

Title: Health status, health service use and satisfaction according to sexual identity of young Australian women.

ABSTRACT

Objectives

To compare physical and mental health status, health service use and satisfaction amongst young Australian women of varying sexual identity; and to explore associations of all of these variables with satisfaction with their general practitioner (GP).

Methods

Data are from the youngest cohort of women in the Australian Longitudinal Study on Women's Health surveyed in 2003. The sample included women aged 25-30 who identified as exclusively heterosexual (n=8,083, 91.3%), mainly heterosexual (n=568, 6.4%), bisexual (n=100, 1.1%), or lesbian (n=99, 1.1%). Univariate analyses compared self-reported mental health, physical health, access to GP services and satisfaction across the four sexual identity groups. Linear regression, controlling for education, income and residence, was used to identify factors associated with GP satisfaction.

Results

Sexual minority women (lesbian, bisexual and mainly heterosexual) were significantly more likely than were heterosexual women to report poorer mental health and to have more frequently used health services; depression was strongly associated with mental health services use. Bisexual and mainly heterosexual women were most likely to report poorer general health, abnormal Pap tests, STI, UTI, Hepatitis B or C, and asthma. Lesbians were most likely to have never had a Pap test or

be under-screened. All sexual minority women had lower continuity of GP care and lower satisfaction with that care than heterosexual women.

Conclusions

Underlying social determinants of physical and mental health disparities experienced by sexual minority women require exploration, including the possible effects of discrimination and marginalisation on higher levels of risk taking. Lower continuity of care and lower satisfaction with GP services also need further investigation.

BACKGROUND

Health service use and satisfaction by lesbian and bisexual women is of particular interest because their health status is consistently reported to be poorer than that of heterosexual women. By rights, poorer health status should result in higher use of health services. Here, we present secondary analysis of the young cohort of the Australian Longitudinal Study on Women's Health (ALSWH) in which we focus on health status, access and satisfaction according to sexual identity.

Population-based studies show that lesbian and bisexual women have higher rates of depression, anxiety, suicidal ideation and substance use than their heterosexual counterparts. Such evidence comes from studies conducted with adult samples in the USA (Gilman et al., 2001)(Wilsnack et al., 2008)(McCabe, Hughes, Bostwick, West, & Boyd, 2009), the Netherlands (Sandfort, de Graaf, Bijl, & Schnabel, 2001)(Sandfort, Bakker, Schellevis, & Vanwesenbeeck, 2006), the UK (Mercer et al., 2007) and Australia (Hillier, De Visser, Kavanagh, & McNair, 2003)(McNair, Kavanagh, Agius, & Tong, 2005), and with youth in New Zealand (Fergusson, Horwood, & Beautrais, 1999). A recent systematic review on mental health and substance use reiterates these findings (King et al., 2008).

Physical health has not been investigated to the same extent as mental health. However, the prevalence of cardiovascular disease, respiratory disease and cancers is posited to be higher amongst lesbian and bisexual women due to higher risk factors (smoking, alcohol, obesity)(Aaron et al., 2001), nulliparity, reduced cancer screening and reduced contraceptive pill use (Cochran et al., 2001; Dibble, Roberts, & Nussey, 2004). Lower rates of cervical, breast and cardiovascular screening have been found in population-based studies in the US (Cochran et al., 2001; Diamant, Schuster, & Lever, 2000; Valanis et al., 2000) and Canada (Tjepkema, 2008). There is some evidence suggesting higher rates of sexually transmissible infections (STI) amongst bisexually active women (Mercer et al., 2007), and higher levels of heart disease amongst lesbians (Diamant et

al., 2000). Sandfort et al (2006) found that lesbian and gay adults were more likely than heterosexual adults to report acute physical symptoms and chronic physical conditions, although when mental health status was controlled, only chronic conditions were significantly different. Other investigators have found that higher rates of physical health problems amongst lesbian and bisexual women were largely mediated by higher levels of distress (Cochran & Mays, 2007).

