

Sexual behaviours and sexual networks of men who have sex with men in Bali

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ABSTRACT

Background and purpose: Transmission of HIV and other sexually transmitted infections (STIs) among men who have sex with men (MSM) in Bali Province is increasing. This increased transmission is due to their sexual networks and behaviours. This study aims to examine sexual behaviours and sexual networks among MSM population in Bali Province.

Methods: A descriptive cross-sectional study was conducted in Denpasar City and Badung District. A total of 130 MSM were recruited from Denpasar II Public Health Centre and Bali Medica Clinic - Badung District. Data were collected through interviews among MSM who visited both providers for STIs services from August to October 2015. Variables of this study included sociodemographic, sexual network (pattern and density), sexual activities in the last month, sexual role, condom/lubricant use, and history of previous STIs. Data were descriptively analysed.

Results: As many as 53.1% respondents were aged <25 years, 90.8% were senior high school or higher degree graduates, 6.2% were

married, 91.5% were employed, and 59.2% were having a regular partner. In the last month, as many as 70.8% respondents reported to have sex with first sexual partner, 52.3% with second sexual partners, and 45.6% with third sexual partners. Younger respondents tended to seek for younger sexual partners. The majority of respondents had had insertive sex, as many as 40.0% with their first partner, 44.6% with their second partner, and 43.2% with their third partner. About 20% of respondents were having high density sexual network and 71.5% of respondents were having concurrent sexual partnership. The consistent condom use within six months was 67.6% with the first partner, 72.8% with the second and the third partners. As many as 23% of respondents were diagnosed to have STIs.

Conclusion: MSM population in Bali Province seem to have high risk sexual behaviours with great sexual network density, high concurrent sexual partnership, and selective mixing between older and younger MSM population.

Key words: sexual behaviours, sexual networks, MSM, Bali

INTRODUCTION

The estimated number of men who have sex with men (MSM) in Indonesia was 1.2 million people and around 14 thousands for Bali Province.¹ Findings from the 2007 and 2011 Integrated Behaviour and Biological Survey (IBBS) showed that HIV and syphilis prevalence among MSM in several cities in Indonesia were significantly increased.² HIV prevalence in Jakarta among MSM population was increased from 8.1% in 2007 to 17.2% in 2011.² Similarly, HIV prevalence in Bandung City was increased from 2.0% to 10.4% between 2007 and 2011.² In Surabaya City, between 2007 and 2011, the HIV prevalence was increased from 5.6% to 9.6%.² Similar trend was also observed for syphilis prevalence. Between 2007 and 2011, syphilis prevalence in Jakarta City was increased from 3.2% to 16.8%, in Bandung City was increased from 5.6% to 11.2% and in Surabaya City was increased from 4.0% to 9.6%.² Data from Amerta Clinic – Kerti Praja Foundation showed that from a total of 814 MSM who accessed HIV counselling and testing service between April

and December 2016, as many as 104 MSM (12.8%) were HIV positive and between January and June 2017, 98 MSM (12.6%) out of 772 MSM were HIV positive.³

The risk for HIV and other sexually transmitted infections (STIs) is associated to sexual behaviours, patterns and sexual networks among MSM.⁴ A study in China revealed that the high prevalence of HIV and STIs among MSM population were associated to number of sexual partner, anal sex behaviours, receptive partner, and high density sexual networks which contribute to HIV transmission.⁴ Sexual behaviours among MSM are indirectly related to risk of HIV transmission which possibly attributed by their sexual networks.⁵ Another study on sexual networks of MSM in Yogyakarta, Indonesia revealed that a total of 131 sexual networks existed with average age of 23 years and the majority of HIV positive respondents had sex with more than one sexual partners.⁶ This study aims to examine sexual networks (density, patterns, and selective mixing) and sexual behaviours (sexual role, condom/

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lubricant use, sex in the last month, and history of STIs) among MSM population in Bali Province.

