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Sociodemographic and sexual behavior characteristics of an online MSM sample in Guangdong, China

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Abstract

Public health research and interventions often assume that men who have sex with men (MSM) who use the Internet in China have similar characteristics to those in Western countries, though with little empirical evidence. This study aimed to describe and examine the sociodemographic and basic sexual behavioral characteristics of an online sample of MSM in Guangdong, China. In 2010, a total of 1100 MSM were recruited from an lesbian, gay, bisexual, and transgender (LGBT)-oriented website and were asked about their sociodemographic and sexual behavior characteristics. The majority of the participants (77.9%) self-identified as homosexual, and the mean age was 30.0 years ($SD = 6.7$). About 80% of the participants had attained a college degree and only 4.8% were unemployed. About 60% had a monthly salary of more than CNY 3000 (476 USD), and more than 10% were married. The majority (71.7%) had used condoms in the last anal sex. Nearly half of the participants have never been tested for HIV or other sexually transmitted infections (STIs) (47.3% and 47.7%, respectively). More than 80% were willing to be contacted by researchers after the survey. Findings indicate that the sociodemographic characteristics of Chinese MSM who use the Internet are relatively similar to those in the Western countries. However, Chinese MSM are less likely to self-identify as homosexual and be tested for HIV and other STIs than Western MSM. On a positive note, Chinese MSM would be likely to engage in e-technology research showing potential feasibility of an online HIV/STI intervention.

Keywords

Chinese MSM; Internet; intervention; demographics; HIV testing

Introduction

The Internet is a popular venue for men who have sex with men (MSM) to construct their social and sexual networks in Western countries (Bolding, Davis, Hart, Sherr, & Elford,

2007; Kim, Kent, McFarland, & Klausner, 2001; McFarlane, Bull, & Rietmeijer, 2000). HIV risks among MSM are positively associated with the use of Internet for socialization, and sexual partner recruitment (Chiasson et al., 2007). Rosser et al. (2009) found that online MSM are significantly more likely to practice unprotected sex than their offline counterparts. Similar findings occurred in a large Internet sample of MSM from Asia (Lim, Guadamuz, Wei, Chan, & Koe, 2012). MSM who recruit sexual partners both online and offline have a significantly greater number of sexual partners than those who recruit only offline partners (Jenness et al., 2010).

The initial study to describe and examine Internet use among MSM in China was conducted in 2003 (Wang & Ross, 2002). Compared with email users, chat room users were less likely to self-identify as homosexual, more likely to practice unprotected sex, and less likely to discuss AIDS on the Internet. Meanwhile, China has experienced a rapid development in e-technology in the last decade (CNNIC, 2010; Zhang et al., 2007). This has given the impetus to Chinese MSM to use it to socialize and recruit sexual partners (Feng, Wu, & Detels, 2010; Guo et al., 2011; Lee, Tam, Mak, & Wong, 2011; Li et al., 2008). Researchers started using e-technology to study sexual behaviors and provide risk reduction behavioral interventions targeting MSM in China. However, one of the shortcomings is that they often assume that Chinese online MSM samples have similar socio-demographic and behavioral characteristics to Western MSM, though with little empirical evidence. Researchers note discrepancies between Internet-only samples and those collected in different methods (Zhang, Bi, Lv, Zhang, & Hiller, 2008; Zou et al., 2010), yet little research has been done to describe the characteristics of the Internet samples. A recent study on a large Internet sample of MSM has provided demographic information from certain Asian countries (Lim et al., 2012; Wei, Guadamuz, Lim, & Koe, 2012; Wei, Lim, Guadamuz, & Koe, 2012); however, the pooled data may not reflect the sociodemographic characteristics of MSM specifically in China. Therefore, this study describes the sociodemographic and sexual behavioral characteristics of an online sample of MSM in Guangdong, China.

Methods

Participants

The Internet-based cross-sectional survey was administered by an lesbian, gay, bisexual, and transgender (LGBT)-oriented nongovernmental organization or NGO (www.gztz.org), in Guangzhou, Guangdong Province (populations of 12,700,800 and 104,303,132, respectively) (NBS, 2010; SBG, 2010). The website had 3,504,343 unique visitors in 2010. Inclusion criteria for this study included individuals who were at least 18 years of age and had sex with a man in the past three months. Only registered members could participate in the survey. To register, participants only need to provide their geographic location, gender, year of birth, and an alias. The website system does not provide any identifiable information linked to the questionnaire. Due to the use of multiple recruitment methods, the online system could not provide the number of MSM who have declined to participate in the survey, and therefore, response rate was not calculated. This survey was approved by the Sun Yat-sen University IRB.