Health care access varies according to the country and health care system studied. Data from the US National Health Interview Survey (n = 93,418) showed that women in same sex relationships (n=614) were about one-half as likely as women in heterosexual relationships to have seen a doctor in the previous 12 months or to have a regular source of care (Heck, Sell, & Gorin, 2006). These findings replicate the predominantly US-based literature over the last two decades that suggests lower levels of access amongst lesbians (Banks & Gartrell, 1996; Clark, Landers, & Sperber, 2001; Mravcak, 2006), and even lower access amongst bisexual women (Rogers, Emanuel, & Bradford, 2003). Barriers to accessing US health services have been summarised as: limited health insurance and next of kin rights, inadequate number of providers competent in minority sexual orientation issues, lack of specific prevention services, and preference not to disclose sexual orientation (Mayer et al., 2008). A Canadian national probability survey compared health care use in 83,723 heterosexual, 695 lesbian, and 833 bisexual women and also found that lesbians were less likely to see a GP in the previous 12 months and less likely to have a regular doctor (Tjepkema, 2008). By contrast, lesbian and bisexual women were *more* likely to see a mental health care provider than were heterosexuals in the Canadian study (Tjepkema, 2008), and this was also found in a population-based Californian study (Grella, Greenwell, Mays, & Cochran, 2009). A large Dutch survey within 104 general practices completed by 9,684 patients, 1.5% of whom were lesbian and 1.2% bisexual, showed that 'homosexuals' had a *higher* usage of physical and mental health care services (Bakker, Sandfort, Vanwesenbeeck, van Lindert, & Westert, 2006). To date, there has been

no population-based Australian data published on access to health care among sexual minority women.

Levels of satisfaction with health care are consistently found to be lower for lesbian and bisexual women than heterosexual women, regardless of study location or sampling method (Diamant et al., 2000; Tjepkema, 2008). Reasons for dissatisfaction, particularly amongst north American samples, often relate to difficulty accessing health care, (Diamant et al., 2000; Mathieson, Bailey, & Gurevich, 2002), and unmet healthcare needs (Tjepkema, 2008). Poor communication by providers including assumptions of heterosexuality is also implicated (Bonvicini & Perlin, 2003).

Dissatisfaction can result from, or lead to, reluctance to disclose sexual orientation (Meckler, Elliott, Kanouse, Beals, & Schuster, 2006). Conversely, satisfaction with health care is found to be higher when providers and services are more culturally competent regarding minority sexual orientation (Hutchinson, Thompson, & Cederbaum, 2006; Mayer et al., 2008; Polek, Hardie, & Crowley, 2008).

The primary question addressed in this paper is whether health service usage and satisfaction differ based on sexual identity. We also present analyses of mental and physical health status and their association with differences in health care use and satisfaction. Based on previous literature, we posit two hypotheses: (1) that sexual minority women report greater use of health services than heterosexual women due to their poorer health status; and (2) that satisfaction with care is lower amongst sexual minority women than amongst heterosexual women.

METHODS

Participants

The study sample is from the third survey of the young cohort of women in the ALSWH. The ALSWH is a prospective, longitudinal study that has collected health data from three age cohorts of women via self-completed questionnaires every three years since 1996. The ALSWH sample was selected randomly from the database of Medicare Australia, the universal provider of government funded health insurance for all Australians. The younger cohort of women was 18-23 years old at baseline (n=14,247), and at survey 3 in 2003 were aged 25-30, with 64% of the original young sample completing the third survey (n=8,850) (Lee et al., 2005). Our analyses focus on survey 3 because sexual orientation was not assessed in survey 1. Survey 2 analyses relating to sexual orientation have been previously reported (McNair, 2005; Hillier, 2003). Information about ALSWH recruitment, response rates and research design have been reported elsewhere (Brown et al., 1998)(Lee et al., 2005).

Measures

Sexual Identity

Women were asked ‘which label most closely describes your sexual orientation?’ Response options were ‘I am exclusively heterosexual’, ‘I am mainly heterosexual’, ‘I am bisexual’, ‘I am mainly homosexual (lesbian)’, ‘I am exclusively homosexual (lesbian)’, ‘I don’t know’, and ‘I don’t want to answer’. Women who selected ‘don’t know’, ‘don’t want to answer’ or did not respond to the question (n=211, 2.4%) were compared with the other four sexual identity groups to assess patterns of similarity or difference regarding demographics and key health status and health service use variables. The sample included women who self-identified as exclusively heterosexual (n=8,083, 91.3%), mainly heterosexual (n=568, 6.4%), bisexual (n=100, 1.1%), mainly lesbian (n=35, 0.4%) and exclusively lesbian (n=64, 0.7%). We combined the mainly lesbian and exclusively lesbian groups and labelled these ‘lesbian’, as their demographic characteristics and responses were very similar.

