

日本と海外の MSM 人口における比較研究

研究協力者：コーナ・ジェーン（名古屋市立大学看護学部／財団法人エイズ予防財団）、
市川誠一、金子典代（名古屋市立大学看護学部）、塩野徳史、新ヶ江章友（名古屋
市立大学看護学部／財団法人エイズ予防財団）

研究要旨

2009 年に実施した「日本在住成人男性を対象とした性行動・性的意識調査」の調査方法と結果について、アジアや西欧地域で実施された先行研究を参照するため、PubMed、Google Scholar で文献レビューを行ない、MSM 人口割合を地域別、調査方法別に比較した。

HIV 感染症の流行を背景として、男性同性間の性行動に関する調査が 1990 年代以降世界各地で行われてきた。アメリカ合衆国、ヨーロッパ、オーストラリアでは、代表的標本調査、面前インタビュー法、コンピュータを介した面前インタビュー法、郵送法、電話インタビュー法、コンピュータを介した家族世帯に対する電話インタビュー法が用いられている。これらの調査によると、男性同性間での性経験は 0.8%から 18.5%であった。アジアでは、性行動調査は主に面前インタビュー法が用いられており、軍隊、大学生などの限定された集団をサンプルとした調査が多かった。これらの調査によると、男性同性間の性的経験を有するものの割合は 3.4%から 18.5%であった。また中国と香港の一般住民を対象にした人口調査によると、中国のコンピュータを介したインタビュー法では成人男性の 2.2%、香港のコンピュータを介した電話インタビュー法では成人男性の 4.6%が男性との性経験があったと報告されている。代表的調査として実施した日本の調査では、成人男性の 2%が男性との性経験を有していた。

地域によって方法論が一貫していないために日本で実施した本調査結果との比較が難しいが、日本における男性同性間の性経験は、アジアの他の国のデータと比較すると低い。これは 1) 今回の調査は代表標本を用いた郵送法による調査であったこと、2) 日本の調査に若い年齢の回答率が低かった、3) 同性間の性行動を報告することへの抵抗があったことなどが考えられる。

A. 研究目的

Understanding sexual behavior is fundamental to understanding the dynamics of HIV transmission. While historically, studies of human sexuality have drawn from a diverse range of academic approaches, public health responses to HIV/AIDS have emphasized the need for population level surveys to understand patterns of sexual behavior and HIV transmissible risk behaviors[1]. This data is necessary at the

policy level for advocacy, response planning, resource allocation, estimations of HIV prevalence, and epidemic projections. At the programming level, population size data is needed for planning the scale of interventions needed, evaluation of coverage, and monitoring and evaluations[2].

Despite the need for data on HIV transmission among men who have sex with men (MSM), population level surveys on male

homosexual behavior have been conducted mainly in industrialized Western countries [3]. In particular, retrospective research indicates previously undocumented HIV epidemics among MSM through-out the Asian region, and this has been facilitated, in part, by a lack of behavioral data on male to male sex behavior prevalence [4, 5, 6]. In order to effect a scaled up response to increasing HIV infections among MSM, a UNAIDS Regional meeting has recommended that countries in the Asia Pacific include the collection of MSM and transgender population size estimations in their HIV response strategies [6].

This study aimed to compare the international data published on male homosexual behavior, in order to evaluate the findings of the 2009 survey of homosexual sexual behavior derived from a general population of adult males in Japan. Studies pertaining to male homosexual behavior in Western countries including Australia, Europe, and the USA, and Asian countries are presented here.

B. 研究方法

A literature search was conducted using PubMed and Google Scholar internet search engines to collect literature related to population surveys of male same sex behavior and male homosexuality. Japanese data was obtained from AIDS Prevention Research Grant Reports and a research paper under review for publishing entitled 'Findings of the 2009 survey of homosexual sexual behavior derived from a general population of adult males in Japan' (presented elsewhere in this Research report).

