



Published in final edited form as:

Am J Orthopsychiatry. 2009 October ; 79(4): 500–510. doi:10.1037/a0016848.

Social and Psychological Well-being in Lesbians, Gay Men, and Bisexuals: The Effects of Race, Gender, Age, and Sexual Identity

Robert M. Kertzner,
Columbia University

Ilan H. Meyer,
Columbia University

David M. Frost, and
City University of New York

Michael J. Stirratt
Columbia University

Abstract

Using social stress perspective, we studied the mental health effects of added burden related to socially disadvantaged status (being African-American or Latino, female, young, and identifying as bisexual versus gay or lesbian) in a community sample of 396 self-identified lesbian, gay, and bisexual (LGB) adults. Mental health outcomes were social and psychological well-being contrasted with depressive symptoms. When mental health deficiencies by disadvantaged social status were detected, we examined if LGB community connectedness and positive sexual identity valence played a mediating role, reducing the social status disparity in outcome. We found different patterns when looking at social vs. psychological well-being and positive vs. negative mental health outcomes. Bisexuality and young age, but not gender and racial/ethnic minority status, were associated with decreased social well-being. In bisexuals, this relationship was mediated by community connectedness and sexual identity valence. Though no differences in social or psychological well-being were found by gender, female gender was associated with depressed mood. We conclude that there is limited support for an additive stress model.

Keywords

homosexuality; bisexuality; well-being; depression

Recent research has shown that lesbian, gay, and bisexual (LGB) adults have greater psychiatric morbidity than their heterosexual counterparts and that this excess morbidity is related to exposure to stressors, such as prejudice, discrimination, and violence (Cochran, Sullivan, & Mays, 2003; Meyer, 2003; Sandfort et al., 2001). These stressors may be thought of as constituting minority stress, a specific type of social stress to which individuals from stigmatized groups are exposed as a result of their minority position (Meyer, 1995; Meyer,

*corresponding author: Robert M. Kertzner, 2154 Broderick Street, San Francisco, CA 94115; 415-441-6196 (voice and fax), rmk3@columbia.edu.

Publisher's Disclaimer: The following manuscript is the final accepted manuscript. It has not been subjected to the final copyediting, fact-checking, and proofreading required for formal publication. It is not the definitive, publisher-authenticated version. The American Psychological Association and its Council of Editors disclaim any responsibility or liabilities for errors or omissions of this manuscript version, any version derived from this manuscript by NIH, or other third parties. The published version is available at www.apa.org/pubs/journals/ort.

2003). Little is known about the effects of minority stress on social well-being despite the inherently social nature of stigmatization and the tasks of psychosocial development undertaken by LGB persons to overcome this stigmatization such as establishing new social networks, cultivating a positive in-group minority identity, and revising heterosexually-based social norms defining sexuality, intimacy, and purpose in life (Frost & Meyer, 2009; Meyer & Dean, 1998).

Although not well studied in LGB populations, social well-being may be especially relevant to understanding minority stress effects on mental health. The concept of social well-being as developed by Keyes (1998) draws on the work of Durkheim (1951), Seeman (1991), and Antonovsky (1994) in emphasizing the fit between individuals and their social worlds. Social well-being encompasses the extent to which individuals feel they make valued social contributions, view society as meaningful and intelligible, experience a sense of social belonging, maintain positive attitudes towards others, and believe in the potential for society to evolve positively. The achievement of social well-being defined by this construct overlaps with outcomes suggested by models of sexual identity formation in LGB persons: a rejection of the belief that the world is divided into “bad” heterosexuals and “good” homosexuals; a decreased sense of anger, alienation, and frustration; and an increased sense of belonging to the world at large and of being more than “just” a lesbian or gay man (Cass, 1996; Eliason, 1996).

A focus on social well-being in LGB lives is also germane to the study of processes mitigating the impact of minority stress. In general, coping processes related to minority stressors are those that foster a positive re-evaluation of stigmatized identity (for example, by providing a favorable basis for social comparisons) and make available social support resources. Connectedness to LGB communities may be a particularly important coping resource as it provides access to non-stigmatizing environments and greater opportunities for positive social regard that support more positive self-appraisals (Crocker & Major, 1989; Meyer, 2003).