Health Status

Health status was measured only by self-report. Physical functioning was assessed using a question regarding 10 activities that could be limited by health status. Possible responses were ‘limited a lot’, ‘limited a little’, ‘not limited at all’. Current self-rated health status was assessed using a five-point Likert-type scale ranging from poor to excellent, with a higher score indicating better health. These two questions were derived from the SF-36 short-form health survey (Ware, Jr. & Sherbourne, 1992). Women were also asked whether they had been diagnosed or treated for a range of illnesses (e.g. depression, cancer, asthma) over the previous three years.

The mental health index scale was used as an overall indicator of mental health status. This is a five-item subscale of the well-validated Medical Outcomes Study 36-item Short Form Survey (SF-36) (Andresen, Malmgren, Carter, & Patrick, 1994)(Ware, 2002). For each of the items respondents were asked to ‘give the one answer that comes closest to the way you’ve been feeling during the past four weeks’, with higher scores indicating better mental health status (J. J. Ware, 2002). The short 10-item version of the Center for Epidemiologic Studies Depression Scale (CES-D) was used to assess depression over the past 4 weeks (Andresen et al., 1994). Based on results of Andresen et al we selected a score of 10 or more (out of 30) to indicate possible depressive illness. Respondents were also asked whether they had been diagnosed or treated for depression or anxiety in the last three years.

Two additional measures regarding stress and life satisfaction were assessed. The Perceived Stress Questionnaire for Younger Women was developed specifically for the ALSWH (Bell & Lee, 2002). Women completed 11 questions about their perceived level of stress over the previous 12 months related to family of origin, relationships with partner/spouse and others, health, work/employment, study, and motherhood/children. Responses were on a four-point Likert-type scale that ranged from

0 (not at all stressed) to 4 (extremely stressed), with higher scores indicating higher levels of stress. Life satisfaction assessed seven areas of women's lives: work, career, study, family relationships, partner/closest personal relationship, friendships, and social activities. A five-point Likert-type scale was used (1 = very dissatisfied to 5 = very satisfied) with higher scores indicating greater life satisfaction.

Use of Health Care Services

Women were asked about their use over the previous year of a range of services. Specific questions about general practice services included whether they attended the same GP clinic and whether they saw the same GP. Responses were on a four-point Likert-type scale (always, most of the time, sometimes, rarely or never). We combined attendance always or most of the time to indicate continuity of care. Women were also asked whether they preferred to see a female GP. Response options were 'yes, always'; 'yes, but only for certain things'; 'no'; and 'don't care'. We compare the 'yes, always' with all other responses, to indicate a consistent preference. Women rated the level of access to a range of health services on a five-point Likert-type scale from excellent to poor, with lower scores indicating better access. Finally, two questions were asked about Pap testing: timing of last Pap test (never, less than 2 years ago, 2 to 5 years ago, more than 5 years ago and not sure), and whether they had ever had an abnormal Pap test result (yes, no or don't know).

Satisfaction with GP Visit

Women rated their satisfaction with a range of health care in the context of their most recent visit to a GP. The five Likert-type-scaled response options ranged from poor to excellent (lower scores reflect lower levels of satisfaction). Five questions were taken from a US consumer satisfaction survey by Davies and Ware (cited by Young et al, 1998) with wording modified to better fit Australian consumers (Young, Byles, & Dobson, 1998). Three additional questions asked about

GPs' interest in women's opinion about tests and treatment, opportunities to ask questions, and cost of the visit.

Data analysis

Preliminary analyses included descriptive statistics, estimating internal consistency for all scales, contingency table analyses and ANOVA models for bivariate relationships. A linear regression model was then fitted to the data. All analyses were conducted in STATA intercooled version IE10. The analyses were weighted (provided by Australian Women's Health Study) and the statistical package, STATA, was chosen specifically because it allows for correct variance estimates.