METHODS

A descriptive cross-sectional study was conducted in Denpasar City and Badung District. A total of 130 MSM were recruited to participate in the study. Data were collected through interviews among those who accessed STIs services at Denpasar II Public Health Centre and Bali Medica Clinic in Badung District. Data were collected from August to November 2015. The inclusion criteria included men who have sex with men at least one time in the last year, agree to participate in the study by signing up the informed consent, and agree to be tested for STIs. Data were collected by a midwife at the Denpasar II Public Health Centre and a counsellor at the Bali Medica Clinic. Research variables included sociodemographic, sexual networks, and sexual behaviours. Sociodemographic characteristics included age, employment status, marital status, and education. Sexual behaviours included sexual role, condom and lubricant use, and sexual intercourse in the last month with a maximum of three sexual partners. Data on sexual networks included density and patterns of sexual partnership. Sexual density was defined as a total of sexual partnership between respondents and their sexual partners in the last year. Sexual partnership pattern was defined as period of sexual partnership between

respondents and their sexual partner over the last year which included concurrent and monogamous partnership.

RESULTS

A total of 53% of respondents were interviewed at the Bali Medica Clinic, Badung District, while another 47% were at Denpasar II Public Health Centre. Sociodemographic characteristics of respondents can be seen in Table 1. As many as 53.1% of respondents were aged <25 years, 90.8% were senior high school or higher degree education graduates, 6.2% were married, 91.5% were employed and 59.2% were having a regular sexual partner.

Data on sexual behaviours of MSM can be seen in Table 2. Over the last month, as many as 70.8% of respondents were reported to have sex at least with one sexual partner, 52.3% with at least two partners, and 45.6% with three sexual partners. The majority of respondents had had insertive sex, 40.0% with the first sexual partner, 44.6% with the second sexual partner and 43.2% with the third sexual partner. A total of 28.5% of respondents had had receptive sex with the first sexual partner, 34.6% with the second sexual partner, and 33.6% with the third sexual partner. In addition, as many as 30.0% of respondents had had versatile sex with the first sexual partner, 18.5% with the second sexual partner, and 22.4% with the third sexual partner.

Table 1 Sociodemographic characteristics of respondents

Characteristics	n	%
Age		
<25 years	69	53.1
25-34 years	52	40.0
>34 years	9	6.9
Education		
Primary, junior high	12	9.2
Senior high and higher degree	118	90.8
Marital status		
Not married	121	92.0
Married	8	6.1
Not answered	1	1.8
Employment		
Employed	119	91.5
Unemployed	8	6.2
Regular sexual partner		
Yes	77	59.2
No	53	40.8
Total	130	100.0

Table 2 Sexual behaviours of respondents

Variables	First sexual partner n (%)	Second sexual partner n (%)	Third sexual partner n (%)
Sexual intercourse (in the last month)			
Yes	92 (70.8)	68 (52.3)	57 (45.6)
No	38 (29.2)	62 (47.7)	68 (54.4)
Sexual role (in the last month)			
Insertive	52 (40.0)	58 (44.6)	54 (43.2)
Receptive	37 (28.5)	45 (34.6)	42 (33.6)
Versatile	39 (30.0)	24 (18.5)	28 (22.4)
Missing	2(1.5)	3 (2.3)	1 (0.8)
Condom use (in the last six months)			
Consistent	88 (67.7)	91 (70.0)	91 (72.8)
Inconsistent	38 (29.2)	25 (19.2)	25 (20.0)
Missing	4 (3.1)	14 (10.8)	9 (7.2)
STIs history of sexual partner (in the last six months)			
Yes	20 (15.4)	4 (3.1)	5 (4.00)
No	109 (83.9)	125 (96.2)	119 (95.2)
Not answered	1 (0.7)	1 (0.7)	1 (0.8)
Total	130 (100.0)	130 (100.0)	125 (100.0)

