Same-Sex Behavior and Health of Sexually Active Young Adults in Cebu, Philippines:

Findings from the Cebu Longitudinal Health and Nutrition Survey (CLHNS)

Chia-Hsin Emily Cheng, Jessica D. Gipson and Susan D. Cochran

UCLA Fielding School of Public Health

Abstract

This study examines the associations between reported same-sex and opposite-sex behaviors and three domains of health indicators: 1) sexual behavior (age at 1st sex, number of partners), 2) risk behavior (ever use of tobacco, alcohol, other drugs), and 3) psychological distress (depression, perceived stress). We analyze information obtained from 1,112 sexually experienced young men and women (ages 20-22 years) who participated in the 2005 Cebu Longitudinal Health and Nutrition Survey (CLHNS) in the Philippines. Participants who reported ever having a same-sex romantic relationship and/or same-sex sexual contact are compared with those who did not report any same-sex encounters. Results indicate that, even after controlling for sociodemographic variables, same-sex sexually active young adults in Cebu, Philippines engage in more risky sexual and health behaviors as compared to their peers; however, no significant effects were found for psychological distress. We discuss the implications of these findings within the context of the Philippines and other international settings.

Introduction

Globally, there are over 1.8 billion young people between the ages of 15-24, of whom 90% live in developing countries (UNFPA, n.d.). Despite the fact that adolescence represents a critical period in sexual development and initiation of sexual behavior, some aspects of adolescent sexuality are often omitted from research and programs efforts, including the investigation of same-sex behaviors and possible associated health outcomes among adolescents and youth (Brown, Jejeebhoy, Shah & Yount, 2001). What is known – mostly from Western and higher-income settings – is that individuals with same-sex (i.e., male-male or female-female) romantic or sexual partners generally experience more violence and have somewhat poorer health status including higher prevalence of risk behaviors, suicidality, STDs, HIV, and psychiatric disorders than do individuals in opposite-sex relationships (Easton, Jackson, Mowery, Comeau & Sell, 2008; Gilman, Cochran, Mays, Hughes, Ostrow & Kessler 2001; Halpern, Young, Waller, Martin & Kupper, 2004; Lindley, Walsemann & Carter, 2012; Russell, Franz & Driscoll, 2001). However, there is inconsistency in the literature with some researchers reporting no differences in risk behaviors between sexual minorities and heterosexual youths (e.g., Russell, Driscoll &Truong, 2002). Many studies that examined health-related knowledge and outcomes among sexual minorities have focused either on romantic attraction or sexual behaviors but not both (e.g., Blanc & Way, 1998; Dandona et al., 2005; Kirby & Rolleri, 2009). An understanding of the sexual behavior and reproductive health of youth in developing countries is thus vital.

Youth Sexual Behavior & Health

Recent social and demographic trends, for example, delayed marriage and earlier sexual initiation, as well as social shifts in the ways in which adolescents may view and engage in

sexual behaviors, may present new challenges for adolescents in navigating their sexual and romantic lives. Despite regional and cultural differences, sexual activity typically begins during adolescence among a majority of young people (Brown, Jejeebhoy, Shah, & Yount, 2001; Hindin & Fatusi, 2009). A review of case studies in developing nations suggests that many youth have a limited knowledge of health issues and engage in risky premarital sexual behaviors, including having multiple partners, contact with sex workers, and inconsistent use of contraceptives (Brown, Jejeebhoy, Shah, & Yount, 2001). Age of sexual debut has been associated with risk behaviors as well. Condom use is sporadic, making a substantial portion of sexual activity risky. In addition, many young people experience non-consensual sexual debut and sexual activity (Brown, Jejeebhoy, Shah, & Yount, 2001). Youth identified as non-heterosexual are at an even greater risk for risk behaviors and negative health consequences (van Griensven et al., 2004; Tangmunkongvorakul, Banwell, Carmichael, Utomo, & Sleigh, 2010).

Most studies in developing countries report higher prevalence of premarital sex among males and that males engage in sexual activity earlier than females. For example, median age of sexual debut in Thailand is 18 for females and 16 for males; in Nigeria the mean age of sexual debut is 19 for males and 17 for females. Much of this variation was due in part to under-reporting by women (Brown, Jejeebhoy, Shah, & Yount, 2001). In addition, homosexual males generally report earlier sexual debt than do heterosexual males (van Griensven et al., 2004; Wellings et al., 2006). Understanding the cultural and gender differences in the perceptions of homosexuality, same-sex behaviors, and risk behaviors are important, as negative attitudes toward homosexuality have been found to be positively associated with unprotected sexual activity (Rosario, Schrimshaw & Hunter, 2006).

A recent study conducted in three cities in Asia (Hanoi - early, Shanghai – intermediate, and Taipei – later stage) illustrates the ways in which modernization is altering the romantic and sexual behaviors of Asian young people and shifting norms regarding homosexuality (Zabin, et al., 2009). There is growing evidence to support this, as Confucian values were found to be eroding unevenly in different Asian cities. Those with more traditional Confucian values (i.e., Hanoi) have lower prevalence of premarital sex among young people (Gao, Zuo, Wang, Lou, Cheng, & Zabin, 2012). Adolescent knowledge of sexual and reproductive health and traditional values were important predictors for perception of homosexuality. Compared to Taiwan, adolescents in Hanoi and Shanghai primarily hold a negative view of homosexuality (Feng et al., 2012).

