

## การรับรู้ความเสี่ยงของการติดเชื้อเอชไอวี/เอดส์ในกลุ่มชายที่มีเพศสัมพันธ์กับชาย จังหวัดขอนแก่น

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## Risk Perception to HIV/AIDS among Men Who Have Sex with Men in Khon Kaen Province, Thailand

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**หลักการและวัตถุประสงค์:** ปัจจุบันกลุ่มชายที่มีเพศสัมพันธ์กับชายยังคงมีความเสี่ยงของการติดเชื้อเอชไอวีเพิ่มขึ้นอย่างต่อเนื่อง การศึกษานี้มีวัตถุประสงค์เพื่อประเมินการรับรู้ความเสี่ยงเกี่ยวกับความเสี่ยงของการติดเชื้อเอชไอวี/เอดส์ในกลุ่มชายที่มีเพศสัมพันธ์กับชาย

**วิธีการศึกษา:** เป็นการศึกษาภาคตัดขวางเชิงพรรณนาในกลุ่มชายที่มีอายุ 15 ปีขึ้นไป ที่มีเพศสัมพันธ์กับชาย 424 ราย ใช้วิธีการเข้าถึงกลุ่มเป้าหมายโดยการสุ่มแบบลูกโซ่ ด้วยการแจกลิงก์แบบสอบถามให้กับกลุ่มแกนนำชายที่มีเพศสัมพันธ์กับชายเพื่อให้ตอบแบบสอบถามแบบออนไลน์

**ผลการศึกษา:** พบว่าร้อยละ 64.9 ของกลุ่มตัวอย่างมีการรับรู้เกี่ยวกับความเสี่ยงสูงเอชไอวี/เอดส์ มากกว่าร้อยละ 60 ของกลุ่มตัวอย่างมีการรับรู้มีความเสี่ยงสูงที่เกี่ยวข้องกับเลือด สารคัดหลั่งจากระบบสืบพันธุ์ ผลิตภัณฑ์ของเลือด และทางเพศ สัมพันธ์ มีการรับรู้ความเสี่ยงปานกลางจากน้ำลายและสารอื่นๆ **สรุป:** ควรมีมาตรการแนะนำกลุ่มชายที่มีเพศสัมพันธ์กับชายที่เป็นวัยรุ่น เพื่อลดพฤติกรรมเสี่ยง เช่น การมีคู่นอนหลายคน, การให้ความรู้และส่งเสริมทัศนคติที่ดีในการป้องกันเอชไอวี/เอดส์

**คำสำคัญ:** การรับรู้ความเสี่ยงสูง, ชายที่มีเพศสัมพันธ์กับชาย

**Background and Objective:** Recently, men who have sex with men (MSM) continue to be at high risk for HIV infection in the population. This study aimed to evaluate risk perception regarding HIV/AIDS among the MSMs.

**Materials and methods:** A descriptive cross-sectional study was conducted in 424 MSMs, aged  $\geq 15$  years old and over. A snowball sampling technique was adopted to identify the sample groups, using MSM leaders to distribute the online questionnaire links to the samples.

**Result:** Overall, it was found that 64.9% of the samples had high risk perception about HIV/AIDS. More than 60% had high risk perception in relation to blood, genital fluids, blood products, and sexual intercourse. The sample had moderate risk perception level towards saliva and other body fluids.

**Conclusions:** From the study results, intervention to decrease MSMs risky behavior such as having sex with multiple partners, health education and promoting a positive attitude to prevent HIV/AIDS is recommended among the younger MSMs.

**Keywords:** High risk perception, Men who have sex with men

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## Introduction

The term Men Who Have Sex With Men (MSM) was introduced in the 1980s<sup>1</sup> and used to describe those males who have sex with other males, regardless of whether or not they have sex with women or have a personal or social identity associated with that behavior, such as being 'gay' or 'bisexual' or 'transgender'<sup>2</sup>. Globally, MSM and transgenders often face stigma, discrimination and violence which increases their own risks of HIV infection as well as the risks to their male and female partners<sup>2</sup>.