RESULTS

Sample Demographics

Socio-demographic characteristics differed significantly across the four sexual identity groups (see Table 1). Mainly heterosexual women were most similar to heterosexual women in education and income, but most similar to bisexual women with regard to relationship, parental and residential status. Bisexual women had the lowest levels of education and income ($p<.01$), were most likely of all four groups to have a Health Care Card ($p<.001$), and the least likely to have private health insurance ($p<.001$). (Health care cards are issued in Australia to residents with low or no income and enable the cost of primary health services to be fully covered by government rebates.)

Compared with exclusively heterosexual women, lesbians were most likely to have a university degree or higher, but were equally likely to have higher incomes and less likely to have private health insurance. Lesbians were least likely of the four groups to be married or divorced/separated or to have children, but most likely to be in a de facto relationship ($p<.001$). Lesbian and bisexual women were less likely than exclusively heterosexual and mainly heterosexual women to live in rural or remote areas ($p<.001$).

There were 51 (.6%) women who answered the sexual identification question as “I don’t know” and 117 (1.3%) women who declined to answer. Both groups differed substantially from all four sexual identity groups, having the lowest educational levels, and being the most likely to have a Health Care Card. They were the most like bisexual women on these factors. The “Don’t know” women had the lowest educational attainment with 34.7% having a 10th grade education or less while having a trade school diploma was the modal category (32.7%) for those who “Declined”.

Unfortunately, only 23% of both groups combined answered items about income. However, almost half of the “I don’t know” cases (49%) and the “Declined” cases (43.5%) reported having a Health Care Card. In terms of relationship status, the “I don’t know” women were more likely to be single (66%) than the lesbians, and 57.8% of the “Declined” women reported being single, similar to the bisexuals. Correspondingly only 27.5% of the “I don’t know” women like the Bisexuals and Mainly Heterosexuals; while 35.9% of the “Declined” women had at least one child, similar to the Heterosexuals. Finally, “I don’t know” (96%) and the “Declined” women (95.5%) were least likely to live in remote areas, similar to the lesbians. So, overall on demographic characteristics the “Don’t know” group was most like the bisexual women, and the “Declined” group was variably similar to the Bisexuals and the Heterosexuals. The lack of data for some items and the variation with regard to demographic characteristics confirmed our decision not to include them in the substantive analyses. However brief comparative comments regarding the two groups are included within the health status and health service usage results sections.

Health status

Health status is reported in Table 2. Mental health was poorer for all three groups of sexual minority women, both short term (over the previous four weeks) and longer term (in the previous three years)($p<.001$). Bisexual women reported the highest levels of depression and anxiety, and on general health measures, the highest levels of stress and the lowest levels of life satisfaction ($p<.001$). Findings related to mental health and substance use have been presented in detail

elsewhere (Hughes, Szalacha & McNair, in press). The “Don’t know” group had a mean stress score of 1.0148, which was closest to the Lesbians, while the “Declined” women mean stress score was .7321, equivalent to the Heterosexuals.

With regard to physical health status, short term physical functioning did not differ based on sexual identity. However, both the “Don’t know” and “Declined” women scored lower than all other groups, with the “Don’t knows” the lowest (mean = 79.8). Bisexual women, however, reported the poorest physical health, including general health and diagnosis with Hepatitis B or C ($p < .001$). Only 32% of bisexual women had none of the physical diagnoses (compared with at least 44% of the lesbian and heterosexual women). Bisexual and mainly heterosexual women had a higher prevalence of asthma ($p < .001$). When controlling for current smoking, however, prevalence of asthma did not differ by sexual identity. Nonetheless, sexual identity was significantly associated with asthma for those who had never smoked or had quit smoking ($p < .001$). Bisexual and mainly heterosexual women were also more likely to report sexually transmitted infections (STI) and urinary tract infections in the previous three years ($p < .001$). One third of mainly heterosexual and 42.4% of bisexual women reported an abnormal Pap test result in their lifetime compared with fewer than one fourth of heterosexual women ($p < .001$).

Physical health of lesbian and heterosexual women was similar apart from a higher proportion of lesbians (3.1%) reporting a cancer diagnosis ($p < .05$). Comparing lesbians who had ever had a Pap test with all other women, they were least likely to have had an abnormal result.