Table 3 Sexual partnership patterns

Variables	Sexual partnership pattern (in the last year)	
	Concurrent partnership n (%)	Monogamous partnership n (%)
Sexual partnership patterns	93 (71.5)	37 (28.5)
Age		
<25 years	35 (62.5)	21 (37.5)
25-34 years	47 (75.8)	15 (24.2)
>34 years	11 (91.7)	1 (8.3)
Sexual network density		
2-3 partners	72 (69.2)	32 (30.8)
4-6 partners	21 (80.8)	5 (19.2)
Sexual role		
Insertive	29 (72.5)	11 (27.5)
Receptive	19 (73.1)	7 (26.9)
Versatile	45 (70.3)	19 (29.7)

Table 4 Selective mixing by age

Age	First sexual partner n (%)			Second sexual partner n (%)			Third sexual partner n (%)		
	<25	25-34	>34	<25	25-34	>34	<25	25-34	>34
< 25	27 (48.2)	21 (37.5)	8 (14.3)	32 (57.1)	18 (32.1)	6 (10.7)	26 (46.3)	24 (42.6)	6 (11.1)
25-34	29 (46.8)	27 (43.6)	6 (9.7)	30 (48.4)	20 (32.3)	12 (19.4)	25 (39.0)	29 (45.8)	10(15.3)
> 34	3 (25.0)	5 (41.7)	4 (13.3)	9 (75.0)	1 (8.3)	2 (16.7)	7 (58.3)	4 (33.3)	1 (8.3)

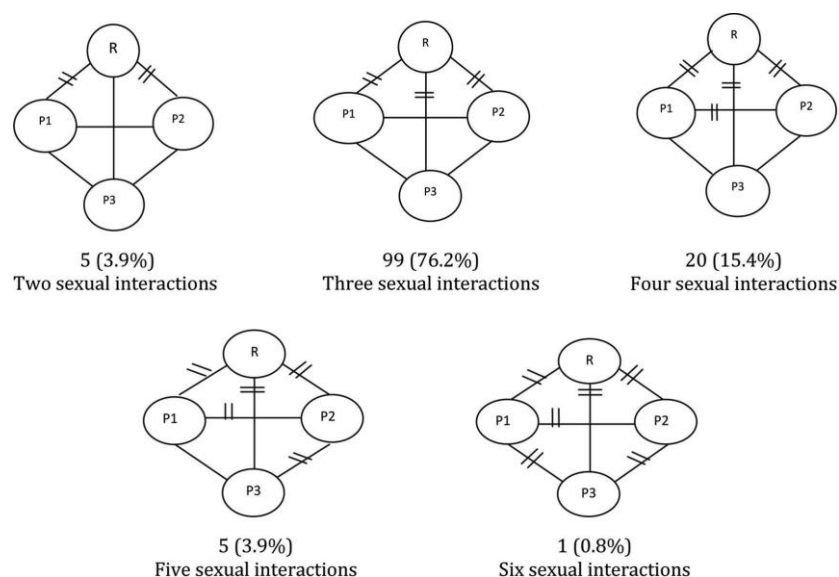


Figure 1 Density of sexual network (in the last year)

The consistent condom use in the last six months were reported by 67.7% of respondents with their first sexual partner, 70.0% with the second sexual partner, and 72.8% with the third sexual partner. The majority of MSM reported that they were not aware of their partner STIs history in the last year which were 83.9% for the first sexual partner, 96.2% for the second sexual partner, and 95.2% for the third sexual partner.

Sexual network density can be seen in [Figure 1](#), where 'R' is respondents, 'P1' is the first sexual partner, 'P2' is the second sexual partner, and 'P3' is the third sexual partner. Sexual partnership and interactions between respondents and their sexual partners were indicated by '='. The more frequent sexual partnerships and interactions between respondents and their sexual partners indicates a higher density of sexual network. [Figure 1](#) shows that as many as 76.2% respondents reported that they had three sexual interactions in the last year, 3.9% had two sexual interactions, 15.4% had four sexual interactions, 3.9% had five sexual interactions, and 0.8% had six sexual interactions.