The HIV prevalence in MSM was a pandemic. In a global situation, the HIV prevalence continued to expand in most countries showing that the high probability of transmission per act through receptive anal intercourse has a central role in explaining the disproportionate disease burden in MSMs<sup>3</sup>. In addition, HIV can be transmitted through large MSM networks at great speed. Molecular epidemiological data show substantial clustering of HIV infections in MSM networks, and higher rates of dual-variant and multiple-variant HIV infection in MSMs than in heterosexual people in the same populations<sup>3</sup>. In Thailand, HIV prevalence among populations of MSMs indicates a significant increase in HIV infection among MSMs in Bangkok from 2003 to 2005<sup>4</sup>. The overall HIV prevalence increased from 17.3% in 2003 to 28.3% in 2005 to 30.8% in 2007 ( $p < 0.001$  for trend). The estimated HIV incidence among young MSMs increased from 4.1% in 2003 to 6.4% in 2005, to 7.7% in 2007 ( $p < 0.02$  for trend)<sup>4</sup>. Moreover, HIV prevalence among male-to-female transgender persons (TGs) was 13.5%<sup>5</sup>. In addition, HIV infection was widespread among MSMs, male sex workers (MSW), and TGs in the three study locations. Moreover, the following risk factors were independently associated with HIV infection: being recruited from Bangkok or Chiang Mai (MSM), older age (MSM and TG), being recruited from a park or street location (MSW and TG), drug use (MSM), self-reporting history of sexually transmitted infections (MSW), and self-reporting previous HIV-positive test result

or refusing to disclose a previous HIV test result (MSM and MSW). Sex with women during the preceding three months was inversely associated with HIV prevalence among MSW. More effective behavioral and biomedical interventions for MSM, MSW, and TG are needed to stop the spread of HIV in these populations.

Perceived risk of HIV infection was not inconsistent in risky HIV sexual behavior among MSMs. In Vietnam, the MSM self reports show inconsistent condom use and inaccurate perceptions of HIV risk. Nearly half of the sample reported engaging in unprotected anal sex with a male partner in the past 12 months and one-third with a male client<sup>6</sup>. In addition, American MSMs continue to have increased rates of HIV and sexually transmitted diseases (STD). The prevalence of HIV was 2.3%, syphilis 2.0%, urethral gonorrhea 0.1%, urethral chlamydia 1.3% while 2.2% of the men had hepatitis C antibodies. Although 43.2% of the men had engaged in unprotected anal intercourse in the prior 2 months, the majority of the men thought that their behaviors did not put them at increased risk of HIV or STDs<sup>7</sup>. Moreover, in the high risk group, amongst the males, secondary level education (as compared with primary or post-secondary level), and believing in monogamy (as a means of HIV risk reduction) were correlated with a decreased perception of HIV risk<sup>8</sup>. A survey among MSMs in six cities of the UK revealed that one quarter of young MSMs perceived they were at moderate/high risk of acquiring HIV and moderate/high perceived risk had the strongest association with unrecognized HIV infection<sup>7</sup>. However, the study in Malaysia found a positive correlation between risk perception and HIV infection in this study. Clients with high HIV risk perception have 17 times the odds of testing HIV positive compared to low risk clients. High HIV risk perception was significantly associated with multiple sex partners, multiple types of sex partners, alcohol use before intercourse, unprotected sex beyond 6 months, and inconsistent condom use during anal sex compared to low risk clients<sup>9</sup>. Little, however, is known about what

determines if persons in concurrent relationships develop a perception of being at risk of HIV infection. Therefore, this study aims to evaluate risk perception of HIV/AIDS among MSMs in Khon Kaen Province, Thailand. Targeting MSMs would provide evidence useful in planning for HIV prevention.