An examination of the sexual orientation and health risk behaviors among a population of 1,725 15- to 21- year old students in Northern Thailand found that 9% of males and 11% of females identified themselves as homosexual or bisexual (van Griensven et al., 2004). Non-heterosexual males were found to have an earlier mean age of sexual debut at 14.7 years old compared to heterosexual males who had a mean age of 16.8 years old. They also had a higher mean number of lifetime sexual partners than heterosexual males, 7.9 and 5.8 respectively. Both males and females identified as homosexual or bisexual were also more likely to report any illicit drug use than did heterosexual males or females (van Griensven et al., 2004).

Multiple health risk behaviors such as alcohol use, smoking, and substance use have also been shown to co-occur among adolescent heterosexuals in Southeast Asia (Sychareun, Thomsen, & Faxelid, 2011). Among heterosexual boys, the most common paired risk behaviors were alcohol use and smoking, followed by sexual activity without condom use. For girls with

two risk behaviors reported, the most common were sexual activity and not using condoms, however boys were more likely to report two health risk behaviors than girls were.

Sexual Behavior in the Philippines

Like many Asian countries, youth in the Philippines experience very different expectations in sexuality. For males, there is more sexual freedom and to certain extent sexual experience is even encouraged; for females, social norm dictates more conservative sexual behavior (Medina, 2001). One of the earliest nationally representative studies of sexual behavior in the Philippines is the Young Adult Fertility and Sexuality study (YAFS) that began in 1982 (Raymundo, 2002). The most recent 2002 YAFS data of a sample of about 16,000 Filipino youth between the ages of 15-24 showed that 23.1% had premarital sexual intercourse, with more males (31.3%) reporting sexual intercourse than females (15.7%). About 12% of the youth between ages 15-19 reported ever having had premarital sexual intercourse compared with about 40% among the 20-24 year olds. Males consistently had higher prevalence of sexual intercourse than females across all age ranges (Natividad & Marquez, 2002).

Significant gender differences in both precoital and sexual behavior have also been reported. In a cohort of Filipino youth in Cebu, more males than females reported ever having kissed (72% vs. 65%) and ever having had sex (31% vs. 20%) (Upadhyay, Hindin & Gultiano, 2006). In addition, rapid progression of emotional relationships was associated with females having sex at a younger age. The authors note that, given the cultural norm against premarital sex and possible recall bias in self-reports, males may over-report and females may under-report their sexual experiences.

The most recent data from the 2002 YAFS study provided one of the few data available on Filipino youth's attitudes and practices of homosexuality (Raymundo, 2002). Among a

sample of about 16,000 males and females between the ages of 15-24, Filipino adolescents in general, are accepting of homosexuality (51.8%), with females more accepting than males (60.7% vs. 41.9%) (Silverio, 2002). However, homosexual practice was minimal, about 1% reported having been attracted or have had a crush on the same sex and about 6% admitted being attracted to both sexes. Homosexual practice is more prevalent among males (14.9%) than females (4.1%). More females (11.8%) than males (2.9%) were more likely to evidence symptoms of gender identity disorder (a desire to be the opposite sex). Distribution of homosexuality also varied by certain background characteristics such as age, marital status, schooling status, educational attainment, employment status, religion, and ethnicity. For example, more 15-19 year olds reported having sex with a same-sex partner (15%) than 20-24 year olds (9%) did. Prevalence of homosexual behavior was 13% for those with less than elementary education and 10% among college educated (Silverio, 2002).

Although the study provided a much needed insight into homosexuality among adolescent youth in the Philippines, little is known on recent trends of same-sex behaviors, associated risks, gender differences, and related health outcomes.

Present Study

In this study we aim to describe same-sex behavior and its correlates including sexual behavior, substance-related risk behavior, and perceived psychological distress. We limit our analyses to respondents who reported ever having sexual intercourse. This allows us to focus on patterns of same-sex behavior and how they are related to health outcomes and risk taking behaviors among a cohort of Filipino young men and women.

Method

Data Collection and Study Sample

We use data from the 2005 Cebu Longitudinal Health and Nutrition Survey (CLHNS), an ongoing longitudinal study of a cohort of Filipino mothers and their children born between May 1, 1983 and April 30, 1984 (See Adair et al., 2010 for a detailed description of the study background and methodology). Metropolitan Cebu is the second largest metropolitan area in the country after Metro Manila. At baseline, 33 communities or barangays (17 urban, 16 rural) were randomly selected from the Metro Cebu area using a single stage cluster sampling procedure. Approximately 3,300 women and their newborns (index children) were included in the baseline study. Follow-up surveys were conducted in 1991-92, 1994, 1998, 2002, 2005 and tracking surveys were conducted in 2007 and 2009. Of the total sample of 1,912 index children, 1,112 (58.2%) met the inclusion criteria of being sexually active. Thus, the current analytic sample of 677 males (60.9%) and 435 females (39.1%) is based on index children's self-reports of same-sex experiences and health-related indicators. All were between 20 to 22 years of age at the time of assessment in 2005and all reported prior experience of sexual intercourse.

Same-Sex Behavior Status

We describe same-sex behavior based on the following questions: "Have you ever had any sexual contact with someone of the same sex?" and "Have you had a romantic relationship with someone of the same sex?" Respondents who answered "yes" to either or both questions are defined as the *same-sex* group; those who answered "no" to both questions are defined as the *opposite sex* group. Of the total analytic sample, 944 (84.9%) reported no same-sex encounter of any kind, 168 (15.1%) reported having had either same-sex sexual contact or a same-sex romantic relationship, 88 (7.9%) reported same-sex sexual contact only, 27 (2.4%) reported a same-sex romantic relationship only, and 53 (4.8%) reported having had both sexual contact and a romantic relationship with someone of the same-sex.