By identifying as a sexual minority person and participating in the LGB community, LGB persons can benefit from affirmative social norms and create life narratives about LGB identity reflecting positive transformation of stigmatized identity and enhanced personal growth (Kertzner, 2001; Meyer & Dean, 1998). Decreased concealment of sexual identity, opportunity for in-group identification, and greater access to social support foster acceptance of homosexual and bisexual identity that, in turn, is strongly linked to psychological well-being (Jordan & Deluty, 1998; Halpin & Allen, 2004; Meyer, 2003).

In our discussion of well-being, we are referring to functional definitions of social and psychological well-being that emphasize the *achievement* of mental health as opposed to hedonic or experiential measures of well-being such as affect and happiness (Keyes, 1998; Keyes, Ryff & Shmotkin, 2002; Ryff, 1989). Functional well-being constitutes an important dimension of positive mental health and, as such, contributes to a two continua model of negative and positive mental health that provides a more complete picture of mental health with implications for psychosocial functioning and resilience (Keyes, 2002, 2005). A two continua model of mental health has particular relevance to LGB mental health for several reasons. LGB persons have elevated rates of psychiatric disorders as noted above, but this does not provide information about how positive mental health is achieved despite co-existent psychiatric morbidity. For the majority of LGB persons without a psychiatric diagnosis, joint assessment of negative and positive mental health more fully captures the implications of minority stress for psychosocial functioning. As Hughes and Thomas (1998) suggested, research should focus on issues related to well-being in addition to studying the effects of stigma on mental disorder. These authors (1998, p. 787) noted that psychiatric disorders, self-esteem, and quality

of life may be affected by prejudice in different ways: “People can think highly of themselves, be in good psychiatric health, but also be dissatisfied with their quality of life.”

A two continua perspective is also well suited to an examination of the effect of co-existent disadvantaged statuses on stress among LGB adults. A model of additive stress suggests that racial/ethnic minority, female, young, and bisexually-identified LGB adults experience incremental exposure to stress related to the unique social situation attached to their disadvantaged status; such stress is exemplified by social isolation, community disenfranchisement, limited access to coping resources, or the burden of managing multiply devalued identities (Bowleg, Craig, & Burkholder, 2004; Harper, Jernewall, & Zea, 2004). This model builds upon a sociological paradigm that views social conditions as a cause of stress for members of disadvantaged social groups (Aneshensel, Rutter, & Lachenbruch, 1991). The authors noted that, as Pearlin (1989) had observed, “the various structural arrangements in which individuals are embedded determine the stressors they encounter” (p. 167) as well as their coping resources. The interplay between these stressors and coping resources determine the net mental health effect of added socially disadvantaged status.

Recent work has described unique stressors associated with racial/ethnic, gender, sexual identity, and age statuses in LGB adults. African-American and Latino LGB individuals face stressors related to alienation from their racial/ethnic identity within the LGB community, stigmatization of minority sexual identity within racial/ethnic minority communities, and stressors related to sexual prejudice that affect all LGB persons (Diaz et al., 2001; Espin, 1993; Greene, 2000; Meyer, Schwartz, & Frost, 2008). Within their racial/ethnic communities, for example, African-American and Latino LGB persons contend with anti-homosexual and traditional family values that emphasize an individual's primary allegiance to nuclear and extended family members and that view marriage as limited to heterosexual unions (Munoz-Laboy, 2008; Adams & Kimmel, 1997). Latino GLB persons may experience the additional burden of acculturative stress, although this may be less important to mental health than differences in gender and socioeconomic status (Zea, Reisen, & Poppen, 1999).

