UTILISATION OF VOLUNTARY CONFIDENTIAL COUNSELING AND TESTING FOR HIV BY MEN WHO HAVE SEX WITH MEN IN NORTHEASTERN THAILAND

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ABSTRACT:

Background: HIV/AIDS remains a serious public health problem globally and in Thailand, and men who have sex with men (MSM) are at particularly high risk of infection. To reduce the incidence of HIV/AIDS, Thailand provides Voluntary Confidential Counseling and Testing (VCCT) for MSM at no cost.

Methods: This cross-sectional study (n = 565) assessed VCCT participation rates and examined a variety of factors that potentially influence participation in Khon Kaen, Thailand. Data were collected using a self-administered questionnaire.

Results: Results showed that 43% of the study subjects had participated in VCCT, and five factors were found to be associated with participation. For two of these, the association was positive: those aged older than 24 years and reporting a frequency of sexual intercourse of at least once every month over the past three months were more likely to have participated. Three factors were negatively related: subjects who reported that their family did not know their sexual orientation, that their first sexual partner was a stranger or was the result of chance as opposed to some other kind of partner, and that they had no history of sexually transmitted disease were less likely to use VCCT. Knowledge about VCCT and HIV/AIDS and attitudes to VCCT were unrelated to participation.

Conclusion: Thailand is falling well behind in achieving national and international targets in testing MSM for HIV infection, and there is an urgent need for a major re-engineering of VCCT services in terms of promotion, outreach and acceptability.

Keywords: HIV; Voluntary confidential counseling and testing; Men who have sex with men; MSM; Thailand

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INTRODUCTION

HIV infection and AIDS remain serious public health issues throughout the world. The UNAIDS Global Report for 2013 estimates that in 2012 there were 35.3 million individuals living with HIV worldwide and 2.3 million new HIV infections; while the number of new infections had declined by 33% since 2001, number of living with the infection had grown due to the increased survival resulting from more receiving antiretroviral treatment [1]. In Thailand, there were an estimated 445,504 people living with HIV in 2014 and 7,816 new infections; the number of new infections had declined by 65% over the period 2000-2010, but the rate of decrease has slowed since 2010, and the reductions in recent years fell well short of the targeted figures [2].

Men who have sex with men (MSM) are particularly at risk of infection by HIV [3]. Gay men and MSM are reported to be 19 times more likely to be infected than the population in general [4]. In the USA, although gay, bisexual and MSM represent only about 2% of the population, they accounted for 65% of all people considered to have HIV infection in 2013 [5]. Many public health organizations around the world continue to work diligently to address and reduce the burden of HIV/AIDS in this population, but attempts to control or reduce the spread of the

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disease among MSM have not succeeded [4, 6, 7]. Limited data and pockets of high prevalence create problems in estimating and tracking national prevalence rates for MSM, but the WHO Progress Report 2011 for the South-East Asia Region indicated rates of 11.1, 11% and 12.4% for Thailand, Myanmar and Indonesia (respectively) in 2010, and 7.4% for India in 2008; the Report concluded that there appeared to be a growing epidemic of HIV among MSM in the region [8]. An illustration of a pocket of high prevalence in Thailand is provided by a cohort study of 1744 MSM in Bangkok who practisced penetrative sex and were followed up every four months for three or more years. The baseline prevalence of HIV infection in 2006 was 21.3%, and perhaps more alarming was the incidence rate of 5.9 per 100 person years over the follow-up period which, as the authors observed, was one of the highest incidence rates for MSM ever reported in Western countries [9].

Voluntary Confidential Counseling and Testing (VCCT) is an important method for the control and prevention of HIV transmission. In Thailand, VCCT is a free service which is covered by the nation's universal healthcare programme and offers up to two HIV tests per year. Counseling is provided for patients who receive positive results to help them cope adaptively with the diagnosis and promptly connect them with options for treatment and care. Awareness of HIV infection also seems to have the effect of considerably reducing the frequency of high-risk sexual behaviors [10]. For those with negative test results, VCCT serves to reinforce patient motivation to remain HIV negative by maintaining safe sexual practices such as condom use and the avoidance or casual sex or having multiple sex partners. In developed countries unawareness of HIV status among MSM is usually below 30%, but in regions like Asia, Africa and Latin America it is 40% or higher [11].