Health Outcome Variables

We examine the associations between same-sex behaviors and three indicators of health: (1) Sexual behavior – "At what age did you first have sexual intercourse?" and "Number of people had you had sex with since you began having sex?" (2) Substance-related risk behavior – "Have you ever smoked?", "Have you ever drank alcoholic beverages?" and "Have you ever taken drugs?" Responses are either "yes" or "no" (3) Perceived psychological distress – Total score on the 16 depressive symptom items and total score on the 10 perceived stress items. Higher scores indicate higher levels of perceived psychological distress. Sample depression questions include "How frequently have you felt lonely for the past 4 weeks?" and "How frequently have you felt life isn't worth living for the past 4 weeks?" Responses are 1=none of the time, 2=occasionally, and 3=most or all of the time. Sample stress questions include "In the last 4 weeks, how often have you felt nervous and stressed?" and "In the last 4 weeks, how often have you found that you could not cope with all the things that you had to do?" Responses ranged from 0=never to 4=very often.

Background Characteristics/Covariates

Variables included in the study are sociodemographic characteristics of gender, marital status, level of education, current employment status, household wealth index, urban or rural household residence, religion, and religiosity. The household wealth index was derived from asset variables such as having electricity, air conditioning, home ownership, car ownership, TV and other household electronics and appliance items and has been used in other studies of this population (Gipson, Gultiano, Avila & Hindin, 2012).

Data Analysis

We describe sample characteristics and explore the associations among sociodemographic characteristics of sexually experienced and non-experienced youth as well as those reporting any lifetime same-sex sexual contact and/or romantic relationship with those who did not report any same-sex encounters. First, bivariate analyses with crosstabs, chi-squares, ANOVAs, and logistic regressions are used to describe and compare the sexual activity and same-sex behavior groups. Next, multivariate ordinary least squares and logistic regressions are used to examine the associations between same-sex and opposite sex groups on the various health indicator variables controlling for sociodemographic variables. Because females and males are expected to differ across most of our variables, we separate our analysis by gender where appropriate. Last, we model the effects of three blocks of variables on age at first sex: sociodemographic characteristics, substance use, and same-sex status.

Results

The ages of the index children ranged from 20-22 with a mean of 20.9 ($SD = .33$). Sexually active youth were more likely to be males ($p < .001$), married ($p < .001$), not currently working ($p < .01$), living in urban areas ($p < .001$), and do not consider him/herself as a religious person ($p = .066$) than non-sexually active youth (See Table 1). More males than females reported history of same-sex sexual contacts (19.4% vs. 2.3%) or same-sex romantic relationships (9.2% vs. 4.1%), $p < .01$. Sociodemographic characteristics of the sample stratified by sexually experienced or no experience, same-sex or opposite-sex status, as well as by gender are presented in Tables 2.

Sexual Behaviors

Age at first sex. The mean age at first sex was 18.1 for the opposite sex group ($SD =$ 1.88, range = 10-22) and 16.8 for the same-sex group ($SD =$ 2.10, range = 8-20), $p < .001$. Among males, the mean age at first sex was 17.9 for the opposite sex group ($SD =$ 1.98, range = 10-22) and 16.7 for the same-sex group ($SD =$ 2.13, range = 8-20). Among females, the mean age at first sex was 18.2 for the opposite sex group ($SD =$ 1.74, range = 13-21) and 17.6 for the same-sex group ($SD =$ 1.67, range = 14-20).

Number of sexual partners. The median number of people the index child had had sex with since he/she began having sex was 1 for the opposite sex group (range = 1-30) and 3 for the same-sex group (range = 1-150), $p < .001$. Among males, the median number of reported sexual partners was 2 for the opposite sex group (range = 1-30) and 4 for the same-sex group (range = 1-150). Among females, the median number of reported sexual partners was 1 for the opposite sex group (range = 1-7) and 1 for the same-sex group (range = 1-10).

Ordinary least squares regression adjusting for sociodemographic characteristics showed that young adults who reported any lifetime same-sex sexual contact and/or romantic relationships were more likely to report sexual intercourse at a younger age and had more sexual partners (see Table 3). Same-sex status remained a significant predictor of age at first sex for males ($\beta = -0.25$) but not for females ($\beta = -0.05$). Same-sex status was also a significant predictor of number of sexual partners for both males ($\beta = 0.24$) and females ($\beta = 0.34$) (See Table 4).

In Table 5, we report results from three models testing for same-sex behaviors in predicting age at first sex. The full model demonstrates that same-sex experience is as a significant predictor of age at first sex after adjusting for both sociodemographic characteristics and substance-related risk behaviors ($\beta = -0.19$). In Model 1, being male and married were

significant predictors of younger age at first sex. Four-year high school, some college, and rural residence were associated with later age at first sex. In Model 2, risk behaviors of smoking and drug use were negatively associated with age at first sex. In the final model the magnitude and significance of being male, rural residence, smoking and drug use were attenuated after same-sex group were added as the last predictor.