Health service use

The use of health services is reported in Table 3. Sexual minority women were significantly more likely than heterosexual women to report consulting with GPs, medical specialists or alternative health professionals ($p < .001$) and less likely to have consulted reproductive GPs ($p < .001$) or

reproductive specialists ($p < .01$) in the past year. When depression ($\text{CES-D} \geq 10$) was controlled for most of the variance in health service use disappeared, indicating that mental health service use was associated with higher levels of depression. Although all three sexual minority groups reported more frequent use of health services than did heterosexual women, they were less likely to report continuity of primary care in the past year ($p < .001$), suggesting that they were attending more clinics and more individual GPs. More than two-thirds of all respondents had a regular GP, but each of the three groups of minority sexual identity women were less likely than exclusively heterosexual women to have a regular GP ($p < .001$). The “Don’t know” and “Declined” women were least likely to attend the same clinic or same GP, and while 68.6% of “Don’t know” group had a regular GP (similar to the Mainly Heterosexual and Bisexual women), 81.2% of the “Declined” group did so, which was similar to the Heterosexuals.

In terms of health care access (Table 4), there was no significant difference in perceived accessibility to GPs, including access to female GPs, indicating that access did not contribute to the lower continuity of care for sexual minority women. Only lesbians were significantly more likely to always prefer to see a female GP ($p < .05$). Accessibility to counseling services was the lowest of all primary care services; lesbian and heterosexual women reported significantly lower access to these services than did mainly heterosexual and bisexual women ($p < .01$). However, differences by sexual identity were no longer significant when education, income and residence were controlled.

Pap testing is a useful indicator of access to and uptake of preventive services in primary care. Lesbians were three-to-four times more likely to have never had a Pap test than all other women ($p < .001$). Among lesbian and bisexual women who had had a Pap test more than 25% reported that their most recent pap test was more than two years ago..

Satisfaction with the most recent GP visit

The overall satisfaction with recent GP visits was relatively high for all women (lowest mean score 2.72, SD .09). Of the eight questions relating to satisfaction, and amongst the whole sample, women were most satisfied with the doctor's personal manner (mean 2.08, SD 1.06), the doctor's technical skills (mean 2.22, SD 1.05) and the opportunity to ask questions (mean 2.27, SD 1.08). Sexual identity, however, was significantly associated with GP satisfaction. Using linear regression controlling for demographic characteristics (education, income, Health Care Card, and urbanicity), use of medical care, measures of general physical and mental health and life satisfaction, lesbians rated their GP satisfaction, on average, .24 points lower (on a scale of 1 to 5) than did exclusively heterosexual women ($\beta = .238$, SE = .103, $t = 2.32$, $p = .020$).

The strongest predictor of GP satisfaction was having a regular GP ($\beta = .519$, SE = .029, $t = 17.8$, $p < .001$). Other positive predictors of satisfaction were greater GP use ($\beta = .060$, SE = .009, $t = 6.33$), greater life satisfaction ($\beta = .183$, SE = .030, $t = 6.18$), and having a Health Care Card ($\beta = .123$, SE = .032, $t = 3.78$) (all $p < .001$). The negative predictors of satisfaction, apart from lesbian identity, were poorer general health ($\beta = -.155$, SE = .014, $t = 11.04$, $p < .001$) and lower continuity of care ($\beta = -.211$, SE = .017, $t = 12.67$, $p < .001$). Significant differences in GP satisfaction from the bivariate analyses (such as depression reducing satisfaction) were not significant in the multivariate model when other variables were controlled.

DISCUSSION

Our finding of poorer mental health amongst minority sexual identity women has been described in several other population-based studies. Conversely, the finding of poorer physical health, higher stress, and lower life satisfaction has not been described for Australian women, and is rarely described elsewhere. Although some observed differences in physical health are small, for example