There is evidence to suggest additive social stress associated with gender among LGB persons. Szymanski (2005) found that heterosexism, sexism, and internalized heterosexism were associated with psychological distress in lesbians and bisexual women, and that the interaction of heterosexist and sexist events further contributed to levels of psychological distress. This dual exposure may account for the observation that lesbians and bisexual women account for much of a heightened expectation of stigma observed among women in a community sample of heterosexual, homosexual, and bisexual adults (Meyer, Schwartz, & Frost, 2008). In general population studies, however, research has not shown the impact of social stress on gender in a predictable way nor consistently demonstrated that women experience more stress than men (Hatch & Dohrenwend, 2007).

As a status within groups of non-heterosexually identified individuals, bisexuality has been associated with unique social disadvantages (see Dodge & Sandfort, 2006, for review). These disadvantages are multifold: in addition to stigma experienced in heterosexual social worlds, bisexuals experience stigmatization or “biphobia” within LGB communities as exemplified by the perception that bisexual identity is a betrayal of gay or lesbian identity (Herek, 2002; Matteson, 1996). Bisexuals may avoid participating in the LGB community because of this stigmatization, yet may have difficulty finding a supportive community of other bisexual persons (Fox, 1996; McLean, 2008). Because, in part, of stigmatization of bisexuality, bisexual men and women are less open about their sexuality with family and friends and have higher levels of identity confusion relative to their lesbian and gay peers (Balsam & Mohr, 2007; Jorm et al., 2002; Warner et al., 2004). These multiple effects of stigmatization may be mutually reinforcing and underlie findings of a greater prevalence of depression, anxiety, alcohol misuse,

negative affect, and suicide attempts and plans in bisexually versus lesbian/gay and heterosexually-identified adults (Jorm et al., 2002).

We also consider mixed evidence for the effect of age cohort among LGB persons in terms of socially disadvantaged status. Contemporary cohorts of young LGB adults are arguably advantaged by the evolution of progressive social attitudes toward homosexuality that allow adolescent and young LGB persons to disclose sexual identity to friends and family earlier than previous generations of young LGB adults (Floyd & Blakeman, 2006). However, despite liberalization of social attitudes toward homosexuality, young LGB persons may be disadvantaged relative to older LGB persons in having less time to establish social networks and a variety of social roles that, in composite, create a greater sense of social integration and purpose. Young gay and bisexual men are also more exposed to anti-gay victimization than older gay and bisexual men because they may have less independence and control over their lives, making it difficult for them to access safe LGB community venues (Dean, Wu, & Martin, 1992; Huebner, Rebchook, & Kegeles, 2004).

Older LGB adults contend with stigmatization of aging that may be felt as early as middle age, particularly for gay and bisexual men, and have been stereotyped as being lonely, sexless, or sexual in an age-inappropriate manner (Berger & Kelly, 1996; Kooden, 2000). In addition, older LGB adults with co-existent disadvantaged statuses may experience a heightened sense of ageism. With respect to race/ethnicity, for example, David and Knight (2008) found that older African-American gay and bisexual men were more likely than their white counterparts to experience ageism, although they did not appear to be experiencing more negative mental health outcomes as a result. In contrast to findings of decreased social status associated with aging, there is some evidence to suggest that LGB adults in their thirties and subsequent middle-aged years expand their portfolio of social roles related to commitments expressed in long-term friendships and relationships, and commitments to members of future generations; these roles include parenting, caretaking, teaching, and leadership or participation in community agencies (Cohler et. al, 1998; Erikson, 1959; Grossman, 2008; Kimmel & Sang, 1995). The engagement of these social roles may signify that as LGB persons enter the fourth and later decades of life they experience an increased sense of social capital defined by Keyes and Waterman (2003) as comprising feelings of trust, a sense of social responsibility, and reciprocal social ties.

Hypotheses

We examined the mental health outcome of social and psychological well-being in a diverse cohort of LGB adults. We contrasted these findings with depression, an indicator of mental health that is more commonly used in studies of stress and mental health in LGB as well as in general populations. We first hypothesized that added social disadvantage associated with racial/ethnic minority, female, bisexual, and young status would be associated with decreased well-being and increased depression, in keeping with additive stress predictions. We also hypothesized that social and psychological well-being would be enhanced by, and depression decreased by, positive attitudes toward one's sexual identity and by increased connectedness to the LGB community. Furthermore, we hypothesized that where disadvantaged social status is related to lower social and psychological well-being and greater depression, this relationship would be mediated, at least in part, by coping resources: positive attitudes toward one's sexual identity and connectedness to the LGB community.