Precise information about the utilization of VCCT by MSM in Thailand is not available, but a venue-day-time sampling procedure that was used to recruit a total of 2,049 MSM in Bangkok, Chiang Mai and Phuket during 2005 found an overall 50.3% reported a history of HIV testing [12]. A similar rate of prior testing (51.8%) was found in a much smaller sample of MSM (N=56) recruited at a life-skills camp in Bangkok in 2009 [13]. According to the most recent report of the National AIDS Committee, a survey of MSM conducted in seven provinces during 2013 found that 61.8% had been tested for HIV at some time in the past and that 41,6% had been tested in the past year, but the overall national rates for MSM who received HIV prevention programmes and who knew the results of an HIV test done in the past 12 months were reported as 45.92% and 36.85%, respectively [2]. In the northeastern city of Khon Kaen in 2012 only 22.5% of 400 MSM recruited by snowball sampling reported having been HIV tested at some time in the past [14] and had therefore fully engaged with VCCT services. The reasons for this considerably lower rate are not known and are difficult to understand given the government funded incentives such as free testing and free round-trip transportation and the campaigns to promote HIV testing among MSM.

The purpose of the present study was to a) estimate the current prevalence of VCCT participation among an MSM population in Khon Kaen, and b) investigate factors which might influence the health behavior of voluntarily pursuing HIV counseling and testing among MSM in the province. The findings were expected to help in developing new ways of promoting VCCT services so that they reach a larger proportion of the local MSM population.

MATERIALS AND METHODS

Study design

Using a self-report survey questionnaire, this cross-sectional analytical study conducted among the MSM population of Khon Kaen Province in Northeastern Thailand was designed to estimate the current rate of VCCT utilisation and to investigate a variety of factors believed to be associated with VCCT participation for HIV screening.

Participants and procedures

The target population of MSM comprised individuals who self-identified as gay, bisexual, transgender, or heterosexual men who had experienced sexual intercourse (that is, by manual, oral, and/or anal means) with other men. The inclusion criteria required that participants must be of Thai nationality, fluent in the Thai language (reading, writing, and speaking), aged at least 18 years of age, a resident of Khon Kaen Province for at least three months, and physically present in the province during the data collection period (1 December, 2013, - 31 May, 2014). Participants voluntarily elected to take part in the study through an informed consent process, and the research

procedures were approved by the Khon Kaen University Ethics Committee for Human Research (reference no: HE562194).

A snowball sampling method was used for the identification and recruitment of participants. The principal investigator (PI), with the assistance of staff members from a local MSM outreach non-profit organization (M-Reach Khon Kaen), initially contacted and invited eligible individuals in their own social networks (N = 10). The PI and outreach workers also visited and recruited individuals from pubs, bars, clubs, and events commonly attended by MSM. Each participant was then either invited to visit the M-Reach drop-in center to complete the survey questionnaire or the PI traveled to and met with the participant at a convenient location (for example, at home or a coffee shop). After completing the questionnaire, participants were asked to invite other eligible individuals to take part in the study, either by contacting the PI or by visiting the M-Reach drop-in centre. Without offering any incentives, the present study recruited a final sample size of n = 565, which meets the minimum required sample size for a multiple logistic regression analysis using the formula provided by Hsieh, Bloch, and Larsen [15].

Survey instrument

The data were collected using a 54-item self-report survey questionnaire which consisted of six sections: general information (mainly demographic), sexual history and behaviour, health behaviour, knowledge of VCCT services, knowledge of HIV/AIDS, and attitudes towards VCCT. Participants completed the survey in about 15-20 minutes. A copy of an English translation of the questionnaire may be obtained from the corresponding author.