general health, we contend that given the young age of the sample and given the consistent pattern of results, even these differences are worth noting and may be cause for concern. Within the minority sexual identity groups, bisexual and mainly heterosexual women were particularly likely to report poor physical health. We can speculate that some of the negative health outcomes, such as higher rates of STIs, UTIs and abnormal Pap tests, may be associated with higher levels of sexual risk taking, such as having a greater number of sexual partners. In other studies, higher levels of sexual risk taking have been associated with poorer mental health, higher levels of drug and alcohol use, and higher levels of victimization (Koh, Gomez, Shade, & Rowley, 2005; Mercer et al., 2007)—all of which have been found in previous analyses of data from the 2003 young ALSWH cohort (McNair et al., 2009). Similarly, intravenous drug use is more common amongst bisexual women and is a predictor of Hepatitis B or C diagnoses (Bailey, Farquhar, Owen, & Mangtani, 2004; Fethers, Marks, Mindel, & Estcourt, 2000). A potential link between these risk factors and health outcomes for bisexual and mainly heterosexual women is higher levels of distress due to identities that are even more marginalised than those of lesbians (Jorm, Korten, Rodgers, Jacomb, & Christensen, 2002). Thus, physical health may be affected by risk factors arising as coping mechanisms for discrimination, as has been described as contributing to mental health problems amongst sexual minorities (Warner et al., 2004)

We found further physical health disparities in terms of higher levels of asthma amongst bisexual and mainly heterosexual women, and higher rates of cancer diagnoses amongst lesbians. Asthma was associated with current smoking; however, non-smoking bisexual and mainly heterosexual women also had higher levels of asthma than other non-smoking respondents. This may be related to higher levels of marijuana use (Rosario, 2008), or possibly to greater exposure to passive smoke due socialization in venues such as bars, where smoking is common. The rate of cancers in this group of relatively young women is predictably low; however it is of concern that 3.1% of lesbians reported a cancer diagnosis compared with only 1.1% heterosexual women and 1.0% bisexual

women. There has been no reliable prevalence data on actual cancer diagnoses in a population-based group of sexual minority women of diverse age to date; therefore, it will be important to follow this cohort of women longitudinally in order to track cancer diagnoses as they age.

It is reassuring that perceived access to general practice services (apart from Pap tests) did not differ across sexual identity groups. In fact, more sexual minority women than heterosexual women attended GPs and we contend that this is appropriate given demonstrated physical and mental health inequalities among sexual minority women. Health service use of young women in Australia is quite different from that in the USA, where there is generally lower use by sexual minority women—despite similarly poorer health status (Mayer et al., 2008) (Heck et al., 2006). A significant contributor to health care access in this Australian context is likely to be universal availability of publicly funded primary health care. This is supported by the similar health service use patterns in other countries with universal health insurance, such as the Netherlands (Bakker et al., 2006).

In contrast, our finding of lower continuity of primary care amongst all sexual minority women compared with heterosexual women is similar to previous research (Heck et al., 2006; Tjepkema, 2008) and suggests that sexual minority women may be more likely than heterosexual women to ‘doctor shop’. Lower satisfaction with the patient-doctor relationship has been associated with lower continuity of care (Steele, Tinmouth, & Lu, 2006), which is consistent with our findings. Given that both having a regular doctor and more frequent GP usage were positively associated with satisfaction, it seems reasonable to assume that lack of satisfaction may encourage women to search for a ‘better’ GP. We were unable to assess respondents’ preferences for specific GP qualities, but our findings generally support the need for improved cultural sensitivity reported in other studies (Hutchinson et al., 2006; Polek et al., 2008). It is possible that satisfaction and continuity also influence each other in the opposite direction, in that more time spent developing a

relationship with a regular provider may be positively related to satisfaction. This pattern was seen in analyses of the mid-aged ALSWH cohort, where satisfaction and continuity with the same GP were positively correlated (Young, Dobson, & Byles, 2001).

We also wonder whether the lower level of Pap testing and concomitantly lower levels of satisfaction amongst lesbians reflects a tendency of sexual minority women to seek culturally sensitive GPs. For example, Pap testing requires particular sensitivity to women's sexual history. Lesbians and healthcare providers alike have been found to falsely assume that lesbians do not need Pap testing due to perceived low sexual risk (Marazzo, 2001). Conversely, full disclosure of sexual history improves Pap screening rates (Diamant, 2000). So, lack of sensitivity and understanding of sexual minority women's health by healthcare providers may very well serve as a barrier to this important preventive health screening.