### Materials and Methods

A descriptive cross sectional study was carried out among young MSMs who are members of the M Reach group in Khon Kaen Province. The study population was 5,249 MSMs, aged 15 years old and over, with the exclusion criteria being unable to communicate in the Thai language. A snowball sampling technique was adopted to identify the samples, using MSM leaders to distribute the online questionnaire links to the MSM sample. Sample size was calculated to estimate a population, confidence level 95%, maximum acceptable difference 0.05, assumed proportion 0.31<sup>10</sup>, expected loss of subjects 30%, and this required a sample size of 442 MSMs.

Data were collected by e-survey from the self administered questionnaire which was developed by means of a literature review and validated by three experts. This questionnaire is composed of two parts; Part I includes general informations which aims to evaluate the MSM respondents with regard to knowledge and attitude to prevention of HIV/AIDS and Part II includes risk perception about HIV/AIDS which is measured by Likert's scale<sup>11</sup> yielding the reliability by Cronbach's alpha test as 0.82, which was divided into five parts; (1) blood, (2) genital fluids, (3) saliva and other body fluids, (4) blood and blood products and (5) sexual intercourse. The risk perception score interpretation was stratified into three groups by "high risk perception" with average rating of 3.68-5.00, "moderate risk perception" with average rating 2.34-3.67 and "low risk perception" with average rating 1.00-2.33<sup>12</sup>.

The knowledge about prevention of HIV/AIDS was measured by the test and included the use of condoms and living with HIV infected persons, which was content

reviewed by experts and the KR20 was 0.76. In addition, the attitude to prevention of HIV/AIDS used a rating scale of 5 levels - strongly agree, agree, not sure, disagree, and strongly disagree. The measurement of Likert<sup>12</sup> was applied to divide the results into five levels. This was also content reviewed by experts and the Cronbach's alpha test result was 0.79.

Descriptive statistics were used to describe sample characteristics, such as frequencies, percentages, means, standard deviations, medians, IQRs. A probability ( $p < 0.05$ ) indicated a statistically significant relationship. Ethics approval for the study was obtained from Khon Kaen University (No.HE 571459).

### Results

The response rate was 95.93% because this study had strong participation and cooperation with district coordinating leaders distributing and encouraging the MSM sample to look and complete the questionnaire on the internet. The advantage of the e-survey was that it was easy to assess the questionnaire via desktop, laptop and tablet/smart phone. Moreover the self-administered questionnaire made the MSM samples confident to answer some sensitive questions.

#### Socio-demographic characteristics

This study found the median age of the samples was  $24 \pm 8$  years old, with the minimum at 15 and the maximum at 46 years old. Most participants had completed vocational school at 47.2%, or had completed secondary school at 46.7%. As for marital status, it was found that most participants were single, divorced and widowed, and unmarried (having a partner) (Table 1).

#### Sexual behavior risks among MSMs

In terms of health behavior, for the role in the sexual intercourse, most of the respondents took both roles at 52.4%, were passive at 27.6%, and were active at 20.0%. For sexual orientation, almost all of them were

gays at 61.8%, straight men at 13.7% and bi-sexual men at 13.4%. Fifty seven percent of the participants had had

sex within the last week. 23.1% had had 2 sexual partners (Table 2).

**Table 1** Socio-demographic characteristics

Variables	N= 424	%
Age (year old)		
median± IQR	24.06±8.00	
Min, Max	15, 46	
Education level		
Have never attended school	4	0.9
Primary school	1	0.2
Secondary school	198	46.7
Vocational school	200	47.2
University	21	5.0
Marital status		
Unmarried (having a partner)	178	42.0
Married	22	5.2
Single/Divorced/Widowed (lives alone)	224	52.8