Studies were collated into geographical area, and analyzed in order to determine the methodology used and findings obtained regarding life-time experience of male homosexual behavior, attraction and identity. A total of 32 papers were reviewed.

C. 研究結果

The first sexual behavior surveys asking about homosexual sexual behavior and attraction was implemented in Germany by Hirschfeld in 1903, and more famously by Kinsey in the US in the 1940s and 1950s. However, it was the rapid increase of HIV in the late 1980s which led to the public health need for population level data on same sex behavior among men. While sexual behavior surveys including questions about homosexual sexual behavior and attraction began to be more widely implemented in the late 1980s and 1990s, there was little consensus in methodology and analysis[7]. More recently, there has been more sophisticated discussion of the methodological issues in conducting population level data on sexual behavior[8], and male homosexual behavior in particular. This has been further stimulated by the UNGASS indicators developed by the United Nations to uniformly measure and evaluate progress on countries health sector responses to HIV [2, 9, 10]which has facilitated the collection of more uniform data leading to global and wide scale comparisons of human and MSM sexual behavior [3].

The findings regarding lifetime experience of male same sex sexual behavior, attraction and identity are presented in

Table 1. The findings are presented for Western countries including Europe, Australia and the USA, followed by Asian data from representative and non-representative samples.

Regarding male homosexual sexual behavior in Europe, while a wide variation exists between Holland (13.4%) and Portugal (0.9%) more than half the countries reviewed fall within the range of 4 to 6%. Survey samples and data collection methodologies vary. Each country has its own sampling method, although most (with the exception of Greece) aiming to compose national representative samples. Data collection methods also varied, with a number of countries using computer assisted telephone interviewing (CATI), while other countries used telephone, face-to-face interviewing and postal methods[11, 12]. Among the European surveys, only the Netherlands survey collected data on homosexual attraction with 13.5% of men reporting same sex physical attraction in their lifetime[12].

Australian and US data is more recent than the European data, and most recent surveys conducted using CATI indicate male same sexual behavior among 6.97% and 7% respectively, findings which are marginally higher than the European average. Homosexual attraction of 3.2% was reported in the US in 2002, and 5.1% and 3.3% in Australia in 2002 and 2004/5 respectively.

Looking at the data available from Asia, it is of note that there are only a small number of national representative sample surveys, conducted in China[13], Hong Kong[14], and Japan[15]. The findings,

respectively, regarding male homosexual behavior are 2.2%, 4.6%, and 2.0% and these findings are considerably lower than the data from Western countries. The majority of studies in Asia have been conducted among convenience samples of truck drivers, slum dwellers, young people, and university students using interview and self conducted data collection methods revealing a wide range in male same sexual behavior from 3.4% to 18.5%.

From Asian surveys, no data on male homosexual attraction was reported apart from the Japanese 2009 survey which reported 3.7% homosexual or bisexual attraction.

The purpose of collecting population level data on homosexuality is to track HIV incidence and prevalence to project the number of MSM affected and to plan a response including interventions, coverage and evaluate them. For the purposes of this Study Group on the Development and Implementation of Community-based HIV Prevention Interventions for MSM, in addition to the data obtained from the 2009 survey regarding homosexual attraction and behavior, 2.0% and 3.7% respectively, data regarding those who had homosexual attraction or homosexual behavior were calculated to be 4.3%, and this percentage was deemed to be the target of interventions of the Study Group.

D. 考察

While direct comparison of the homosexual behavior data is difficult due to the lack of uniformity in sampling, data collection and instrumentation. However,

review of the research indicates that male homosexual behavior from representative samples in Western countries ranges from 0.9% to 11% with more than half of countries falling within 4 to 6%.

In Asia, non-representative samples indicate life time same sex behavior among men ranges from 3.4% to 18.5%. Data from representative samples range from 2% to 4.6%.

Comparison of the data from representative samples indicates that Asian data is lower than that from Western countries, and Japan's 2.0% MSM prevalence is rather low by Asian and international standards.