Substance-Related Risk Behaviors

Smoking. About 67.3% of the opposite sex group and 92.3% of the same-sex group reported having ever smoked ($p < .001$). Among males, 86.0% of the opposite sex group and 94.6% of the same-sex group reported having ever smoked. Among females, 43.5% of the opposite sex group and 73.7% of the same-sex group reported having ever smoked.

Drinking. Most respondents reported that they had drunk alcoholic beverages at some point, 93.3% and 99.4% for opposite sex and same-sex groups, respectively ($p < .01$). Nearly all the males reported having done so regardless of group membership, 97.9% for opposite sex group and 100% for same-sex group. About 87.5% of the females in the opposite sex group and 94.7% in the same-sex group reported having ever drunk alcohol.

Drug Use. About 31.1% of the opposite sex group and 60.1% of the same-sex group reported having ever used drugs ($p < .001$). Among males, 48.9% in the opposite sex group and 63.1% in the same-sex group reported ever taken drugs. Among females, 8.7% in the opposite group and 36.8% in the same-sex group reported ever taken drugs.

In the multivariate analysis after adjusting for sociodemographic characteristics, young adults who reported a history of same-sex sexual contact and/or romantic relationships were more likely to report substance use, particularly smoking (OR = 3.03, CI = 1.62-5.67) and drug use (OR = 2.10, CI = 1.43-3.09) (See Table 3). For males, the odds of smoking were nearly three

times higher and the odds of drinking was about twice as high for the same-sex group as compared to the opposite sex group (See Table 4).

Perceived Psychological Distress

    Depression. The mean depression score was 23.5 for the opposite sex group ($SD = 3.79$, range = 16-37) and 23.2 for the same-sex group ($SD = 3.84$, range = 16-33), $p = .307$. Among males, the mean depression score was 22.7 for the opposite sex group ($SD = 3.35$, range = 16-35) and 23.0 for the same-sex group ($SD = 3.65$, range = 16-33). Among females, the mean depression score was 24.7 for the opposite sex group ($SD = 4.02$, range = 16-37) and 24.8 for the same-sex group ($SD = 4.92$, range = 16-33).

    Bivariate analysis of each of the 16 depression items indicated that the same-sex group were more hopeful about the future ($p < .05$) and the opposite sex group reported more headaches ($p < .01$). There were also gender variations, with same-sex males reported more thoughts of death ($p < .05$) and feeling worthless ($p < .05$) when compared to opposite sex males; same-sex females felt more worthless ($p < .01$) compared to opposite sex females. Multivariate results showed no significant association between same-sex behavior and total depression score (see Table 3 & 4). Factor analysis derived subscales (psychosomatic, suicidality, outlook, social adjustment) were also nonsignificantly related to same-sex behavior (data not shown).

    Stress. The mean stress score was 17.2 for the opposite sex group ($SD = 4.50$, range = 0-34) and 17.3 for the same-sex group ($SD = 4.75$, range = 1-30), $p = .879$. Among males, the mean stress score was 16.1 for the opposite sex group ($SD = 4.18$, range = 0-28) and 16.9 for the same-sex group ($SD = 4.76$, range = 1-30). Among females, the mean stress score was 18.6 for the opposite sex group ($SD = 4.51$, range = 2-34) and 19.9 for the same-sex group ($SD = 3.84$, range = 14-26).

Bivariate analysis for the total score showed there were no differences between the same-sex groups. However, significant differences emerged when the bivariate analyses were stratified by gender, with same-sex males ($n = 149$) reporting a higher level of stress than did opposite sex males ($p = .04$); same-sex females ($n = 19$) did not differ from opposite sex females ($p = .203$). Examining each of the 10 items, we found that compared to opposite sex males, same-sex males reported more frequency of upset due to something unexpected ($p < .01$), control of important things in life ($p < .05$), and felt nervous and stressed ($p < .05$). Compared to opposite sex females, same-sex females reported more frequency of feeling confident about ability to handle personal problems ($p < .01$), things going (her) way ($p = .057$) and being able to control irritations in life ($p < .05$). Multivariate results showed no significant associations between same-sex behavior and total perceived stress score (See Tables 3 & 4).

Discussion

As has been shown elsewhere, we observed that same-sex behaviors in a cohort of sexually active Filipino young men and women, though uncommon, is not rare. Findings from the current study indicated that more males than females reported a positive history of same-sex sexual and/or romantic relationship and a substantially larger proportion of males reported same-sex sexual contact (19.4%) than females did (2.3%). In comparison to the 2002 Young Adult Fertility and Sexuality (YAFS) study in the Philippines – the most recent, nationwide study of young adult fertility and sexuality (Raymundo, 2002; Silverio, 2002) where 13.2% of males and 3.5% of females between ages 20-24 reported ever having sex with someone of the same sex – we found a higher prevalence among males and lower prevalence among females.

The findings from our study also provided evidence that sexually active young adults in Cebu, Philippines are engaging in risky sexual and health behaviors. In particular, those with a

positive history of same-sex sexual contact and/or romantic relationship are more likely to report

sexual intercourse at a younger age, more number of sexual partners, and positive histories of

tobacco use and drug use. These effects were consistent across gender, with the exception of

females' age at sexual intercourse, which did not differ between opposite-sex and same-sex

groups. Our results of the hierarchical regression full model accounted for 12% of the variance in

age at first sex, suggesting those with any positive history of same-sex sexual contact and/or

relationship are more likely to report sexual intercourse at a younger age, over and above the

effects of background characteristics and substance use. No effects were found for alcohol use,

as nearly all of the respondents (94.2%), regardless of history of same-sex behavior, reported

ever drinking alcohol.