Procedures

A pilot test was conducted prior to the survey, showing that more than 80% of registered members were willing to participate in sexual health research and interventions. Data were collected between February and March 2011: registered members received system notification of the survey from the website. A banner advertising the survey was also posted on the front page of the website. By clicking the banner, members were directed to the survey. All participants provided an electronic informed consent before participating in the survey. Virtual incentives (analogous to virtual currency in video games) were offered to participants in exchange for survey completion. A duplicate-detector system was used to prevent multiple submissions.

Study variables

Sociodemographic characteristics—Participants were queried with respect to their age, residence, length of residence, education, occupation, sexual orientation, marital status, and income.

Sexual behavior characteristics—Variables included were first sexual experience, sexual position, condom use in the last anal sex with men, commercial sex experience, group sex experience, and history of previous HIV/sexually transmitted infections (STIs) testing.

Analytic strategies

Descriptive statistics, including personal demographics, sexual behaviors, and STI testing behaviors, were explored using SPSS v19.

Results

Table 1 summarizes the sociodemographic characteristics of the sample ($N = 1100$). Mean age was 30.0 years ($SD = 6.7$); 93% of participants currently lived in Guangdong Province and 74.9% had been living in their current location for more than two years. Most (77.9%) self-identified as homosexual. About 80% of the participants had attained a college degree and 4.8% were unemployed. Almost 60% had a monthly salary of more than CNY 3000 (US \$476), and more than 10% were married.

Table 2 summarizes sexual behavioral of the participants. A majority of MSM (75.1%) reported having anal sex with men in the past three months and most (71.7%) used condoms during last anal sex. A small proportion of the participants had purchased or provided commercial sex in the past three months (7.9 and 2.4%, respectively). More than one-third of the participants had tested for HIV and other STIs (35.8 and 35.8%, respectively) in the past year. More than 80% were willing to be contacted by researchers after the survey.

Discussion and conclusions

Our aim was to examine sociodemographic and basic sexual behavior characteristics of a Southern Chinese online MSM sample. Marital status in our study remains comparable to Wang and Ross (2002), while MSM from our sample are more likely to self-identify as

homosexual (from 54.7 to 77.9%), willingness to engage in sexual health activities increased from 67.9% to more than 80%, and safe-sex practices almost doubled.

Our findings reveal similar distributions in terms of age, education, and income as observed in the Western literature: respondents are young (more than one-third were less than 30 years in age), educated, and relatively financially secure (Navejas, Neaigus, Torian, & Murrill, 2012). However, participants from this online sample are less likely to self-identify as homosexual than their Western counterparts. Researchers should consider that the Western concept of sexual identity (feeling different, self-labeling, and disclosure) and sexual orientation may hold a different value or meaning, or involve different processes for an online MSM in China. That is, Internet-based interventions with emphases on self-labeling, sexual identities, and sexual orientations may yield different or equivocal results among Chinese online MSM.

Self-reported condom use in the last anal sex among this sample is more frequent than Western MSM and Asian MSM in general (Lim et al., 2012). Yet, almost half of the respondents had never been tested for HIV or other STIs, a high proportion compared to Western studies. Furthermore, only some one-third of the respondents reported being tested for HIV or other STIs within the past year, lower than Western MSM (Khosropour & Sullivan, 2011; Navejas et al., 2012). Perhaps, exposure to previous Internet-based interventions (e.g., online sex education and sexual health promotion advertisements) in our sample may explain increased condom use in the last anal sex with men among the participants. Even though there is more than one testing center targeting the MSM population in Guangdong, participants may not be willing to disclose their identities to others in real life (especially when the sample was drawn from the Internet where anonymity is perceived as substantially important). The low HIV/STIs testing rates are disconcerting, consistent with the known literature among Chinese MSM and needs to be addressed in future interventions (Huang et al., 2012).

Given that young adults who use the Internet as a cruising venue are more likely to be infected with STIs (McFarlane, Bull, & Rietmeijer, 2002), STIs testing in China should be seen as one form of prevention. However, cultural and social stigma regarding MSM in China can act as strong deterrent to accessing HIV/STI care and services or to discussing sexuality with health providers (Li et al., 2012). HIV prevention targeting Chinese MSM must address such issue.