Knowledge of VCCT services was assessed using seven statements about VCCT which respondents were asked to rate as 'true' or 'false'. For three items the correct answer was 'true' (for example, 'VCCT is free of charge for Thai citizens twice a year') and for the other four the correct response was 'false' (for example, 'VCCT is not useful for men who have sex with men'). A participant's knowledge score was the total number of correct responses. For the purpose of the analysis each participant was then categorised as having higher or lower knowledge in terms of whether his score was above or below the median score for all participants. Knowledge of HIV/AIDS was assessed in a similar way using six 'true' or 'false' statements with 'true' being the correct answer for four items (for example, 'Someone who looks healthy may have HIV'), and 'false' the correct response to the other two (for example, 'Mosquitos can carry HIV from one person to another'). Again, participants were categorised as having higher or lower knowledge using the median score.

For the measurement of attitude to VCCT participants rated their level of agreement/ disagreement with each of 11 evaluative statements on 5-point Likert-type scales with response options ranging from 'strongly agree' (score=5) to 'strongly disagree' (score=1). Six statements represented a positive attitude (for example, 'VCCT providers are kind, nonjudgmental, and want to help people'). The remainder represented a negative attitude (for example, 'VCCT providers sometimes discriminate against men who have sex with men'), and the scores on these items were reverse coded. The median total attitude score was used to categorise participants as having a more positive or less positive attitude to VCCT.

Data analysis

Descriptive data were summarised using mean, SD, median, minimum and maximum values and percentages as appropriate for continuous or categorical variables. The factors associated with VCCT participation were determined using simple and multiple logistic regression. The dependent variable was reported participation versus non-participation in VCCT. The independent variables for the univariate analysis were a selection of items in the survey questionnaire which were chosen on the basis of the PI's experience in working with MSM. The candidate variables for the multivariate analysis using backward elimination were those found to have a statistically significant ($p \leq 0.05$) relationship with VCCT participation in the univariate analysis. For the final model, statistical significance was set at $p \leq 0.05$. All analyses were performed using Stata v.10.1 [16].

RESULTS

The socio-demographic and sexual behaviour characteristics of the 565 survey participants, their knowledge and attitudes, and the results of both the univariate and multivariate analyses are summarised in Table 1.

A total of 43.36% had used VCCT, and all of the non-users reported that they have never been tested for HIV (datum not shown). The majority of the participants (54.69%) were in the 18-24 years age group, and the mean age was 25.56 years

Table 1 Characteristics of participants and results of logistic regression analyses

Variables	Number (%) (n=565)	VCCT used (%)*	OR_{Crude} (95%CI)	*P-value*	$OR_{Adjusted}$ (95%CI)	*P-value*
Age(years)						
15-24	309 (54.69)	18.58	1	0.000	1	0.000
More than 24	256 (45.31)	24.77	2.35(1.66-3.32)		1.97(1.35-2.86)	
Min = 18, Max = 61, Mean = 25.56, SD = 7.92						
Education						
Junior high school or less	191 (33.81)	15.75	1	0.215		
Senior high school or above	374 (66.19)	27.61	0.82(0.58-1.17)			
Occupation						
Non-student	348 (61.59)	31.86	1	0.000	1	0.632
Student	217 (38.41)	11.5	0.4(0.28-0.58)		1.03(0.92-1.16)	
Family awareness						
Aware	389 (68.85)	35.22	1	0.000	1	0.000
Not aware	176 (31.15)	8.14	0.34(0.23-0.51)		0.45(0.33-0.63)	
First sex partner						
Boyfriend, sex worker and others	446 (78.94)	36.46	1	0.003	1	0.001
Stranger and by chance	119 (21.06)	6.9	0.49(0.33-0.71)		0.83(0.74-0.93)	
Condom use in first sexual intercourse						
Used	312 (55.22)	25.3	1	0.189		
Not used	253 (44.78)	18.05	0.8(0.57-1.12)			
Sexual intercourse role						
Insertive	92 (16.28)	7.43	1			
Receptive	288 (50.97)	18.93	0.7(0.44-1.13)	0.0884		
Both	185 (32.74)	16.99	1.28(0.78-2.12)			
Sexual intercourse for money						
Ever	144 (25.49)	13.98	1	0.001	1	0.068
Never	421 (74.51)	29.38	0.54(0.36-0.79)		0.68(0.44-1.03)	
Frequency of sexual intercourse in last 3 months						
Less than once per/month	292 (51.68)	27.43	1	0.049	1	0.025
1 - 2 times per month or more	273 (48.32)	23.01	1.4(1.00-1.96)		1.13(1.02-1.27)	
Number of different sexual intercourse partners within last 3 months						
Less than once per month	381 (67.43)	26.02	1	0.001	1	0.626
1 - 2 times per month or more	184 (32.57)	17.35	1.81(1.27-2.60)		1.04(0.89-1.21)	
Condom use with steady partner within past 3 months						
Consistent use	286 (50.62)	23.36	1	0.086		
Inconsistent use	279 (49.38)	11.33	0.65(0.69-1.56)			
Condom use with temporary partner within past3 months						
Consistent use	339 (60.00)	27.79	1	0.074		
Inconsistent use	226 (40.00)	6.19	0.33(0.41-1.04)			
Drug use or alcohol consumption before had sexual intercourse in past 3 months						
Ever	355 (62.83)	27.26	1	0.991		
Never	210 (37.17)	35.58	0.99(0.71-141)			
History of a sexually transmitted disease						
Ever	41 (7.26)	4.96	1	0.001	1	0.006
Never	524 (92.74)	38.41	0.33(0.16-0.65)		0.35(0.17-0.72)	
Frequency of using health care services or hospital						
More than 1-2 times/year	293 (51.86)	24.78	1	0.028	1	0.590
1-2 times/year or less	272 (48.14)	18.58	0.69(0.49-0.96)		1.04(0.90-1.21)	
Level of VCCT knowledge						
Higher	362 (64.07)	26.55	1	0.218		
Lower	203 (35.93)	16.81	1.24(0.88-1.76)			
Median=5, min=0, max=7						

