Health Equity and Disparities among Same-Sex Attracted Women, Self-Identified Lesbian/Bisexual Women and Women Who Have Sex with Women (WSW): A Systematic Review of the Literature

Vicky C. Rajcoomar & Nicholas A. Grosskopf, EdD, MCHES
Collaborative Research Group on Health Policy & Promotion
Department of Social Sciences-Social Work/Department of Health and Physical Education/Gerontological Studies
School of Health & Behavioral Sciences, York College of The City University of New York

Background

Lesbian and bisexual women have been underrepresented in the public health literature. However, research shows that lesbian and bisexual women experience a number of common risk factors which may contribute to disparities in health outcomes when compared to their heterosexual counterparts (O'Hanlan & Isler, 2007). In the literature, studies have traditionally classified self-identified or same-sex attracted women in three ways: (1) via orientation; (2) behavior; and/or (3) self-identity, which has posed problems when evaluating epidemiological data on health behavior and disease.

For example, some literature shows that HIV transmission between women who have sex with women is unclear (O'Hanlan & Isler, 2007); however other research has found that bisexual women have the highest rates of sero-positivity in comparison to both self-identified lesbian and heterosexual women (Solarz, 1999). Other research has found that self-identified lesbian and bisexual women are more prone to partner psychological and physical victimization and more sexual assault experiences during adulthood (Balsam et al., 2005).

Moreover, research has shown that self-identified lesbian and bisexual women are more likely to be classified with alcohol and drug dependence syndromes (Cochran & Mays, 2000). Same-sex attracted, lesbian/bisexual and women who have sex with women (WSW) often experience disparities in additional health issues such as poor cardiovascular health, obesity, gynecologic cancers, other cancers like those of the breast, colon, and lungs, and even high rates of mental health decline (Meyer & Northridge, 2007).

Methods

The purpose of this systematic literature review was to identify, select, and synthesize high-quality, empirically-based research literature on the health of same-sex attracted, self-identified lesbian/bisexual women and WSW with the use of specific search criteria (including research examining orientation, behavior and/or identity). These criteria included looking at full PDF texts, scholarly peer-reviewed academic journal articles written in English, and those that have been published between 2004 and 2014 which were accessible for viewing and with references available.

In addition, the studies were retrieved from the Academic Search Complete Database and based on research done in the United States only. The literature generated were a result of using only the search terms "*lesbian*" and "*health*" under the search option of "Boolean/Phrase." These criteria were set because they were seen as the best possible options for identifying research done on the genetic and behavioral factors, and not necessarily environmental determinants, such as access to or the quality of healthcare (purposively excluded). This would have proven to be too large a scope and requires a separate systematic review. Identifying the predisposing determinants of health in this subset of women may serve as good indicators of disparities that exist in health and as precursors for future research in areas of quality of and access to health care.

Results

The systematic literature review yielded five individual papers, each highlighting determinants and/or distribution of health among lesbian and bisexual women (via orientation, behavior and/or identity).

Among 7,643 US women ages 15-44, Tao (2008) estimated that 1.3% to 1.9% of the sample were lesbians and that 3.1% to 4.8% were bisexual. These identities were assigned combining both data reported on past or current sex partners and self-identification. When compared to their heterosexual counterparts, lesbian women had .27 greater odds of reporting ever having had a viral STD ($p < .05$) while bisexual women had 2.66 greater odds of reporting ever having had a viral STD ($p < .05$).

Cochran et al. (2013) compared tobacco use and secondhand smoke (SHS) exposure among heterosexually-identified women (n = 5,513), self-identified lesbians (n = 71), bisexual women (n = 188), and WSW (n = 263). With regards to current cigarette smoker status, self-identified lesbians had 2.04 greater odds, WSW, 2.77 greater odds, and bisexual women, 2.43 greater odds of being a current cigarette smoker when compared to their heterosexual counterparts (CI = 95%). Both lesbians and WSW, compared with exclusively heterosexual women, were more likely to have elevated serum cotinine levels consistent with SHS exposure ($p < .05$).

Hiedemann and Brodoff (2013) found that older women (n = 1,755) who lived with female partners were statistically significantly more likely than those who lived with male partners or spouses to have difficulty dressing or bathing ($p < 0.001$). The odds of self-care difficulty were 1.50 times greater among women living with female partners than among heterosexually-identified married women ($p < 0.001$).