**Table 2** Sexual behavior risks among MSMs (N=424)

Variables	N	%
<b>1. Roles in sexual activities</b>		
1. Active	85	20.0
2. Passive	117	27.6
3. Both	222	52.4
<b>2. Sexual tastes</b>		
1. Men	58	13.7
2. Bi-Sexual Men	57	13.4
3. Gays	262	61.8
4. Transgender	47	11.1
<b>3. Number of partners you had sex with last week</b>		
1 partners	243	57.3
2 partners	98	23.1
3 partners	47	11.1
4 partners	8	1.9
5 partners	7	1.7
6 partners	1	0.2
7 partners	5	1.2

#### Risk perception to HIV/AIDS among MSMs

Overall 64.9% of samples perceived a high risk of HIV/AIDS. This study also found perceived high risk of HIV/AIDS through blood, genital fluids, blood and blood products, and sexual intercourse at more than 60%. Except for saliva and other body fluids risk, this study found most of the MSM samples perceived risk at the moderate level (Table 3).

#### Discussion

This study was given good cooperation by the MSMs samples due to the online self administered questionnaire being available and accessible, which made them feel free to complete the questionnaire even if some of the questions were sensitive.

This study found most of the sample completed vocational school at 47.2% and 46.7% had completed secondary school. The median age was  $24 \pm 8$  years old. Most of the samples were unmarried (having a partner)

**Table 3** Risk perception of HIV/AIDS among MSMs

Risk perception of HIV/AIDS	Low risk		Moderate risk		High risk	
	n	%	n	%	n	%
Risk perception in blood	32	7.5	97	22.9	295	69.6
Risk perception in genital fluids	14	3.3	155	36.6	255	60.1
Risk perception in saliva and other body fluids	18	4.2	341	80.4	65	15.3
Risk perception in blood and blood products	22	5.2	97	22.9	305	71.9
Risk perception in sexual intercourse	8	1.9	139	32.8	277	65.3
Risk perception of HIV/AIDS	4	0.9	145	34.2	275	64.9

and single/divorced/widowed (living alone). This confirms the characteristics of the study by UNESCO that found that Khon Kaen province had the lowest mean age at 25.4 years and most of them were students who had completed vocational school or completed secondary school<sup>13</sup>. This study also found a high percentage of the MSM sample was unmarried and lived alone, similar to the characteristics of MSMs in China<sup>14</sup>, Malaysia<sup>9</sup> and Vietnam<sup>6</sup>.

In terms of sexual orientation, there was a difference in each social and cultural situation. Most of the samples in this study identified their sexual orientation as gay, similar to the study of UNESCO and half of them reported a sexual role that was both active and passive<sup>13</sup>. This is contrast to the report from China where 65.7% reported having a homosexual orientation<sup>14</sup> and 82.7% identified themselves as homosexuals and 17.3% as bisexuals in Malaysia<sup>9</sup>.

This study found 64.9% of the samples perceived a high risk of HIV/AIDS, compared to the study of Koh KC and Yong LS who found 23.9% MSMs rated themselves as low risk, 27.9% as medium risk, 8.5% as high risk, and 39.7% were unsure of their risk due to the definition of the research tools differing. However, risk perception is the ability of an individual to discern a certain amount of risk<sup>15</sup>. If people have a basic understanding of what

risk means then those people may be able to prevent the risky behavior<sup>15</sup>, thus, the more perceived risk the more concern about the risky behavior. This study found that most perceived a high risk in all parts of the HIV/AIDS infection, except the part of saliva and other body fluids risk such as using needles and syringes for drug injections which increases the risk of HIV/AIDS infection, HIV/AIDS infection can be found in the used syringes for more than 4 weeks after blood contamination in infected recipients and being hit and bleeding increases the risk of HIV infection. The risk was found at the moderate level due to their idea that the risk was irrelevant to their sexual and life style.

## Conclusion

This study found that 64.9% of the sample perceived high risk of HIV/AIDS. Therefore, intervention to increase risk perception is recommended to decrease HIV/AIDS risk behaviors among younger MSMs.

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