Table 1 Characteristics of participants and results of logistic regression analyses (cont.)

Variables	Number (%) (n=565)	VCCT used (%)*	OR_{Crude} (95%CI)	*P-value*	$OR_{Adjusted}$ (95%CI)	*P-value*
Level of HIV/AIDs knowledge						
Higher	334 (59.12)	24.07	1	0.128		
Lower	231 (40.88)	19.29	1.30(0.93-1.82)			
Median= 5, min=0, max=6						
Level of attitude towards VCCT						
More positive	283 (50.09)	19.82	1	0.069		
Less positive	282 (49.91)	23.54	1.36(0.98-1.90)			
Median = 40, min=25, max=55						

*note: base for percentages is the total number of study participants (N=565)

(SD = 7.92, min=18, max=61). Most (66.19%) reported their education to have been at senior high school level or above, and 38.41% described themselves as students. A majority (68.65%) indicated that their family was aware of their sexual orientation, and transgender was the commonest term which they used to describe their gender role.

Nine of the 19 factors in the univariate analysis were entered as candidate variables in the multiple regression analysis, and five of these were found to have a statistically significant association with the use of VCCT in the final model. Subjects older than 24 years were more likely to have used VCCT than the younger age group (AOR= 1.97; 95%CI=1.35-2.86); those reporting having engaged in sexual intercourse at least once a month over the past three months were more likely to use VCCT than those who reported a frequency of sexual intercourse of less than once per month over the same period (AOR=1.13; 95%CI=1.03-1.27); those reporting that their family did not know their sexual orientation were less likely to use VCCT than those who said that their family did know their sexual orientation (AOR=0.45; 95%CI=0.33-0.63); those reporting that their first sexual partner was with a stranger and by chance were less likely to use VCCT than those who said that their first sexual partner was a boyfriend, a sex worker or some other kind of partner (AOR=0.83; 95%CI=0.74-0.93); and those who denied ever having a sexually transmitted disease were less likely to use VCCT than those who did report a history of a sexually transmitted disease (AOR=0.35; 95%CI=0.17-0.72. Knowledge of about VCCT and HIV/AIDS and attitudes to VCCT were unrelated to use of VCCT.