We found no significant association between same-sex behavior and psychological

distress. This is in contrast to findings reported in most literature comparing heterosexual and

same-sex oriented individuals (King et al., 2008). We should be cautiously optimistic about this

finding, however, as there are some limitations with the measures and use of summary scores as

outcome variables. Cronbach's alpha indicated that inter-item correlations among the 16-item

depression scale was .67 and the 10-item stress scale was .73, suggesting only moderate internal

consistency. Our bivariate analyses of the individual items found significant differences between

the same-sex groups on some items, including 'feeling hopeful about the future' and the

reporting of 'headaches' in the depression scale. There were gender variations, with same-sex

males reporting more 'thoughts of death' and 'feeling worthless' than opposite-sex males,

whereas same-sex females were more likely to report 'feeling worthless' than opposite-sex

females. For perceived stress, gender differences were also found. Same-sex males tended to be

'more stressed' but same-sex females tended to be 'less stressed', with higher reported frequency

of confidence and control. Whether these are true differences or spurious findings is unclear. Given that significant differences were evident even with a small sample of same-sex females (*n* = 19), further investigation is warranted.

Although these results reflect reporting from a sample of young adults in one metropolitan area of the Philippines, the results from this analysis mirror national-level data collected in 2002 (YAFS). First, the reporting of same-sex behaviors is similar to the YAFS data and indicates higher reporting of same-sex behaviors among males, as compared to females; however, the nationwide YAFS survey did find higher levels (19.5%) of reported same-sex behavior in the Central Visayas area where Cebu is located. Second, although trend data from the YAFS surveys and other national surveys (e.g., 2002 Pew Global Attitudes Project) indicate higher, and possibly growing, levels of acceptability of homosexuality as compared to other countries, the persistence of these disparities in these health outcomes warrants further attention.

A few limitations should be noted in the interpretation of these findings. First, these reports are derived from one cross-sectional survey, thus all of the reports of sexual and risk behaviors were retrospective and self-reported. Moreover, although this study is relatively rare in collecting data on both same-sex romantic behaviors and same-sex sexual contact, the latter was left to participants to define for themselves. Given documented variations in the perceptions of what constitutes 'sex', as well as potential differences in how these acts may be characterized within the context of same-sex and opposite-sex encounters, it is possible that there is misreporting in the occurrence of sexual behaviors. Lastly, the prevalence data should be interpreted with caution as data were abstracted from the 2005 survey when the young adults were between 20-22 years old. The reported estimates here are for only those members of the cohort who had reported any sexual experience by 2005 (58% of the cohort). It is likely that the

remaining members of the cohort will have different sexual experiences and associated health outcomes.

Given the paucity of information on same-sex behaviors from lower- and middle- income community-based studies, this study provides valuable insight into same-sex behavior in a metropolitan area of the Philippines. Although there was no evidence of differences in psychological distress or depression between same-sex or opposite-sex groups, the findings also indicate that there are higher risks for adverse sexual and risk behaviors among young Filipino adults reporting same-sex sexual and romantic behaviors. Further investigation is needed to identify the ways in which young adults' who engage in same-sex behavior may be better supported through social and health interventions to eliminate these health disparities.

References

Adair, L. S., Popkin, B. M., Akin, J. S., Guilkey, D. K., Gultiano, S. Borja, J. & et al. (2010). Cohort profile: The Cebu Longitudinal Health and Nutrition Survey. *International Journal of Epidemiology*, 1-7.

Blanc, A. K. & Way, A. A. (1998). Sexual behavior and contraceptive knowledge and use among adolescents in developing countries. *Studies in Family Planning, 29*(2), 106-116.

Brown, A., Jejeebhoy, S., Shah, I., & Yount, K. (2001). Sexual relations among young people in developing countries: evidence from WHO case studies. *Department of Reproductive Health and Research, World Health Organization.*

Dandona, L., Dandona, R., Gutierrez, J. P., Kumar, G. A., McPherson, S., Bertozzi, S. M. & et al. (2005). Sex behavior of men who have sex with men and risk of HIV in Andhra Pradesh, India. *AIDS, 19*(6), 611-619.

Easton, A., Jackson, K., Mowery, P., Comeau, D., & Sell, R. (2008) Adolescent same-sex and both-sex romantic attractions and relationships: Implications for smoking. *American Journal of Public Health, 98*(3), 462-467.

Feng, Y., Lou, C., Gao, E., Tu, X., Cheng, Y., Emerson, M. R., & Zabin, L. (2012). Adolescents' and young adults' perception of homosexuality and related factors in three Asian cities. *The Journal Of Adolescent Health: Official Publication Of The Society For Adolescent Medicine*, *50*(3 Suppl), S52-S60.

Gao, E., Zuo, X., Wang, L., Lou, C., Cheng, Y., & Zabin, L. (2012). How does traditional confucian culture influence adolescents' sexual behavior in three Asian cities?. *The Journal Of Adolescent Health: Official Publication Of The Society For Adolescent Medicine*, 50(3 Suppl), S12-S17.

Gilman, S. E., Cochran, S. D., Mays, V. M., Hughes, M., Ostrow, D. & Kessler, R. C. (2001). Risk of psychiatric disorders among individuals reporting same-sex sexual partners in the National Comorbidity Survey. *American Journal of Public Health, 91*(6), 933–939.