Farmer et al (2013) reported that among a sample of 5,793 sexual-minority women (SMW) (self-identified lesbians, bisexual women, and/or WSW) there was a greater exposure to cardiovascular disease (CVD) risk factors when compared to their heterosexual counterparts. Women in the study had a higher smoking status than heterosexual women ($p < 0.001$). Current smoking status among SMW was 38.0% compared to 22.7% for heterosexual women. Alcohol use was also higher in SMW with 46.9% reported as risky drinkers compared to 23.7% for their heterosexual counterparts ($p < 0.001$). On average, SMW were 13.9% (CI = 95%) older in vascular terms than their chronological age, which was 5.7% (CI = 95%) greater than that of their heterosexual counterparts.

With regards to risks specifically from breast cancer-related causes, Cochran et al. (2012) suggested that women in same-sex partnerships (n=693) are at elevated risk for breast cancer mortality ($p < 0.05$) compared to similarly co-resident women in different-sex relationships (n = 136,174), as well as a higher percentage of breast cancer-attributed deaths than their heterosexual counterparts (0.5% vs. 0.2%) (p = 0.03). This may have stemmed from differences in reproductive behaviors, lifestyle factors, and the use of routine preventative screening methods.

Results (continued)

Author & Year	Sample	Methods	Results	Limitations
Tao, G., (2008)	7643 women, including lesbian and bisexual women ages 15-44, taken from the National Survey of Family Growth.	Measured sexual orientation and viral sexually transmitted disease (STD) rates using a questionnaire.	STD rates were higher among bisexual women (3.1% to 4.8%) than among lesbians (1.3% to 1.9%).	This study did not cater to the fact that sexual orientation can be classified in many ways based on responses to sexual behavior.
Cochran et al., (2013)	11744 individuals, ages 20-59, taken from the 2003-2010 National Health and Nutrition Examination Surveys (NHANES).	Multivariate methods were used to compare tobacco use and prevalence and secondhand smoke (SHS) exposure in individuals.	Lesbian and bisexual women had higher rates of tobacco use and SHS than their counterparts ($p<0.05$).	SHS was measured using serum cotinine levels, but the source of exposure is indeterminable.
Hiedemann, B. & Brodoff, L. (2013)	1,917,748 households, including 1755 women living with female partners, taken from the 2009 American Community Survey (ACS).	Examined whether older individuals, living with same-sex partners, faced greater risks of needing long-term care than their heterosexual counterparts, using logistic regression models.	Older women who lived with female partners were statistically more likely (6.4%) than those who lived with male partners or spouses (4.0%) to have difficulty dressing or bathing ($p<0.001$)	Data from the ACS does not provide information on an individual' s sexual orientation identity or attraction, but only on the individual' s sex.
Farmer et al., (2013)	Data was aggregated from the 2001-2008 National Health and Nutrition Examination Surveys, with a survey being completed by 5793 women ages 20-69	Framingham General risk score was used to calculate a ratio of vascular and chronological age, to determine if sexual-minority women (SMW) were at greater risk for CVD than their heterosexual counterparts.	SMW were more likely to smoke ($p<0.001$), to report a history of drug use, to report risky drinking ($p<0.001$), and to report a family history of CVD. SMW were 13.9% older in vascular terms than their chronological age.	A lack of sexual behavior data for older participants and a small sample of SMW made it difficult to examine differences in CVD risk.
Cochran et al., (2012)	The National Health Interview Survey (NHIS) interviewed married or cohabiting female participants (155,427), ages 18–80.	Investigated risk for fatal breast cancer in a sample of married and cohabiting women using a Cox proportional hazard model.	Women in same-sex couples compared to women in different-sex relationships had greater age-adjusted risk for fatal breast cancer ($p<0.05$).	A concern is that the number of women in the NHIS who reported living in same-sex partnerships is small and so too is a mortality follow-up period.

Table 1. Summary of Systematic Literature Search Results

Discussion

Research has shown that health disparities exist among same-sex attracted women, WSW and self-identified lesbians & bisexual women compared to women who are heterosexually-identified. The public health literature available, including those found in this systematic literature review, all highlight these disparities. Higher STD infection rates, an elevated risk for harmful tobacco use and second hand smoke exposure, a higher necessity for long term care, more cardiovascular disease risk factors and an older vascular age, and a greater age-adjusted risk for fatal breast cancer are some of the health disparities that lesbian and bisexual women experience in comparison to their heterosexual counterparts.

Since the systematic literature search yielded studies that looked only at the distribution of health disparities, further research is needed to look at the specifics in terms of the determinants of health within smaller and specific samples of lesbian (orientation, behavior and/or identity) and bisexual women populations. Future studies should also aim to identify the predisposing, enabling, and reinforcing factors of knowledge, attitudes, beliefs, and values of lesbian and bisexual women and explore exactly why disparities exist between them and their heterosexual counterparts, in terms of health equity, distribution, and also access and the quality of health care received.

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