DISCUSSION

The finding that the estimated uptake of VCCT among MSM in Khon Kaen (43.36%) was about twice that reported in the previous study is encouraging. To the extent that all VCCT users are expected and encouraged to accept testing for HIV, the fact that none of the non-users reported having been tested means that the percentage use of VCCT is equivalent to the data on prior HIV testing rates found in other studies. The present rate for Khon Kaen is therefore only a little lower than the rates found in other parts of Thailand [12, 13, 17]. Nevertheless, all these national estimated rates are not only low in comparison with those in the more fully developed countries [11], but they are also worse than those found in the neighbouring country of Cambodia where 83.6 of MSM are recently reported to have been tested at least once in their lives and 65.1% in the past six months [18]. These rates of HIV testing are important because knowledge of HIV status has been associated with reduced high risk sexual behaviour [10].

The second and probably more important aim of the present study was to explore factors associated with VCCT uptake, and five factors were found to have significant associations in the final regression model. The finding that the older age group was more likely to use VCCT is supported by a previous Thai study [13] and is consistent with the results of three studies conducted in other countries [11, 19, 20] but not with a South African study in which younger MSM were more likely to have been HIV tested [21]. In the community-based study conducted in northern districts of Chiang Mai Province [22], there was no age difference between those who came for VCCT and those who did not. However, this was not a study exclusively about MSM: 52.5% of the tested participants were female. In an internet survey of MSM in the USA respondents negative for HIV or whose serological status was unknown were asked to rate their likelihood of using each of five different methods of

obtaining free testing. No age differences were found in preference ratings for VCCT [23]. While this study was conducted in a different culture, one of its other findings may shed some light on the reason for younger MSM making less use of VCCT in the present study. Preference ratings for a testing method which involved no personal contact with other people were higher in younger than older MSM, suggesting that older MSM may be less averse to counseling.

Regarding family awareness, the association between this and VCCT attendance is not surprising given the key role which families can play in supporting healthy behaviour and the avoidance of risk-taking [24]. While a positive and supportive family response to disclosure of sexual orientation can never be guaranteed, when disclosure does occur, it is associated with a reduction in high risk sexual behaviour such as unprotected anal sex [25]. MSM who inform family members about their orientation may also be generally less susceptible to internalized stigmatisation and more open to counseling.

It is not clear why those recalling that their first sexual partner was a stranger or was the result of chance were less likely to use VCCT, but it may be that the basis for this is similar to the reason for finding that those reporting the higher frequency of sexual intercourse in recent months were more likely to engage with VCCT. In both cases it is possible that these groups saw themselves at higher risk of HIV infection. While one Thai study found that MSM with low perceived risk of HIV were more likely to get tested [13], a number of studies elsewhere have shown that high perceived risk of HIV is a factor which motivates MSM to get themselves tested [18, 26-29]. The last factor associated with use of VCCT services was reported history of sexually transmitted disease (STD). MSM reporting no history were less likely to attend theses services. The likely explanation for this is that MSM who had experienced a STD were more 'acclimatised' to sexual health facilities and contact with the health service staff in these facilities may have increased their awareness of the wisdom of attending VCCT.

Research relying on information from 'hard-to-reach' populations such as MSM inevitably involves some form of non-probability or respondent–driven sampling such as convenience sampling or, as in the present study, snowball sampling. Various methodological approaches have been developed for improving the representativeness of MSM samples, but none entirely removes the possibility of selection bias and the resultant threat to external validity [6]. A further problem is that research data collected in one province will not necessarily generalise to parts of the country. A more specific and perhaps less important limitation of the present study related to measures of knowledge and attitudes, none of which were found to be associated with VCCT attendance. Both knowledge scales contained only a small number of items, and the median scores on all three measures were high. This meant that the ability of these scales to detect differences between VCCT users and non-users was probably low due to limited variances.

CONCLUSION

More and better quality data are needed to track the level of engagement with VCCT by MSM, but the indications are that Thailand is falling well-behind international and national targets. At a global level the target has been for HIV services to reach at least 85% of MSM by 2020 [4], and within Thailand the target is that 90% of all people living with HIV will know their HIV status also by 2020 [2]. For these goals to become a reality there needs to be an urgent, major re-engineering of VCCT services in terms of promotion, outreach and acceptability. While the present study provides some empirical and speculative understanding of some of the barriers to engagement with VCCT, it barely scratches the surface on how the targets can be achieved.

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