Method

Participants and Procedure

Data were collected as part of Project Stride, a study of the relationships among stress, identity, and mental health in a diverse LGB population in New York City (more information about Project Stride is available online at <http://www.columbia.edu/~im15/>). Three hundred and ninety-six lesbian, gay, and bisexual respondents completed a comprehensive face-to-face interview that included interviewer- and self-administered measures using computer assisted interview (CAPI) and paper and pencil methods. Respondents were sampled from venues selected to ensure a wide diversity of cultural, political, ethnic, and sexual representation within the demographics of interest. Over the course of 11 months, 25 outreach workers visited a total of 274 venues in 32 different New York City zip codes. Outreach workers received training regarding the geographic and ethnographic aspects of the types of venues targeted for recruitment before beginning work in the field.

Recruitment venue types included: (a) bars (i.e., establishments where alcohol was served); (b) non-bar establishments (i.e., indoor commercial establishments where no alcohol was served, such as coffee shops, gyms, book stores, art galleries, and sex shops); (c) outdoor venues (i.e., parks and streets); (d) groups (i.e., community organizations and groups organized around a variety of activities or interests such as sports, politics, culture, racial, ethnic, or national interests); and (e) events (e.g., Gay Pride). As recruitment proceeded the researchers monitored quotas from venues to ensure that no venue type was overrepresented in the overall sample. Also, to prevent bias by recruitment place, no more than four respondents were recruited from any one specific venue at any particular recruitment effort. To further reduce selection bias, venues were excluded from our venue-sampling frame if they were likely to over-represent people receiving support for mental health problems (e.g., 12-step programs, HIV/AIDS treatment facilities) or people with a history of significant life events (e.g., organizations that provide services to people who have experienced domestic violence). Detailed information on the sampling procedures used in Project STRIDE -- including a breakdown of the representation of each venue type in the final sample by race/ethnicity, gender, and sexual identity -- is available online at: <http://www.columbia.edu/~im15/files/STRIDEMethod.pdf> (see Tables 1 through 3).

Respondents were eligible if they were 18-59 years-old, resided in New York City for two years or more and self-identified as: (a) lesbian, gay, or bisexual; (b) male or female (and their gender identity matched sex at birth); and (c) white, African-American or Latino. Eligible respondents were contacted by an interviewer and invited to complete the research interview. Response and cooperation rates were 0.6 and 0.8, respectively (AAPOR, 2005: formulas COOP2 and RR2) and did not differ by race/ethnicity or gender. Sample characteristics are described separately by sample subgroups in Table 1.

Measures

Social status variables—In accordance with our interest in self-identity among LGB persons as a marker of social status, participants were asked what best described their sexual orientation and their race and/or ethnicity. Respondents could have used any identity labels referring to themselves (e.g., LGB, queer, same-gender loving; Caucasian, Black, African American, Hispanic). For the purpose of group analysis, responses were later coded into categories: gay, lesbian, or bisexual, and Black, Latino, or white. Participants also self-reported their gender (i.e., male or female) and their date of birth, which was used to calculate their age. In recognition of multiple age cohorts in our sample, we classified respondents in one of three age categories: 18 – 29 years of age, 30 – 44, and 45 – 59. While each of these categories is likely to include a broad range of life experiences and developmental trajectories, we felt that

they approximate periods of post-adolescent entry into and exploration of the LGB community; the subsequent and greater assumption of social roles related to partnership, child-care responsibilities, work, or community activities in young adulthood; and the deepening or broadening commitment of these roles in midlife, particularly as they relate to the well-being of future generations.