There may be a number of reasons which account for the low 2.0% result obtained in the 2009 Japanese survey investigating homosexual experience and attraction of adult men.

1. The postal methodology of the 2009 Japanese survey and resulting response rate may have contributed to participation bias and skewing of the data. Mode of interviewing is known to affect the quality of data obtained in large population sex behavior surveys[16, 17]. Use of computer assisted interviewing methods, including ACASI and CASI, are reported to obtain higher response rates and accurate data collection. In particular, CASI improves the reporting of sensitive and stigmatized behaviors including male to male sexual activity[18, 19].

2. The 2009 Japanese survey investigating homosexual experience and attraction of adult men had a low response rate among younger age groups. Higher rates of sexual activity among younger age groups

of men have been reported in Japan[20], and among homosexually active men in Australia, Europe, and USA [12, 21]. This indicates that a higher response from younger age groups would have resulted in a higher rate of male same sexual behavior and attraction.

3. The impact of social attitudes on the occurrence and reporting of homosexual behavior has been acknowledged in the literature [12]. Legal status of homosexuality, religious influences, and visibility of homosexuality in society affect individual's openness to express homosexual behaviors and willingness to report homosexual experiences in sex surveys. The rates of reporting of homosexual behaviors in a particular country at a particular time are affected by social and political dynamics that go beyond technical issues of survey sampling and methodology [7]. Thus the reporting of higher rates of homosexual behavior in North American, Australian in comparison to Asia is a reflection of social factors as well as sexual behavior patterns.

4. A representative survey investigating the sexual behavior of adults using similar sampling methodology, conducted in 1999, found that 1.2% of adult men had experienced homosexual and bisexual sexual experience. The finding of the 2009 survey, that 2.0% of adult males had experienced same sexual behavior indicates that: 1. The face to face interview methodology used in the 1999 survey inhibited the collection of same sex behavior, and 2. In the 10 years since the previous survey, that social attitudes to expressing and reporting same sexual

behavior have relaxed somewhat.

5. In defining who should be the target of interventions of the Study Group on the Development and Implementation of Community-based HIV Prevention Interventions for MSM, the 2009 Japanese study findings that 4.3% of adult men had experience homosexual attraction or homosexual experience was deemed to be the target population.

E. 結語

The conducting of male homosexual sexual behavior is an important Understanding sexual behavior provides important data for policy and programming.

A review of the literature relating to male homosexual behavior indicates that Japanese prevalence of 2.0% male homosexual sexual experience is low by international standards.

The 2009 Japanese study findings that while 2.0% of adult males had lifetime sexual experience with a man and 3.7% had experienced lifetime sexual attraction to a man, the target population of the Study Group on the Development and Implementation of Community-based HIV Prevention Interventions for MSM is the 4.3% of adult men who had experienced lifetime homosexual attraction and or experience.

It is imperative that the Japanese survey be repeated in another 5 to 10 years using methodology that might increase the response rates of younger age groups and the survey sample as a whole.

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Table 1: Representative and non-representative surveys on male homosexual behavior in Western countries and Asia

Country	Authors	Year	Method	N	Response rate %	Male homosexual identity %	Male same-sex attraction %	Male same-sex experience (past year) %	Male same-sex experience (life-time) %
Western countries: Europe									
Athens (Greece)	Sandfort	1990	Face to face interviews with self-administered questionnaire.	774	84.1				1.7
Belgium	Sandfort	1993	Computer assisted telephone interviewing.	1222	80.9			1.6	5.2
Finland	Sandfort	1992	Face to face interviews with self-administered questionnaire.	753	37.2				4.9
France	Sandfort	1992	Computer assisted telephone interviewing.	1630	75.9			1.3	4.3
Germany	Sandfort	1990	Face to face interviews with self-administered questionnaire.	1034	68.7				4.4
Holland	Sandfort	1989	Face to face interview.	359				6.3	13.4
Norway	Sandfort	1992	Self administered postal questionnaire.	1636	37.2			1.6	5.2
Portugal	Sandfort	1991	Face to face interview with self administered questionnaire.	1163	86			0.8	0.9
Spain	Sandfort	1992	Self administered questionnaire.	427	69.9				7.3
Switzerland	Sandfort	1990	Computer assisted telephone interviewing.	1266	68.9				4.7
UK	Wellings	1990	National probability sample of adults ages 16 to 44 using pen and paper self interview.	Men N=6,000	63.3				6
UK	C H Mercer, K A Fenton, A J Copas et. Al	2000	National probability sample of adults ages 16 to 44 using computer assisted self interview.	Men N= 4,762	65.4				8.4