Sexual partnership of respondents can be seen in [Table 3](#). As many as 71.5% of respondents were having concurrent partnership while 28.5% were having monogamous partnership. The older MSM tended to have higher concurrent partnership when compared to the younger MSM, for example among MSM age <25 years around 62% were having concurrent sexual partnership, while among age groups of 25-34 years and >35 years were 75.8% and 91.7% respectively. The concurrent sexual partnership with 2-3 partners was 69.2%, while with 4-6 partners was 80.8%. The majority of MSM who had concurrent sexual partnership

were varied in their sexual role with 72.5% were insertive, 73.1% were receptive, and 70.3% were versatile.

Sexual network of respondents based on age can be seen in [Table 4](#). It displays the selective mixing among respondents. It can be observed that younger respondents tended to choose sexual partner within their age group for the first, second, or third sexual partners. In contrast, older respondents tended to find younger sexual partners.

DISCUSSION

This study showed that the consistent condom use among MSM population was relatively high along with a high sexual network density and concurrent sexual partnership. Finding from this study in relation to sexual network density and sexual behaviour is relatively consistent with other study conducted in 2012 in three big cities of Medan, Jakarta and Bali.⁷ It found that as many as 43.9%, 15.9%, and 37.8% MSM population in Bali were having 1-5, 6-10, and >10 sexual partners respectively.⁷ There are several methodological differences between the present study and their study⁷ which are different study locations and sampling methods. In the present study, samples were selected from MSM who accessed STIs services in two clinics in Denpasar and Badung, while in the previous study MSM were recruited from the hotspot points. Furthermore, in the present study, we asked sexual behaviours for only three sexual partners. The previous study found that the consistent condom use for receptive sex in the last year was only 39.2% and 44.4% for insertive sexual role.⁷ In contrast, the present study revealed that the consistent condom use in the last six months was between 67.7% (with the first sexual partner) and 72.8% (for the second and third sexual partners). However, the present study do not capture consistent condom use based on sexual roles (receptive and insertive). It can be explained that a higher condom use in the present study when compare to the previous study⁷ may be due to the interviewer bias. The present study employed a midwife and a counsellor to interview respondents where more possibility that the reported condom use is overrated by respondents.

In terms of sexual role, the previous study found that as many as 80.4% of MSM had had insertive sex while 77% MSM had had receptive sex.⁷ In the present study, as many as 40%, 44.6%, and 43.2% of respondents had had insertive sex with their first, second, and third sexual partners. Furthermore, as many as 28.5%, 34.6%, and 33.6% of respondents had had receptive sex with their first, second, and third partners. Lastly, as many as 30.0%, 18.5%,

22.4% of respondents had had versatile sex with their first, second, and third sexual partners. It can be explained that the way of presenting the question about sexual role to respondents influences responses from them.

Studies from other countries also revealed a high sexual network density among MSM population. A study in the US among black Americans between 2013 and 2014 found that respondents who had one, two, 3-5, and ≥ 6 sexual partners in the last six months were 20%, 24%, 42%, and 13% respectively.⁴ Another study among African Americans in the US showed a lower density of sexual network. It found that MSM who had one, two, three and four sexual partners were 39%, 23%, 18%, and 15% respectively.⁸ A survey in China between 2008 and 2009 found that MSM who had 2-10 and >10 sexual partners were 47.4% and 5.0% respectively.⁹ The present study found that selective mixing was common among older MSM. Younger MSM tended to find sexual partners in the same group categories while older MSM tended to find younger sexual partners. This phenomenon is also observed in the USA.¹⁰ This present study revealed that concurrent sexual partnership predominantly reported by older MSM. As many as 91.7%, 75.8%, and 62.5% of respondents who reported concurrent sexual partnership were aged >35 years, 25-35 years and <25 years respectively. While in the US, concurrent sexual partnership was observed in all age groups which were 18-24 years (24.2%), 25-29 years (27.5%), 30-39 years (24.7%), and >40 years (23.6%).¹⁰

CONCLUSION

MSM population in Bali seem to have high risk sexual behaviours with great sexual network density, high concurrent sexual partnership, and selective mixing between older and younger MSM population.

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