Socioeconomic variables—*Education* was assessed by asking participants to self-report the highest grade of education that they completed ranging from “some high-school” to post-graduate degree (e.g., PhD, or MD). We created a dichotomous variable that distinguished participants who had obtained less than or equal to a high school diploma from the rest of the sample. We created an *unemployment* category, defined as nonstudent individuals who were seeking work. We assessed *net worth* by asking participants to calculate how much money they would have or owe after converting all assets to cash and paying all debts (Conger et al., 2002). Their responses were then coded into a dichotomous net worth variable, with “1” indicating negative net worth.

Identity valence—We measured identity valence through analysis of an Assessment of Multiple Identities (AMI; Stirratt et al., 2008). Participants reported up to 12 personal, relational, and collective identities in response to the question, “Who am I?” Among these 12 identities, participants were asked to specify their gender, racial/ethnic, and sexual identities (as noted above, self-identification in these categories was an eligibility criterion). Participants rated each identity that they nominated on a set of 70 descriptive attributes that varied in their valence. We subsequently obtained measures of sexual identity valence by analyzing the AMI data through a clustering procedure, Hierarchical Classes Analysis, or HICLAS (DeBoeck & Rosenberg, 1988). We defined identity valence as the percentage of positive attributes associated with one's sexual identity in one's HICLAS identity model. Stirratt and colleagues (2008) provide further technical descriptions of this measure which is also described at: <http://www.columbia.edu/~im15/files/STRIDEMethod.pdf>.

Connectedness to the LGB community—Connectedness was assessed with an 8-item scale (Frost & Meyer, 2008), adapted from a 7-item community cohesion scale used in the Urban Men's Health Study (UMHS), a multi-city study of gay men's psychological and physical health (Mills et al., 2001). We added one item —“You feel a bond with other [men who are gay or bisexual]” taken from Herek and Glunt's (1995) community consciousness scale — to capture symbolic affiliation that did not denote activity and we also modified the scale for use by men and women. Scores were recoded so that higher scores indicated more connectedness. Scores on this measure in the current study had a Cronbach's alpha of .80.

Social well-being—As formulated by Keyes (1998), this 15-item scale examines respondents' perception of their social environment and includes five dimensions of social coherence, integration, acceptance, contribution, and actualization. This portion of the interview was self-administered. Internal consistency reliabilities (alpha) for the total scale was 0.78 and for the five subscales reliability ranged from 0.36 to 0.74. Given low to moderate internal consistency coefficients of some of the subscales we did not analyze each subscale as a separate outcome. Instead, we created a score for each participant on social well-being by computing the participant's total score on the 15-items and dividing it by the number of items in the scale. Higher scores indicate greater social well-being.

Psychological well-being—We used an 18-item assessment of psychological well-being developed by Ryff (1989) and Ryff and Keyes (1995). This measure assesses psychological well-being across six domains: self-acceptance, positive relations with others, autonomy, environmental mastery, purpose in life, and personal growth. This portion of the interview was

also self-administered. The internal consistency reliability of the total scale was 0.75 and for the subscales alphas ranged from 0.25 to 0.55. As with social well-being, we did not analyze each subscale as a separate outcome because of low reliability of the subscales, but computed an overall score based on dividing the total score by the number of items in the scale. Our approach to using only total scores for the psychological well-being measure is in agreement with recent research that suggests that the scale represents one dimension, rather than separate dimensions related to respective subscales (Springer & Hauser, 2006)

Depressive symptoms—The Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977) is a 20-item measure of depressive symptoms experienced over a one week period prior to the interview. Numerous studies have demonstrated the convergent validity of the CES-D among both clinical and non-clinical samples in the form of large and statistically significant correlations with clinical reports of depression, DSM depression diagnoses, the Hamilton Rating Scale for Depression, and the Symptom Checklist-90 (McDowell & Newell, 1996). Scores on this measure in the current study resulted in a Cronbach's alpha of .92.