Gipson, J. D., Gultiano, S. A., Avila, J. L. & Hindin, M. J. (2012). Old ideals and new realities: The changing context of young people's partnerships in Cebu, Philippines. Culture, Health & Sexuality: An International Journal for Research, Intervention and Care, 14(6), 613-627.

Halpern, C. T., Young, M. L., Waller, M. W., Martin, S. L. & Kupper, L. L. (2004). Prevalence of partner violence in same-sex romantic and sexual relationships in a national sample of adolescents. *Journal of Adolescent Health, 35*(2), 124-131.

Hindin, M. J., & Fatusi, A. O. (2009). Adolescent Sexual and Reproductive Health in Developing Countries: An Overview of Trends and Interventions. *International Perspectives On Sexual & Reproductive Health*, *35*(2), 58-62.

King, M., Semlyen, J., Tai, S. S., Killaspy, H., Osborn, D., Popelyuk, D. & Nazareth, I. (2008). A systematic review of mental disorder, suicide, and deliberate self harm in lesbian, gay and bisexual people. BMC Psychiatry, 8.

Kirby, D & Rolleri, L. (2009). Impact of sex and HIV education programs on sexual behaviours of youth in developing and developed countries. *Family Health International.*

Lindley, L. L., Walsemann, K. M. & Carter Jr., J. W. (2012). The association of sexual orientation measures with young adults' health-related outcomes. *American Journal of Public Health, 102*(6), 1177-1185.

Medina, B.T.G. (2001). *The Filipino family*. Quezon City: University of Philippines Press.

Natividad, J. N. & Marquez, M. N. (2002). Sexual risk behaviors. In C. M. Raymundo & G. T. Cruz (Eds.), *Youth Sex and Risk Behaviors in the Philippines: A Report on the 2002 YAFS 3* (pp. 71-94).

Raymundo, C. M. (2002). Studying adolescent sexuality in the Philippines. In C. M. Raymundo & G. T. Cruz (Eds.), *Youth Sex and Risk Behaviors in the Philippines: A Report on the 2002 YAFS 3* (pp. 1-13).

Rosario, M., Schrimshaw, E. W. & Hunter, J. (2006). A model of sexual risk behaviors among young gay and bisexual men: Longitudinal Associations of Mental Health, Substance Abuse, Sexual Abuse, and the Coming-Out Process. *AIDS Education and Prevention, 18*(5), 444–460.

Russell, S. T., Driscoll, A. K. & Truong, N. (2002). Adolescent same-sex romantic attractions and relationships: Implications for substance use and abuse. *American Journal of Public Health, 92*(2), 198-202.

Russell, S. T., Franz, B. T. & Driscoll, A. K. (2001). Same-sex romantic attraction and experiences of violence in adolescence. *American Journal of Public Health, 91*(6), 903-906.

Silverio, M. (2002). Homosexuality. In C. M. Raymundo & G. T. Cruz (Eds.), *Youth Sex and Risk Behaviors in the Philippines: A Report on the 2002 YAFS 3* (pp. 112-120).

Sychareun, V., Thomsen, S., & Faxelid, E. (2011). Concurrent multiple health risk behaviors among adolescents in Luangnamtha province, Lao PDR. *BMC Public Health*, *11*(1), 1-10.

Tangmunkongvorakul, A., Banwell, C., Carmichael, G., Utomo, I., & Sleigh, A. (2010). Sexual identities and lifestyles among non-heterosexual urban Chiang Mai youth: implications for health. *Culture, Health & Sexuality*, *12*(7), 827-841.

United Nations Population Fund (UNFPA). Adolescent and youth demographics: An Overview. Accessed March 8, 2013.

Upadhyay, U. D., Hindin, M. J. & Gultiano, S. (2006). Before first sex: Gender differences in emotional relationships and physical behaviors among adolescents in the Philippines. *International Family Planning Perspectives, 32*(3), 110-119.

van Griensven, F., Kilmarx, P. H., Jeeyapant, S., Manopaibon, C., Korattana, S., Jenkins, R. A., & ... Mastro, T. D. (2004). The Prevalence of Bisexual and Homosexual Orientation and Related Health Risks Among Adolescents in Northern Thailand. *Archives Of Sexual Behavior*, *33*(2), 137-147

Wellings, K., Collumbien, M., Slaymaker, E., Singh, S., Hodges, Z., Patel, D., & Bajos, N. (2006). Sexual behaviour in context: A global perspective. *The Lancet Sexual and Reproductive Health Series, 368, 1706-28*

Zabin, L., Emerson, M. R., Nan, L., Chaohua, L., Ersheng, G., Minh, N., & ... Blum, R. W. (2009). Levels of Change in Adolescent Sexual Behavior in Three Asian Cities. *Studies In Family Planning*, *40*(1), 1-12.

