have sex without condom	-1.758	0.451	0.17 (0.07 - 0.42)	< 0.001	
Life skills to relieve stress					
Seek friends for drinking			1 (ref:)	0.016*	
Seek trusted person for Help	-0.506	0.255	0.6 (0.37 - 0.99)	0.047	
Drink alcohol alone	0.223	0.645	1.25 (0.35 - 4.42)	0.729	
Others#	0.829	0.503	2.29 (0.86 - 6.14)	0.099	

^{*} Others - Meditation, travelling, listening songs and watching movie

Impact of sexual history and life skills on unprotected anal sex

By applying binary analysis, table 4 interprets the impact of sexual history and life skills on "using a condom during anal sex in the previous four months". There was a strong statistically significant association between age at first anal sex with a man and using a condom during anal sex in the previous four months (p < 0.001), condom use was higher in the age groups of 12 and 19 years, and 20 and 31 years than in the age group of 7 and 11 years. "using a condom during anal sex in the previous four months" was also statistically strongly associated with life skills to proposing action if partner refuses to use a condom (p < 0.001). In addition, "using a condom during anal sex in the previous four months" was strongly statistically associated with life skills to relieve stress (p = 0.016), and MSM were more likely to use condoms when they had taken medication, traveled, listened to music, or watched movies to reduce stress.

DISCUSSION

In this present study, the mean age at first anal sex with a man was 15.49, which was contrasted to the results of studies conducted among MSM in China and Tanzania because these studies' average age of the first anal sex were higher (22.3 years and 18.3 years respectively) [14, 15]. Other studies among MSM regarding the age of first anal sex encounters provided support for the findings of this study, which revealed that MSM have early sexual debut ages (15 years) [16, 17, 18]. Several psychological and medical conditions have been linked to early first sexual experiences, including a higher likelihood of contracting a sexually transmitted diseases (STD) [16, 19, 20].

This present study found out that a high percent of MSM (76.1%) did not use condom when they had first anal sex. MSM who engage in their first anal sex without using a condom have a greater chance of contracting HIV [21]. Unprotected early anal sex was strongly linked to irregular condom usage among MSM [22]. The first anal sex without using condom may have occurred due to the accessibility of condoms and a lack of information

among MSM regarding the benefits of having safe anal sex and HIV prevalence among MSM. The National AIDS program (NAP) and other MSM focused service organizations may fall short in their efforts to provide sexual education and condoms. MSM in Myanmar are not supported in terms of sociocultural context. The discrimination and stigma against sexual minorities still exist in Myanmar. Although it appears that this law is rarely put into practice in Myanmar, it still serves to legitimize the harassment or intimidation of sexual minorities, posing major obstacles to sex education and HIV testing by fostering stigma and discrimination [23].

In this present study, the majority of MSM (84.5%) had the life skills to refuse unwanted sex. There was a strong significant association between life skills to propose action if partner refuses to use condom and condom use (p < 0.001). When their partner refused to use a condom, MSM who avoided having anal sex used more condoms than MSM who negotiated to use a condom or who had sex without condom. Studies among MSM in South Africa on unprotected anal sex and self-efficacy and condom use decision-making provide additional support for the findings of the present study that MSM who have lower self-efficacy scales on condom use are more likely to have unsafe anal sex, which includes negotiating skills to use condom when having anal sex [24, 25].

The study among young men in Chile for unwanted sexual experiences, which supports this present study's finding regarding life skills to refuse undesired sex but it is still a public health concern with little attention [26]. Teenagers who lack life skills are reported to engage in risky behavior that have long-lasting negative effects on their health and capacity to participate in society. A study which was conducted among adolescents in Ethiopia on sexual behavior and life skills revealed that there is an association between risky sexual behavior and unfavorable life skills [27]. In Myanmar, MSM lack the freedom to choose their gender identity and sexual orientation. They also lack the life skills necessary to defend themselves from unwanted and unsafe sex, especially among "Apone: masculine MSM", and need interventions that emphasize life skills training.

This present study revealed that there was an association between life skill to relieve stress and "using a condom during anal sex in the previous four months" (p= 0.016). MSM in Myanmar may be at risk for mental health problems not only as a result of discrimination and stigmatization by the community but also as a condition of the law that stigmatizes MSM by forbidding them from disclosing their perceptions and expression. In comparison to "Apwint: feminine MSM", "Apone:

masculine MSM" and "Tha Nge: bisexual," may be much more prone to mental health issues, because a high percent of MSM in this present study were "Apwint: feminine MSM" [28]. Because MSM was hard to get in the community and the snowball sampling technique produced fewer "Apone: masculine MSM" and "Tha Nge: bisexual" participants, the study's high proportion of "Apwint: feminine MSM" was attributable to these reasons. When offering MSM-focused services, it is critical to figure out how to reach all MSM types.