Data Analysis

We used multiple regression analysis in which the dependent variables were social and psychological well-being and levels of depressive symptoms, and the independent variables were dummy variables for each of the tested social status groups. We defined social status groups using dummy-coded variables for race/ethnicity (African-Americans and Latinos vs. whites), gender (men vs. women), sexual identity (gay or lesbian vs. bisexual), and age groups (18-29, 30-44, 45-59) with the youngest cohort defined as the reference group. We combined the race/ethnic categories African-Americans and Latinos despite important socio-cultural differences between them based on our theoretical model that calls for a test of racial/ethnic minority status, focusing on the commonality of African-American and Latino categories as disadvantaged social statuses in American society. However, to ensure we did not miss important differences between Latino and African-American respondents we also tested for such differences and report them when significant differences were found.

In Model 1 we assessed the social statuses differences adjusted for socioeconomic variables (education, net worth, and employment status). In Model 2 we added identity valence and connectedness to the LGB community to test the impact of each of these factors on social and psychological well-being and levels of depressive symptoms. If we found social status differences in the outcome in Model 1, we tested whether the social status group differences were explained by the ameliorating impact of identity valence and connectedness to the LGB community. In this test, identity valence and connectedness to the LGB community were mediators of the association between group status and the outcome. We used Baron and Kenny's (1986) approach to mediation detection: (a) the predictor must be related to the outcome of interest; (b) the predictor must be related to the mediator variable; (c) the mediator must be related to the outcome; and d) the relationship between the predictor and the outcome must be reduced when the mediator is added to the equation.

Results

The means, standard deviations, and correlations of the study variables are presented in Table 2. All variables were approximately normally distributed. Results of our regression analyses are presented in Table 3 and below for each outcome variable.

Social Well-being

Social status differences (Model 1)—After adjusting for socioeconomic variables our hypothesis was supported for two of the four social statuses we tested. Bisexual (as compared

with gay or lesbian) identity and being a member of the youngest cohort, 18-29 years of age, were associated with lower levels of social well-being. Contrary to our hypothesis, however, women did not differ from men and racial/ethnic minorities did not differ from white respondents in social well-being.

Sexual identity valence and connectedness to the community (Model 2)—

Positive sexual identity valence and greater connectedness to the LGB community were both associated with greater social well-being, although the association was stronger for community connectedness than it was for identity valence (β s = .29 and .16, respectively). The effect of disadvantaged social status on social well-being observed for bisexual identity was significantly diminished when valence and connectedness were entered into the model, demonstrating complete mediation. Although the difference between the youngest and oldest age cohorts in social well-being was somewhat diminished in Model 2, Barron and Kenny's condition for mediation was not met because age cohort was not related to identity valence or connectedness (Table 2).

Psychological Well-being

Social status differences (Model 1)—In contrast to our findings regarding social well-being, we did not find support for any of the hypotheses regarding psychological well-being. This included comparison of racial/ethnic minority vs. white status, although when we tested for differences separately for Latino and African-American identities, we found Latino social status was related to significantly lower psychological well-being compared with white status ($B = -.24$, $SE = .09$, $\beta = -.15$, $p = .01$); African-American and white participants did not differ. Because our hypothesis concerned racial/ethnic minority status in aggregate we conclude from the combined analysis that our hypothesis regarding racial/ethnic minority versus white status is not supported.

Sexual identity valence and connectedness to the community (Model 2)—As was observed in relation to social well-being, sexual identity valence and connectedness to the LGB community were independent predictors of psychological well-being: individuals who had a more positive sense of their sexual identity and who were more connected to the LGB community had greater psychological well-being (identity valence was more strongly associated with psychological well-being than connectedness; β .24 vs .15). Adding these mediators in Model 2 of our analysis did not affect the difference between Latino and white participants in psychological well-being.

Depressive Symptoms

Status differences (Model 1)—As expected, women reported significantly more depressive symptoms than men but there were no differences in depressive symptoms based on age group or sexual identity. There were also no general differences between racial/ethnic minority participants as a whole compared as a group with white participants. However, when analyzed separately, Latino participants reported significantly more depressive symptoms than white participants ($B = 3.61$, $SE = 1.37$, $\beta = .15$, $p < .01$); African-American and white participants did not differ.