Table 1

Sociodemographic Characteristics and Sexual Activity Comparisons of Young Adults in Cebu, Philippines, 2005 CLHNS (N=1912)

	No Sexual Experience (n = 800)		Sexually Experienced (n = 1112)		Female No Sexual Exp (n = 469)		Sexually Exp'd (n = 435)		Male No Sexual Exp (n = 331)		Sexually Exp'd (n = 677)	
	n	Percent	*n*	Percent	*n*	Percent	*n*	Percent	*n*	Percent	*n*	Percent
Sex***												
Male	331	41.4%	677	60.9%								
Female	469	58.6%	435	39.1%								
Marital Status***												
Never Married	799	99.9%	590	53.1%	468	99.8%	122	28.0%	331	100.0%	468	69.1%
Married	1	0.1%	482	43.4%	1	0.2%	289	66.5%	0	0.0%	193	28.5%
Widowed/Separated	0	0.0%	40	3.6%	0	0.0%	24	5.5%	0	0.0%	16	2.4%
Education												
No High School	85	10.6%	211	19.0%	19	4.1%	63	14.5%	66	19.9%	148	21.9%
Some High School	85	10.6%	237	21.3%	27	5.8%	98	22.5%	58	17.5%	139	20.5%
4 Yr High School	327	40.9%	435	39.1%	205	43.7%	200	46.0%	122	36.9%	235	34.7%
1-5 Yr College	303	37.9%	229	20.6%	218	46.5%	74	17.0%	85	25.7%	155	22.9%
Currently Employed**												
Yes	314	40.3%	513	46.8%	280	61.5%	193	45.1%	185	57.1%	391	58.4%
No	465	59.7%	584	53.2%	175	38.5%	235	54.9%	139	42.9%	278	41.6%
Household Wealth Index	787	5.54	1099	5.01	462	5.78	432	4.69	325	5.20	667	5.22
Mean (*SD*)		(1.91)		(2.09)		(1.79)		(2.03)		(2.02)		(2.10)
Household Residence***												
Urban	540	67.5%	807	72.6%	339	72.3%	306	70.3%	201	60.7%	501	74.0%
Rural	260	32.5%	305	27.4%	130	27.7%	129	29.7%	130	39.3%	176	26.0%
Religion												
Catholic	751	93.9%	1067	96.0%	442	94.2%	422	97.0%	309	93.4%	645	95.3%
Non-Catholic	49	6.1%	45	4.0%	27	5.8%	13	3.0%	22	6.6%	32	4.7%
Religiosity[†]												
Yes	511	63.9%	657	59.3%	287	61.2%	220	50.6%	224	67.7%	437	35.0%
No	289	36.1%	450	40.7%	182	38.8%	215	49.4%	107	32.3%	235	65.0%

Note. Significant p values represent overall logistic regression tests between sexually experienced and no experience groups.

[†] $p < .10$; *$p < .05$; **$p < .01$; ***$p < .001$

Table 2

Sociodemographic Characteristics of Sexually Active Young Adults in Cebu, Philippines, 2005 CLHNS (N=1112)

	Opposite Sex (n = 944)		Same-Sex (n = 168)		Female Opposite Sex (n = 416)		Same-Sex (n = 19)		Male Opposite Sex (n = 528)		Same-Sex (n = 149)	
	n	Percent	*n*	Percent	*n*	Percent	*n*	Percent	*n*	Percent	*n*	Percent
Sex*												
Male	528	55.9%	149	88.7%								
Female	416	44.1%	19	11.3%								
Marital Status**												
Never Married	476	50.4%	114	67.9%	117	28.1%	5	26.3%	359	68.0%	109	73.2%
Married	434	45.9%	48	28.5%	277	66.6%	12	63.2%	157	29.7%	36	24.1%
Widowed/Separated	34	3.6%	6	3.6%	22	5.2%	2	10.5%	12	2.3%	4	2.7%
Education*												
No High School	184	19.5%	27	16.1%	62	14.9%	1	5.3%	122	23.1%	26	17.4%
Some High School	186	19.7%	51	30.4%	88	21.2%	10	52.6%	98	18.6%	41	27.5%
4 Yr High School	377	39.9%	58	34.5%	194	46.6%	6	31.6%	183	34.7%	52	34.9%
1-5 Yr College	197	20.9%	32	19.0%	72	17.3%	2	10.5%	125	23.7%	30	20.1%
Currently Employed												
Yes	499	53.7%	85	50.9%	183	44.7%	10	52.6%	316	60.7%	75	50.7%
No	431	46.3%	82	49.1%	226	55.3%	9	47.4%	205	39.3%	73	49.3%
Household Wealth Index	932	4.98	167	5.20	413	4.72	19	4.11	519	5.18	148	5.34
Mean (*SD*)		(2.11)		(1.92)		(2.03)		(1.91)		(2.16)		(1.88)
Household Residence**												
Urban	670	71.0%	137	81.5%	291	70.0%	15	78.9%	379	71.8%	122	81.9%
Rural	274	29.0%	31	18.5%	125	30.0%	4	21.1%	149	28.2%	27	18.1%
Religion												
Catholic	906	96.0%	161	95.8%	403	96.9%	19	100%	503	95.3%	142	95.3%
Non-Catholic	38	4.0%	7	4.2%	13	3.1%	0	0%	25	4.7%	7	4.7%
Religiosity												
Yes	560	59.4%	97	58.8%	212	51.0%	8	42.1%	348	66.2%	89	61.0%
No	382	40.6%	68	41.2%	204	49.0%	11	57.9%	178	33.8%	57	39.0%

Note. Respondents with any reported same-sex sexual contact or romantic relationship are categorized in the same-sex group. Significant p values represent overall differences between same- and opposite-sex groups.

