

Same-sex sexual attraction, behavior, and practices of Jewish men in Israel and the association with HIV prevalence

Zohar Mor^a and Udi Davidovich^b

^aRamla Department of Health, Ministry of Health, Ramla, Israel; ^bGGD, Amsterdam, The Netherlands

ABSTRACT

In order to efficiently direct efforts and resources required for the prevention of HIV and other sexually transmitted infection among men who have sex with men (MSM) in Israel, it is necessary to define their particular behaviors, estimate their size, and assess the HIV-burden. This cross-sectional study included a sub-sample from a random representative National study performed in Israel, which included Jewish males aged 18–44 who completed online anonymous questionnaires regarding their sexual attraction and practices, commercial sex-work, as well as condom and substances' use. Additionally, participants were asked to identify themselves as gay, bisexual, or heterosexual. National estimates regarding prevalence of risk-behaviors and HIV-infection among MSM were based on the Statistical Abstract of Israel and the National HIV Registry, respectively. Of the total sample of 997 men, 11.9% reported lifetime male sex encounters, while 4.5% and 3.7% self-identified as gay or bisexual, respectively. The estimated population of self-identified Jewish gays/bisexuals aged 18–44 in Israel was 94,176, and in Tel-Aviv 33,839. HIV prevalence among MSM was estimated at 0.7% in Israel and 1.0% in Tel-Aviv. MSM were more likely to live in Tel-Aviv, had higher levels of education, and were scored higher on several determinants of sexual risk in comparison to those attracted to women, including early sexual debut, greater number of sexual partners, ever paid/been paid for sex, sexually coerced, and substance use. In conclusion, MSM were involved in greater risk behaviors than those who only had female sex partners. Most MSM were living in Tel-Aviv and their estimated HIV prevalence was 1.0%.

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Introduction

The number of individuals who were reported with HIV/AIDS and other sexually transmitted infections (STI) has increased world-wide (World Health Organization [WHO], 2013a, 2013b). In order to implement interventions to reduce the burden of these infections, it is necessary to estimate the size of the sub-populations at risk for HIV/STI acquisition.

Although men who have sex with men (MSM) represent the leading sub-population of individuals susceptible to HIV/STI in developed countries, the number of men in Israel who report same-sex practices and their HIV prevalence is yet unknown. Previous studies that were conducted in Israel mostly include data obtained through periodical studies among MSM or collected through passive surveillance (Brosh-Nissimov et al., 2012; Mor & Dan, 2012; Mor, Grayeb, Beany, & Grotto, 2012; Mor, Shohat, Goor, & Dan, 2012; Mor, Weinstein, Grotto, Levin, & Chemtob, 2013).

The study presented in this paper includes a sub-analysis of a National representative research performed in

Israel, and aimed to identify various dimensions of sexual orientation and practices among MSM in Israel and correlate the findings with sexual-risk practices and HIV prevalence. An up-to-date and accurate estimate of these characteristics is important for health authorities and allied professionals to direct efforts and appropriate resources required to perform targeted interventions.

Methods

This cross-sectional study included a representative sample of Jewish males aged 18–44 years who completed an anonymous electronic questionnaire in December 2012, as has been described elsewhere (Mor & Davidovich, 2015). In short, individuals in this study were chosen from an existing Israeli panel of 77,000 persons aged 15–85 years. A random sample was selected from the fraction of Jewish male panel members aged 18–44 years in accordance with the age group used for publication by the Statistical Abstract of Israel. The sample reflected sex, age, geographic district, and religiosity of

CONTACT Zohar Mor  zohar.mor@rml.health.gov.il  Ramla Department of Health, Ministry of Health, 3 Danny Mass St., Ramla 72100, Israel.

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the general Jewish population in Israel, based on figures from the Central Bureau of Statistics 2008. Those who have not performed vaginal or anal sex were excluded from the study. Arabs, orthodox Jews, and other minority panelists were also excluded, as they comprised less than 20% of the Israeli population, thus their participation required a much larger study sample.

Participants who were selected for this sample were requested to respond to an anonymous online tailored questionnaire, including demographic characteristics, the gender of their partners, definition of their own sexual orientation, past and present sexual behavior with their steady and casual partners, HIV testing, and condom or substance use.

Sexual orientation was measured in 3 dimensions. First, same-sex sexual attraction: a 5-point Likert score was used, ranging from attraction to women only, to men only. Any same-sex attraction was considered when participants reported they were attracted exclusively or mostly to men, equally to both sexes, or mostly to women (Hayes et al., 2012). Second, sexual practices: having ever had lifetime history of sexual contact either with men, women, or both. Same-sex sexual contact was defined as oral or anal intercourse with another man. Third was self-identification at the time of filling out the questionnaire as being gay, bisexual, or heterosexual (Ward, Dahlhamer, Galinsky, & Joestl, 2014).