Sexual identity valence and connectedness to the community (Model 2)—

Positive sexual identity valence but not community connectedness was associated with decreased depressive symptoms. The addition of sexual identity valence in Model 2 did not reduce the effect of being female or Latino on depressive symptoms

Discussion

A dual assessment of well-being and depression suggests that minority stress has inconsistent effects on LGB mental health as reflected in several of our findings. We found that bisexual and young respondents had lower levels of social well-being than their counterparts even when they did not differ on measures of psychological well-being and depressive symptoms suggesting that social well-being is a distinct outcome related to socially disadvantaged status. This interpretation is consistent with the possibility that social well-being, with its theoretical origins in sociological theory and its focus on the fit of individual with his/her social environment, is a more immediate target of social disadvantage than psychological well-being (Keyes, 1998)

The finding that community connectedness predicted social well-being almost twice as strongly as did identity valence and, conversely, that identity valence was more predictive of psychological well-being than social well-being, is consistent with the notion that psychological well-being is focused on individual rather than social resources. This is in keeping with the observation by Ryff et al. (2003) that psychological well-being reflects idiosyncratic factors of biological, genetic, and personality characteristics of the individual that interact with life events and social-historical context to shape well-being. Similarly, our finding that identity valence but not community connectedness predicted depression suggests that depression is more strongly rooted in individual vulnerabilities than social resources. This inference, however, may reflect limitations of community connectedness as a measure of social condition and is at odds with a well-established literature linking social conditions to depression (Brown & Harris, 1978; Pearlin, 2006).

We identified two groups of LGB respondents with disadvantaged social well-being, bisexuals and young adults, 18 - 29 years of age. Our findings underscore the relative difficulty these groups have in achieving social integration relative to other LGB persons. Bisexual status was associated with lower levels of LGB community connectedness, consistent with reports of stigmatization of bisexual identity among lesbians and gay men and limited social support available from other bisexuals (Fox, 1996; Herek, 2002; McLean, 2008). Moreover, the disadvantage in social well-being associated with bisexual identity was fully mediated by levels of community connectedness and identity valence, underscoring the importance of these factors in determining bisexual men and women's perception of their relation to their social environment. This pattern of mediation is echoed in treatment goals of psychotherapy with bisexual clients that emphasize the provision of social confirmation of bisexual identity; therapists, for example, attempt to support an understanding of bisexuality as a natural phenomenon and encourage clients to identify bisexual role models, cultivate support networks, and disclose bisexual identity to appropriate others (Matteson, 1996).

Our finding that 18 – 29 year-old LGB persons had the lowest social well-being of all age cohorts suggests that despite the recent improvement in the social environment of LGB persons and the apparent greater ease of coming out among younger cohorts compared to their predecessors (Cohler & Galatzer-Levy, 2000), young LGB adults do not achieve a measure of social fit comparable to older LGB adults. We interpret this finding as reflecting the greater ability of older LGB persons to find or create social environments that are accommodating and accepting of LGB identity and that provide greater opportunity for the engagement of a variety of social roles. In this regard, social accommodation and engagement connote a broader sense of social fit than connectedness to LGB community which, in contrast, did not differ by age cohort.

Contrary to these findings and our hypotheses stemming from minority stress theory about the added stress that racial/ethnic minority status would place on LGB individuals, we did not find

decreased well-being or increased depression in racial/ethnic minority respondents as a whole. We found different patterns for African-American and Latino individuals compared to whites, suggesting that factors specific to these groups, rather than the added disadvantaged of racial/ethnic minority status, were at work. It is notable that our finding regarding mental health and well-being of African-American LGBs is consistent with results of studies of the general population that found that despite greater exposure to discrimination and prejudice, African-Americans do not have a higher prevalence of most common mental disorders than whites in both the general population (Kessler, Mickelson, & Williams, 1999; Williams et al., 2007) and in LGB populations (Meyer, Dietrich, & Schwartz, 2008). Other studies have shown that African-Americans have higher self-esteem and well-being than whites (Ryff, Keyes, & Hughes, 2003; Twenge & Crocker, 2002). Our finding is consistent with research showing that mental health vulnerabilities in dual status racial/ethnic minority LGB persons may be offset by protective effects of racial socialization, an enhanced sense of purpose in life, differential patterns of social cohesion or familial or social support, and other minority coping processes (Cochran et al., 2007; Ryff, et al., 2003).