*p < .05; **p < .01; ***p < .001

Table 3

Same-Sex Status Comparisons in Sexual and Health Histories among Sexually-Active Young Adults in Cebu, Philippines (N=1112)

	Same-Sex Group (Referent is opposite sex)				
	B	SE	β	OR	CI
Sexual Behavior					
Age at 1st sex	-1.18	0.17	-0.21***		-1.50 – -0.85
No. of lifetime partners	4.73	0.60	0.24***		3.56 – 5.91
Risk Behavior					
Ever smoked	1.11	0.32		3.03**	1.62 – 5.67
Ever drank alcohol	1.61	1.03		5.09	0.67 – 37.57
Ever taken drugs	0.74	0.20		2.10***	1.43 – 3.09
Psychological Distress					
Depression	0.24	0.32	0.02		-0.39 – -0.86
Perceived stress	0.77	0.38	0.06		0.02 – 1.52

Note. SE=standard error. OR=odds ratio. CI=confidence interval. Respondents with any reported same-sex sexual or romantic experience are categorized in the same-sex group, coded as 0=opposite sex and 1=same-sex. Beta weights and odds ratios are adjusted for gender, marital status, education, household wealth index, employment status, household residence, religion, and religiosity.

*p < .05. **p < .01. ***p < .001.

Table 4

Sexually Active Females (n = 435) and Males (n = 677) of Same-Sex Status and Health Outcomes in Cebu, Philippines

	Same-Sex Females (n = 19)					Same-Sex Males (n = 149)				
	B	SE	β	OR	CI	B	SE	β	OR	CI
Sexual Behavior										
Age at 1st sex	-0.42	0.38	-0.05		-1.16 – 0.32	-1.28	0.19	-0.25***		-1.65 – -0.90
No. of partner	1.37	0.18	0.34***		1.01 – 1.73	5.24	0.83	0.24***		3.61 – 6.87
Risk Behavior										
Ever smoked	1.33	0.54		3.77*	1.31 – 10.85	1.07	0.39		2.92**	1.35 – 6.30
Ever drank alcohol[a]	0.84	1.05		2.31	0.29 – 18.20	-	-		-	-
Ever taken drugs	2.08	0.56		8.02***	2.69 – 23.96	0.61	0.21		1.85**	1.24 – 2.76
Psychological Distress										
Depression	-0.06	0.93	-0.00		-1.89 – 1.77	0.31	0.32	0.04		-0.32 – 0.94
Perceived Stress	1.32	1.04	0.06		-0.74 – 3.37	0.65	.41	0.06		-0.15 – 1.45

Note. [a] Results omitted for males as all same-sex males reported ever drank alcohol. SE=standard error. OR=odds ratio. CI=confidence interval. Respondents with any reported same-sex sexual or romantic experience are categorized in the same-sex group, coded as 0=opposite sex and 1=same-sex. Beta weights and odds ratios are adjusted for marital status, education, household wealth index, employment status, household residence, religion, and religiosity.

p < .05. **p* < .01. ***p* < .001.

Table 5

Summary of Hierarchical Regression Analysis for Sexual Debut (Age at First Sex) among Sexually Active Young Adults in Cebu, Philippines

	Model 1			Model 2			Model 3		
	B	SE B	B	B	SE B	β	B	SE B	β
Sociodemographics									
Female (r.g.)									
Male	-0.73	0.14	-0.18***	-0.40	0.15	-0.10**	-0.27	0.15	-0.07†
Never married (r.g.)									
Legally married	-0.47	0.19	-0.08*	-0.54	0.19	-0.09**	-0.55	0.19	-0.10**
Not legally married	-0.60	0.15	-0.14***	-0.62	0.15	-0.15***	-0.66	0.15	-0.15***
Widowed/separated	-0.58	0.34	-0.05†	-0.58	0.33	-0.05†	-0.58	0.33	-0.05†
No high school (r.g.)									
Some high school	-0.21	0.19	-0.04	-0.22	0.19	-0.05	-0.12	0.18	-0.03
4 yr high school	0.68	0.17	0.17***	0.53	0.17	0.13**	0.58	0.17	0.14**
1-5 yrs college	0.43	0.22	0.09*	0.22	0.22	0.04	0.25	0.22	0.05
Household wealth index	-0.05	0.03	-0.05	-0.04	0.03	-0.04	-0.04	0.03	-0.04
Currently working	0.15	0.12	0.04	0.13	0.12	0.03	0.10	0.12	0.03
Rural residence	0.31	0.13	0.07*	0.30	0.13	0.07*	0.25	0.13	0.06†
Catholic religion	0.05	0.30	0.01	0.09	0.30	0.01	0.12	0.30	0.01
Religious	0.07	0.12	0.02	0.03	0.12	0.01	0.03	0.12	0.01
Risk Behaviors									
Ever smoked				-0.44	0.16	-0.10**	-0.38	0.15	-0.09*
Ever drank alcohol				0.21	0.27	0.03	0.23	0.26	0.03
Ever taken drugs				-0.43	0.14	-0.10**	-0.34	0.14	-0.08*
Same-sex group							-1.07	0.17	-0.19***
Constant	17.93	0.43		18.06	0.49		18.10	0.48	
$R^2\Delta$		0.08			0.02			0.03	
Adjusted R^2		0.07			0.09			0.12	
F for ΔR^2		7.74***			7.48***			41.91***	

Note. R.G.=Reference group. Respondents with any reported same-sex sexual or romantic experience are categorized in the same-sex group, coded as 0=opposite sex and 1=same-sex.

† $p < .10$ * $p < .05$. ** $p < .01$. *** $p < .001$.