The estimated numbers of MSM living in Israel and Tel-Aviv were calculated by projecting the rates of study participants who reported sexual behavior which included MSM, by the relevant Israeli population using the 2012 Statistical Abstract of Israel (Central Bureau of Statistics of Israel, 2013), stratified by age groups with a 99% confidence interval (CI). Similarly, the estimated numbers of MSM who were infected with HIV/AIDS in Israel and Tel-Aviv were calculated using data from the National HIV/AIDS Registry (NHAR) in 2011. This Registry includes data collected by the “third-generation” surveillance fashion, and contains demographic (like age and city of residence) and behavioral characteristics of each patient (Mor et al., 2013).

Statistical analyses: Demographic characteristics and risk behaviors of MSM were compared to those who had sex with women only. Continuous variables were analyzed with two-sided Student’s *t*-tests, while chi-square tests were used to compare categorical variables, adjusted to age when appropriate by the logistic regression method, presented by *p*-values and odds ratios. The Pearson correlation coefficient was performed to measure the strength and direction of the linear relationship between sexual practices, attraction, and sexual self-identity. Analysis was conducted by SPSS 20.0 software (Chicago, IL, USA).

Results

Of all 997 Jewish male participants, 119 (11.9%) reported having had sex with men, while 113 (11.3%) were attracted at least to some extent to men, and 84 (8.4%) identified themselves as being gay or bisexual (4.5% and 3.7%, respectively) (Table 1). Both the correlation between men who had sex with men and their sexual attraction and also the correlation between sexual attraction and self-identification were high.

Men who lived in Tel-Aviv reported the highest rate of same-sex attraction, ever having same-sex practice, and self-identification as gay/bisexual (17.4%, 17%, and 13.1%, respectively). It is estimated that there were 94,176 (99%CI: 92,562–96,063) self-identified Jewish gays/bisexuals aged 18–44 years who were living in Israel, and 33,839 (99%CI: 31,895–34,981) who were living in Tel-Aviv.

Of all 671 Jewish men aged 18–44 who were living with HIV/AIDS in Israel and recorded at the NHAR at the end of 2010 and reported same-sex practices, 611 (91.1%) were living in Tel-Aviv. It is therefore estimated that 0.7% (99%CI: 0.61–0.82%) and 1.0% (99%CI: 0.82–1.13%) of all the Jewish gay/bisexual population aged 18–44 living in Israel and Tel-Aviv in 2012 were infected with HIV, respectively (Appendix).

MSM were more likely to live in Tel-Aviv, had higher levels of education, had their vaginal and anal sexual debut at an earlier age, had a greater number of sexual partners, were less likely to have a steady partner, reported lesser sexual contacts with their steady partner, and were more likely to have a casual partner during steady relationships in comparison to men who had only female sex encounters (Table 2). They were also

Table 1. Correlation between sexual attraction, identity, and practices of men in Israel.

		Having had sex with men N = 119 (%)	Sexual self-identity (N = 997)		
			Heterosexual N = 913 (%)	Bisexual N = 39 (%)	Gay N = 45 (%)
Sexual attraction	Only to women (N = 899)	20 (16.8)	882 (96.6)	0 (0)	0 (0)
	Mostly to women (N = 33)	22 (18.5)	26 (2.8)	11 (28.2)	0 (0)
	Equally to men and women (N = 9)	4 (3.3)	2 (0.2)	5 (12.8)	1 (4.3)
	Mostly to men (N = 30)	32 (26.8)	3 (0.3)	7 (17.9)	15 (33.3)
	Only to men (N = 41)	41 (34.6)	0 (0)	16 (41.0)	29 (64.4)
	Pearson correlation coefficient	0.74*	0.82*		

**p* < 0.05.

Table 2. Characteristics and sexual behaviors of men by sexual practice.

		Having had sex with men N = 119 (%)	Having had sex only with women N = 878 (%)	p	OR (95% CI)
Age group	18–24	41 (34.4)	247 (28.2)	0.8	1.1 (0.8–1.9)
	25–34	36 (30.2)	304 (34.6)	0.3	0.9 (0.6–1.1)
	35–44	42 (35.4)	327 (37.1)	0.6	1.0 (0.9–1.3)
Israeli born		95 (79.8)	784 (89.2)	0.9	1.2 (0.7–2.3)
Tel Aviv residency		39 (32.8)	190 (21.9)	<0.01	2.3 (1.5–3.6)
Academic or other high education ^a		81 (68.1)	548 (62.4)	0.04	1.5 (1.1–2.5)
Income: average or above average ^a		63 (52.9)	592 (67.4)	0.9	1.0 (0.6–1.6)
Age at first debut same sex (average ± SD)		13.7 ± 9.7			
Age at first vaginal sex (average ± SD)		14.1 ± 8.3	18.9 ± 4.0	<0.01	
Age at first anal sex (average ± SD)		15.5 ± 8.1	17.9 ± 10.3	<0.01	
More than 10 lifelong sexual partners ^a		49 (41.1)	191 (21.5)	<0.01	3.5 (2.2–5.4)
Current steady partner ^a		64 (53.8)	684 (77.9)	0.01	1.8 (1.2–2.9)
Knew HIV status of steady partner		40 (33.6)	277 (31.5)	0.2	1.7 (0.2–7)
More than weekly sex contact with steady partner ^a		29 (24.4)	431 (49.0)	0.01	2.2 (1.3–3.9)
Casual sex partner while in a steady relationship ^a		33 (27.7)	108 (12.1)	<0.01	3.7 (2.1–6.5)
Substance use during sex in the last year		31 (26.0)	174 (12.3)	0.02	1.7 (1.2–3.1)
Ever paid for sex ^a		33 (27.7)	170 (19.2)	<0.01	2.0 (1.3–3.2)
Ever been paid for sex ^a		16 (13.4)	18 (2.3)	0.01	9.1 (4.4–18.6)
Ever been tested for HIV ^a		63 (52.9)	393 (44.7)	0.01	2.2 (1.4–3.4)
Ever been coerced to have sex		12 (10.0)	18 (2.3)	<0.01	3.9 (2.8–12.5)