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Western countries: Australia and USA									
Australia	AMA Smith, C E Rissel, J Richters, A E Grulich, R de Visser	2001– 2002	National representative telephone computer assisted survey of a random sample of adults aged 16–59	Men N=10,713	69.7	Gay/homosexual 1.6% Bisexual 0.9%	To men only/ predominantly 1.7%, to men and women 5.1%.		With men only/ predominantly 1.6, With men and women 4.4
Australia	A E Grulich, R de Visser, A M A Smith, C E Rissel, J Richters	2004– 2005	National representative telephone computer assisted survey of a random sample of adults aged 16–64	Men N=4,08	56	Homosexual 1.03%, Bisexual 1.23%, Queer 0.02%	To same sex 0.64%, To men and women 3.31%		With men only 0.37, with men and women 6.06
USA	Leigh, Temple, Trocki	1992	National household population survey of adults aged by face to face interview.	Total respondents N=2,058	70.3	2% Homosexual, 1% Bisexual			4.9
USA	Mosher, Chandra, Jones	2002	National household population survey of adults aged 15–44 using audio computer assisted self-interviewing.	Men N=4,928	79	Homosexual 2.3%, Bisexual 1.8%	3.20%		7
Asia - representative samples									
China	Chongyi et. Al	2009	Probability sample of households using CASI with men aged 20 to 64.	1861					2.20%
Hong-Kong	Lau, Kim, Lau, T sui	2001	Random sample of Chinese Hong Kong males aged 18 to 60 using computer assisted telephone interviewing.	Men N=14,963	57				0.046
Japan	Kihara	1999	National proportional household interview survey.	Total N =3,562	71.2				with men only 0.4%, with men and women 0.8%
Japan	Ichikawa et. al	2009	Proportionally representative sample of 5 regional blocks which cover 78.5% of the national population. Postal survey with men aged 20 to 60.	Men N =1,473	44.8		To men only 2.0%, to men and women 1.6%.		With men only 1.5%, with men and women 0.5%.

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Asia – non representative samples									
Bangladesh	Gibney	2001	Face to face interviews with a random sample of trucking company employees.	N=388				7.2	
India	Go	2001	Cross-sectional population based random sample using face to face interviews among 30 slum areas in Chennai.	N=774					0.059
Laos	Toole	2004	Interviews with a purposive sample of young men in Vientiane.	N=800					0.185
Thailand	London, VanLandingham, Grandjean	1993	Anonymous self administered survey of military personnel in northern Thailand.						0.163
Thailand	Beyrer, Eiumtrakul, Celentano	1995	Interviews with 2 cohorts of Thai military conscripts and 1 discharged cohort.	N= 2047					0.065
Thailand	Kitsiriporchai	1998	Anonymous self administered survey with army conscripts.	N=5474					10%
Cambodia	Glaziou	1999	Representative sample of university students in Phnom Penh	N=772	88				0.08
China	Cong	2008	Cross-sectional survey of a university sample in Zhejian.	Sexually active men N=					0.034
Philippines	Ramos-Jimenez	1999	Household interview survey with urban men	N=3,615					with men and women 12.1%, with men only 1.7%