A limitation is that data should be interpreted with caution due to the descriptive nature of the study. Second, the use of a nonrepresentative sample may impose selection bias as we only included registered members of the website. However, including nonmembers may have caused overrepresentation of the online sample due to multiple submissions (the system cannot detect nonmembers' activities). The website has a substantial amount of longstanding members as well as newcomers for more than 12 years. In addition, to the authors' knowledge, this is the only website that provides an online community for the LGBT population in Guangdong, China. Therefore, we believe that the sample captures the characteristics of the online MSM in Guangdong, China. Last, the confidentiality issue could also pose a threat to the internal validity. However, members only provided unidentifiable

information to register and their questionnaire were not linked to their questionnaires. Nonetheless, the findings have illustrated the similarities and the differences between MSM recruited via Internet in Guangdong, China, and in major Western societies, which could serve as the springboard for the next step of research to explore cultural differences on sexual health.

In sum, these findings indicate that the sociodemo-graphic characteristics of online MSM in China are relatively similar to those in the Western countries. However, Chinese MSM were less likely to self-identify as homosexual and less likely to be tested for HIV and other STIs than Western MSM. Specifically tailored sexual health educations and interventions are in demand for health service providers and researchers. However, it is encouraging that >80% were willing to be contacted using e-technologies, showing feasibility for HIV/STI interventions.

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Table 1

Personal demographic characteristics of MSM responding to an Internet survey in Guangdong Province, China.

Variable	Overall (N= 1100)
Age	M (SD) 30.0 (6.7) n (%)
Current living location	
Guangzhou	678 (61.6)
Other cities in Guangdong Province	345 (31.4)
Hong Kong/Macau/Taiwan	14 (1.3)
Other provinces outside of Guangdong Province	49 (4.5)
Outside of China	14 (1.3)
Length of living in current location	
Less than three months	48 (4.4)
3–6 months	47 (4.3)
7–12 months	52 (4.7)
1–2 years	129 (11.7)
More than two years	824 (74.9)
Sexual orientation	
Homosexual	857 (77.9)
Bisexual	188 (17.1)
Heterosexual	1 (0.1)
Not yet decided	54 (4.9)
Ethnicity	
Han	1070 (97.5)
Other ethnicities	27 (2.5)
Occupation	
Student	109 (10.0)
Employed	927 (84.7)
Unemployed	53 (4.8)
Retired	6 (0.5)
Education	
Graduate or above	117 (10.6)
College	760 (69.1)
Senior high school	186 (16.9)
Junior high school or below	37 (3.4)
Marital status	
Married	134 (12.5)
Single	896 (83.8)
Divorced/widowed	40 (3.7)
Monthly income (in CNY and USD) ^a	
0-1000 (0–159)	126 (11.4)
1001-3000 (160–476)	324 (29.5)

Variable	Overall (N= 1100)
Age	M (SD) 30.0 (6.7) n (%)
3001-5000 (477-794)	284 (25.8)
5001-7000 (795-1111)	156 (14.2)
7001-10000 (1112-1587)	107 (9.7)
> 10,000 (1587)	103 (9.4)

Notes: N varies based on missing responses.

^aUSD conversion in parentheses.

Table 2

Sexual behaviors reported by MSM responding to an Internet survey in Guangdong Province, China.

Variable	Overall (N = 1100)
Age of first sexual penetration experience	M (SD) 22.03 (4.4) n (%)
Sexual position	
Top (insertive)	269 (32.6)
Versatile (mostly top)	185 (22.4)
Versatile (mostly bottom)	149 (18.0)
Bottom (receptive)	223 (27.0)
Sex of first sexual partner	
Female	184 (16.7)
Male	916 (83.3)
Major sexual partners seeking venue	
Internet	970 (88.2)
Public parks	10 (0.9)
Saunas/bathhouses	47 (4.3)
Bars/clubs	46 (4.2)
Other	27 (2.5)
Condom use of first time sexual penetration (% Yes)	506 (48.8)
Had anal sex with a man in the past three months (% Yes)	506 (48.8)
Condom use in the last anal sex with a man (% Yes)	592 (71.7)
Purchased commercial sex in the past three months (% Yes)	87 (7.9)
Provided commercial sex in the past three months (% Yes)	26 (2.4)
Participated in group sex (% Yes) Tested for STIs	
Yes, more than one year ago	181 (16.5)
Yes, less than one year ago	394 (35.8)
No	525 (47.7)
Tested for HIV	
Yes, more than one year ago	186 (16.9)
Yes, less than one year ago	394 (35.8)
No	520 (47.3)
Willing to be contacted by Internal messaging system	
Email	299 (27.2)
QQ (an instant message tool)	504 (45.8)
Phone	45 (4.1)
Not willing	204 (18.6)

Note: N varies based on missing responses.