Note: OR – odds ration. CI – confidence interval.

^aAge adjusted.

more likely to use substances during sex, had paid or had been paid for sex, more likely to be tested for HIV, and to be coerced to have sex.

Of all 748 men who were in a steady relationship at the time of the study, 141 (18.8%) had ever had a casual sex partner during their relationships, mostly among those who have sex with men.

Discussion

This study demonstrated that 11.9% of Jewish Israeli males aged 18–44 reported same-sex sexual encounter/s, while 8.4% reported they were gay/bisexual, mostly living in Tel-Aviv. It is also estimated that 0.7% of all the MSM in Israel were infected with HIV, and 1.0% in Tel-Aviv.

MSM generally engaged in riskier sexual behavior than those who only had opposite-sex encounters, which included a greater number of partners, earlier sexual debut, casual partner/s while in a relationship, sex for payment, and more frequent use of substances, as has been previously published by other studies (Hayes et al., 2012; Mor, Shohat, et al., 2012; Nield, Magnusson, Brooks, Chapman, & Lapane, 2015). These men should receive special attention from health and education authorities in order to implement tailored prevention strategies.

The estimated prevalence of 1.0% of HIV among gays/bisexuals in Tel-Aviv is lower than the definition of a “concentrated epidemic” that was indicated by the WHO (WHO, 2013b). Yet, this rate is higher than the estimated National HIV rate (0.07%) (Mor et al., 2013), and prevention efforts should be disseminated in gay-populated areas.

MSM reported higher HIV/STI-related sexual risk-behaviors and use substances more often than those who only had encounters with women, as also found elsewhere (Lhomond, Saurel-Cubizolle, Michaels, & CSF, 2014; Mravcak, 2006). Almost 19% of all the males in steady relationships reported concomitant casual partners. In addition, nearly 22.5% of these males had ever paid or been paid for sex. These men had sexual encounters within a riskier sexual network, and may “bridge” HIV/STI infection to their steady partners, with whom they probably do not use condoms regularly. Prevention efforts should incorporate education regarding sex while in steady relationships and suggest strategies to avoid “importing” HIV/STI into the dyadic relationships (Mor, Davidovich, Bessudu-Manor, McFarlane, & Chemtob, 2011).

This study is limited by the small number of participants who reported same-sex practices, which might have reduced the power of the statistical analysis and underestimated the possible differences between those in the subgroup. It also includes a sample of Jewish men, and as such may not represent all the males living in Israel. Additionally, some participants may have responded incorrectly to some of these sensitive and intimate questions. Yet, the anonymous nature of this questionnaire may have probably reduced the information bias, while being conservative if it exists.

In summary, this study includes a representative National sample and provides an estimation of sexual orientation in Israel including HIV prevalence amongst MSM. It demonstrated that 11.9% of Jewish Israeli males aged 18–44 had same-sex sexual encounters and

8.4% reported they were gay/bisexual, mostly living in Tel-Aviv. Those who indulged in same-sex practices reported greater risk behavior for acquiring HIV/STI than those who only had opposite-sex partners, and it was estimated that 0.7% of all the MSM in Israel were infected with HIV, and 1.0% in Tel-Aviv.

Disclosure statement

No potential conflict of interest was reported by the authors.

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Appendix. Calculation of the estimated number and rate of HIV/AIDS in gays/bisexuals in Israel and Tel Aviv.

Age group	Israeli population		Tel Aviv population		HIV/AIDS in Israeli MSM	HIV/AIDS in Tel Aviv MSM	Estimated rate of HIV/AIDS in Israeli MSM	Estimated rate of HIV/AIDS in Tel Aviv MSM
	Males	Females	Males	Females	N	N	%	%
18–24	316800	304900	118500	58500	28	17	0.1	0.2
25–34	454500	453900	221000	113200	268	257	0.8	1.0
35–44	398800	407200	170000	87300	375	347	1.3	1.7
Average							0.7	1.0