Strengths and limitations

This national probability sample provides a large enough sample to meaningfully compare health status and health service usage across sexual identity groups. A limitation is that there were less than 100 lesbian and 100 bisexual women, leading to small subgroups in some of the analyses. This restricted within group comparisons among sexual minority women. Further, similar proportions of women selected "I don't know" or declined to answer the sexual identity question. The "I don't know" group were most similar to the Bisexual women on key demographic and health access indicators, however were not similar enough to analyse them together. In addition, mental and physical health status were measured using only self-reports, which may not accurately reflect actual health status. Finally, this study has limitations common to secondary data analyses. For example, the ALSWH was not designed to assess sexual orientation differences in health, thus it does not include potentially important issues such as disclosure of sexual identity to health care

providers, perceptions of provider sensitivity related to sexual identity, or experiences of discrimination based on sexual orientation.

Conclusions

Results of the study have important implications, particularly for primary healthcare providers. Findings should raise awareness of the risks of health inequalities amongst sexual minority women, as well as the need for culturally sensitive approaches that encourage continuity of care. Poorer health status amongst sexual minority women requires further research to more fully understand reasons underlying these health disparities. Apart from the lower need for reproductive services, there is no reason to believe that health status inherently differs between heterosexual and sexual minority women. Thus, it is important to address the influence of social marginalisation on the propensity for risk-taking behaviour, as well as the effects of discrimination on health. In addition to understanding differences *between* sexual minority and heterosexual women, providers should also understand that health risks differ *within* sexual minority women. Our findings that mainly heterosexual women were more similar to bisexual than to heterosexual women on a number of health and service usage indicators, suggests that this group may be even more marginalised than lesbians.

Finally, our findings that health service usage was higher but satisfaction and continuity were lower amongst sexual minority women raise many questions about the underlying causes of this seeming discrepancy. For example, would improved provider sensitivity improve satisfaction and lead to better continuity of care, and therefore better uptake of preventive health measures such as Pap testing? Studies that focus on women's perceptions of the cultural sensitivity of providers with regard to minority sexual identity may shed light and encourage a more dedicated approach to health care provider training in this area.

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Table 1: Demographic characteristics by sexual identity: ALSWH Young Women (n = 8,850)

	Exclusively	Mainly			
	Heterosexual	Heterosexual	Bisexual	Lesbian	
	(n = 8,083)	(n = 568)	(n = 100)	(n = 99)	χ^2
	%	%	%	%	Statistic
Education					
Year 10 or less	9.9	10.3	20.6	5.2	
Year 12 or Equiv	19.4	19.4	19.6	17.5	
Trade/Diploma	26.7	24.8	26.8	25.8	
University Degree	34.2	34.6	25.8	44.3	(df = 12)
Graduate Degree	10.7	10.9	7.2	7.2	21.0**
Income					
15,999 or less	1.9	2.4	6.8	4.3	
16,000-36,999	4.8	6.2	13.6	8.6	
37,000-51,999	11.5	12.1	13.6	12.9	(df = 9)
52,000 or greater	81.4	79.4	66.1	74.3	25.7**
Health Care Card	15.8	27.5	41.4	28.3	102.9***
Private Insurance					
Hospital	43.9	30.6	21.0	36.4	94.5***
Ancillary	45.3	31.4	24.0	32.3	104.9***

Relationship Status

Single	32.6	50.0	58.0	62.6	
Married	44.0	18.9	13.0	2.0	
De facto	19.9	25.4	20.0	32.3	(df = 9)
Separated/Divorced	3.5	5.7	9.0	3.0	255.1***

Parental Status

No children	67.2	73.8	72.0	93.9	(df = 3)
1 or more children	32.8	26.2	28.0	6.1	43.2***

Residence

Urban	59.6	69.9	69.8	69.8	
Rural	36.4	27.6	29.2	30.2	(df = 6)
Remote	4.0	2.5	1.0	--	33.5***