The information of MSM in Myanmar is very limited and this study is one of the few studies which was conducted about the sexual behavior, life skills and condom use among MSM. The results of this study will be helpful for MSM focused service organizations and NAP to evaluate, create, and implement the essential services in terms of sex education, life skills training, free condom distribution and condom usage promotion, and psychosocial support. MSM will also be knowledgeable about MSM focused services and the accessibility of their services to engage in safe sex. Due to the fact that Mandalay was purposefully chosen for the present study and the snowball sampling technique was used, there may be limitation of generalization to MSM nationwide. The present study was cross-sectional and analytical; additional qualitative research on sexual, life skills, and reason of non-condom use is needed to establish results that are more generally applicable.

CONCLUSION

In this present study, there were impact of sexual history and life skills on "using a condom during anal sex in the previous four months". To reach all types of MSM with sex education and health education on prevention of HIV, STDs, and other infectious diseases due to unprotected sex, the NAP and other MSM focused service organizations are recommended to enhance their services. Additionally, life skills training should be provided to MSM in order to change their attitudes and behavior towards safe sex. For a deeper understanding of sexual behavior and life skills of MSM, a longitudinal study or qualitative research is recommended.

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REFERENCES

- UNAIDS. A technical brief: HIV and young men who have sex with men. [Internet] 2015. [Cited 2022 November 10]. Available from: https://www.unaids.org/sites/default/files/media a sset/2015 young men sex with men en.pdf
- UNAIDS. 2020 Global AIDS Update —Seizing the moment —Tackling entrenched inequalities to end epidemics. [Internet] 2020. [Cited 2022 November, 16]. Available from: https://www.unaids.org/sites/default/files/media a sset/2020 global-aids-report en.pdf
- Centers for Disease Control and Prevention. Sexually Transmitted Infections Treatment Guideline, 2021. [Internet] 2021. [Cited 2022 November, 17]. Available from: https://www.cdc.gov/std/treatment-guidelines/msm.htm
- World Health Organization. Know Your Status-WHO
 Myanmar World AIDS Day Special. [Internet] 2018.
 [Cited 2022 November, 17]. Available from:
 https://cdn.who.int/media/docs/default-source/searo/myanmar/hiv-aids-(english).pdf?sfvrsn=c7a9f945_0
- Oo HN, Hone S, Fujita M, Maw-Naing A, Boonto K, Jacobs M, Phyu S, Bollen P, Cheung J, Aung H, Aung Sang MT, Myat Soe A, Pendse R, Murphy E. Evolution of the health sector response to HIV in Myanmar: progress, challenges and the way forward. J Virus Erad. 2016; 2(Suppl 4): 20-26.
- 6. UNAIDS. Situational Analysis of the HIV response among men who have sex with men and transgendered persons in Myanmar. [Internet] 2015. [Cited 2022 November, 20]. Available from: https://themimu.info/node/56815
- 7. National AIDS Programme. National Strategic Plan on HIV and AIDS: Myanmar 2016–2020. Myanmar. [Internet] 2016. [Cited 2022 November 16]. Available from:

- https://www.aidsdatahub.org/sites/default/files/resource/myanmar-national-strategic-plan-hiv-and-aids-2016-2020.pdf
- 8. Patel P, Borkowf CB, Brooks JT, Lasry A, Lansky A, Mermin J. Estimating per-act HIV transmission risk: a systematic review. AIDS. 2014; 28: 1509–1519.
- 9. Reid G, Sharma M, Higgs P. The long winding road of opioid substitution therapy implementation in South-East Asia: challenges to scale up. J Public Health Res. 2014; 3(1): 204.
- World Health Organization. Life skills education school handbook, prevention of noncommunicable diseases. [Internet] 2020. [Cited 2022 November, 20]. Available from: https://www.who.int/publications/i/item/97892400
- 11. Postma I, Getkate R, Van Wijk-Sijbesma CA. Life skills-based hygiene education: a guidance document on concepts, development experiences with life skills-based hygiene education in school sanitation and hygiene education programmes. [Internet] 2004. [Cited 2022 November 201. Available from: https://www.ircwash.org/resources/life-skillsbased-hygiene-education-guidance-documentconcepts-development-and-experiences
- Seangpraw K, Somrongthong R, Choowanthanapakorn M, Kumar R. The effect of sex education and life skills for preventive sexual risk behaviours among university of students in thailand. J Ayub Med Coll Abbottabad. 2017; 29(4): 540-546.
- 13. Barros AB, Dias SF, Martins MRO. Hard-to-reach populations of men who have sex with men and sex workers: a systematic review on sampling methods. Syst Rev. 2015; 4(141): 1-8.
- 14. Zou H, Xu J, Hu Q, Yu Y, Fu G, et al. Decreasing age at first anal intercourse among men who have sex with men in China: A multicentre cross-sectional survey. J. Int. AIDS Soc. 2016; 19.
- Mmbaga EJ, Leyna GH, Leshabari MT, et al. Early Anal Sex Experience Among Men Who Have Sex with Men in Dar Es Salaam Tanzania: Implications for HIV Prevention and Care. Arch Sex Behav. 2020; 49: 2045–2055.
- Oidtman J, Sherman SG, Morgan A, et al. Satisfaction and Condomless Anal Sex at Sexual Debut and Sexual Risk Among Young Black Same-Sex Attracted Men. Arch Sex Behav. 2017; 46: 947– 959.
- 17. Kaplan DL, Jones EJ, Olson EC, Yunzal-Butler CB. Early age of first sex and health risk in an urban adolescent population. Journal of School Health. 2013; 83(5): 350–356.

- 18. Kubicek K, Beyer WJ, Weiss G, Iverson E, Kipke MD. In the dark: young men's stories of sexual initiation in the absence of relevant sexual health information. Health Educ Behav. 2010; 37(2): 243-63.
- Outlaw AY, Phillips G 2nd, Hightow-Weidman LB, et al. Age of MSM sexual debut and risk factors: results from a multisite study of racial/ethnic minority YMSM living with HIV. AIDS Patient Care STDS. 2011; 25: 23-29.
- Centers for Disease Control and Prevention. Sexually Transmitted Diseases, CDC Fact Sheet; Information for Teens and Young Adults: Staying Healthy and Preventing STDs. [Internet] 2022. [Cited 2022 November, 25]. Available from: https://www.cdc.gov/std/life-stages-populations/stdfact-teens.htm
- 21. Balthasar H, Jeannin A, Dubois-Arber F. First anal intercourse and condom use among men who have sex with men in Switzerland. Arch Sex Behav. 2009; 38(6): 1000-1008.
- 22. Cheung DH, Suharlim C, Guadamuz TE, Lim SH, Koe S, Wei C. Earlier anal sexarche and co-occurring sexual risk are associated with current HIV-related risk behaviors among an online sample of men who have sex with men in Asia. AIDS Behav. 2014; 18(12): 2423-2431.
- 23. Veronese V, Traeger M, Oo ZM, et al. HIV incidence and factors associated with testing positive for HIV

- among men who have sex with men and transgender women in Myanmar: data from community-based HIV testing services. J Int AIDS Soc. 2020; 23(2): e25454.
- 24. Siegler AJ, Voux Ad, Phaswana-Mafuya N, et al. Elements of Condom-Use Decision Making among South African Men Who Have Sex with Men. J Int Assoc Provid AIDS Care. 2014; 13(5): 414-423.
- 25. Tucker A, Liht J, de Swardt G, et al. Homophobic stigma, depression, self-efficacy and unprotected anal intercourse for peri-urban township men who have sex with men in Cape town, South Africa: A cross-sectional association model. AIDS Care. 2014; 26(7): 882–889.
- 26. Lehrer JA, Lehrer EL, Koss MP. Unwanted sexual experiences in young men: evidence from a survey of university students in Chile. Arch Sex Behav. 2013; 42(2): 213-23.
- 27. Tesema D, Tamirat M, Tadele A. Sexual behaviors and its association with life skills among school adolescents of Mettu town, South West Ethiopia: A school-based cross-sectional study. SAGE Open Med. 2020; 8: 1-8.
- 28. Sun S, Pachankis JE, Li X, Operario D. Addressing Minority Stress and Mental Health among Men Who Have Sex with Men (MSM) in China. Curr HIV/AIDS Rep. 2020; 17(1): 35-62.