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

Table 2: Health status indicators by sexual identity

	Mainly				
	Heterosexual	Heterosexual	Bisexual	Lesbian	Statistical
	n = 7430	n = 548	n = 84	n = 85	test
	M (SD)	M (SD)	M (SD)	M (SD)	
Health status					
Short term Physical					
Functioning (0-100)	91.2 (15.3)	90.1 (15.5)	88.0 (15.8)	92.5 (14.7)	Ns
Current General					F _{(df= 3,}
Health (1-5)	2.37 (.85)	2.54 (.91)	2.79(1.03)	2.49 (.95)	8450)=14.35***
Short Term Mental					
Health (0-100)	71.0 (16.7)	66.48 (18.9)	64.1 (18.4)	67.1 (18.8)	17.6***
Stress (0-4)					
(previous year)	.88 (.51)	1.10 (.62)	1.34 (.69)	1.04 (.54)	53.0***
Current Life					
Satisfaction (1-5)	3.3 (.42)	3.1 (.48)	3.0 (.51)	3.2 (.42)	33.6***
Diagnosed in last 3					
years (as %)	%	%	%	%	Statistical
					test
Abnormal Pap test	24.3	33.2	42.4	16.2	56.8***
Asthma	9.8	15.7	18.0	10.4	26.3***
UTI	17.7	22.9	28.0	7.3	23.6***
STI	3.7	9.1	7.0	3.1	41.1***
Hep B or C	0.2	0.5	4.0	0	62.4***

Cancer	1.1	2.7	1.0	3.1	15.0*
Depression	11.2	25.4	34.0	25.0	151.7***
Anxiety	5.5	10.9	20.0	14.6	73.0***
Short Term					
CES-D \geq 10	24.5	33.9	44.4	28.6	44.2***

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

^aThe diagnoses with significant differences are shown. Other diagnoses with non-significant differences were all forms of diabetes, heart disease, hypertension, low iron and endometriosis.

Table 3: Use of Health Care Services

	Mainly				
	Heterosexual	Heterosexual	Bisexual	Lesbian	
	n = 7430	n = 548	n = 84	n = 85	
	%	%	%	%	χ^2 statistic
Consulted in last year					
GP Reproductive	77.9	74.9	64.6	37.9	95.9***
GP Other	81.8	85.5	90.8	91.6	15.7***
Specialist					
Reproductive	23.2	20.9	17.2	9.7	12.6**
Specialist Other	28.6	33.4	37.8	40.6	15.7***
Hospital Doctor	22.9	26.8	25.3	30.3	ns
Allied Health Prof	61.9	66.3	64.6	68.7	ns
Alternative Health Prof	20.1	27.0	31.3	31.3	28.6***
Community Nurse	9.5	8.7	7.1	4	ns
Health on Internet	24.1	29.1	31.3	27.3	10.1*
Have regular doctor	78.3	68.7	68.0	72.7	35.2***
Prefer female GP always	18.0	19.4	18.2	31.3	18.9*
Last Pap Test					
Never	8.8	6.5	6.0	26.3	
Less than 2 yrs ago	73.6	73.7	65.0	45.5	
2 – 5 yrs ago	15.8	18.2	24	23.2	

More than 5 yrs ago	1.2	1.1	5.0	2.0	
Not Sure	0.6	0.5	0	3.0	80.4***

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

Table 4: Perceived access to GP services

	Mainly				
	Heterosexual	Heterosexual	Bisexual	Lesbian	
	n = 7430	n = 548	n = 84	n = 85	
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	F statistic
Continuity with GP					
(1-4) ^a					
Attends same place	1.61 (.01)	1.87 (.03)	1.87 (.07)	1.87 (.08)	27.7***
Attends same GP	2.01 (.01)	2.29 (.04)	2.20 (.09)	2.17 (.09)	20.4***
Access to services					
(1-5) ^b					
Ease of seeing GP					
of choice	3.08 (1.13)	3.20 (1.20)	3.15 (1.27)	3.19 (1.22)	Ns
Access to GP bulk					
bills ^c	3.54 (.02)	3.57 (.06)	3.35 (.15)	3.55 (.16)	Ns
Access to female					
GP	2.84 (1.20)	2.84 (1.23)	2.73 (1.32)	2.99 (1.20)	Ns
Access to					
counselling	4.17 (.02)	3.95 (.08)	3.85 (.19)	4.15 (.19)	4.2**
Access to Pap Test	2.53 (1.38)	2.52 (1.39)	2.57 (1.50)	3.20 (1.73)	7.0***

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

^a 1 = always, 2 = most of the time, 3 = sometimes, 4 = rarely/never

^b 1 = excellent, 2 = very good, 3 = good, 4 = fair, 5 = poor

^c Bulk billing is an Australian term used when doctors bill the government directly for a patient service and do not charge an additional gap payment to the patient