In contrast, we found that Latino respondents reported more depressive symptoms and lower levels of psychological well-being than whites, suggesting that the mental health effect of the dually stigmatized status of Latino LGB persons is consistent with an added burden stress hypothesis. We found no evidence for a mediating role of sexual identity valence and community connectedness on disadvantage associated with Latino status, lending support to the examination of other mediators that influence Latino LGB mental health such as immigration and acculturation status, and level of family acceptance (Diaz et al., 2001; Zea et al., 1999). The evidence from other researchers for poorer mental health in Latino LGB persons is mixed. Diaz et al. (2001) reported high rates of psychological distress in gay and bisexual Latinos residing in urban environments while Cochran et al. (2007), in contrast, found equal or lower rates of psychiatric morbidity among Latino LGB persons in a national probability sample compared with previous reports of psychiatric morbidity in LGB populations. As Cochran et al. (2007) caution, methodological differences in studies of Latino LGB mental health (for example, how homosexuality is defined, which Latino populations are included) make comparisons inexact.

Turning to gender, our finding of increased depressive symptoms among lesbians and bisexual women is consistent with reports finding greater symptoms of depression in African-American lesbians and bisexual women compared with African-American gay and bisexual men and reports on the population prevalence of depression in African-American women (Mays & Cochran, 1994; Mays, Cochran, & Roeder, 2003). As suggested by Greene (1994), lesbians and bisexual women may be at increased risk for psychological distress because of their multiple jeopardy status in which stress associated with race, gender, and sexual orientation discrimination is compounded. Although our findings are consistent with an added burden stress model, we note that increased rates of psychiatric morbidity have been observed for both genders of LGB persons (Cochran et al. 2003; Sandfort et al., 2003). Gender may not constitute added stress as much as it may be associated with overlapping but different vulnerabilities in gay and bisexual men and lesbians and bisexual women (Meyer, Schwartz, & Frost, 2008).

Overall, our findings highlight the importance of attending to both negative and positive mental health indicators. We showed, for example, that although women have more depressive symptoms than men, they do not have lower levels of psychological well-being, and although bisexuals had lower levels of social well-being, they did not have more depressive symptoms. That is, psychological distress and impaired well-being cannot be thought of as synonymous. The contrast in findings between negative and positive mental health also calls attention to coping mechanisms such as community connectedness and enhanced self-esteem that mitigate the adverse mental health effects of stress. Lesbians, for example, frequently have the support

of a lesbian community during episodes of interpersonal stress that enhances psychological well-being (Gabby & Waller, 2002). In addition, feminist ideology buffers lesbians and bisexual women from the effects of sexism and heterosexism (Szymanski, 2005; Szymanski & Chung, 2002).

Study limitations

Several considerations frame discussion of our findings. To our knowledge, this is the first study of LGB mental health to utilize functional measures of social and psychological well-being. Ryff (1989) notes that theories of functional well-being reflect middle-class (and presumably heterosexual) values and that measures of eudaimonic well-being may be “unattainable, unattractive, or irrelevant for individuals at different locations in the social structure” (p.1079). It is thus possible that some of our null findings could reflect a limited sensitivity of the psychological well-being measure to capture variability in how well individuals with different social statuses manage multiple sources of stigma in unique sexual minority contexts.

Our sampling targeted LGB individuals who to a greater or lesser extent make up the LGB community. We make no generalization to non-LGB identified men and women who have same-sex sexual behavior. Such individuals, who include those sometimes referred to as men who have sex with men and women who have sex with women (or MSM and WSW), are important to study. However, our study excluded non LGB-identified individuals because our theoretical orientation and hypotheses address questions that are specifically related to individuals who at least have the potential to be a part of lesbian, gay, and/or bisexual communities (although they did not have to be actual participants in such communities). For example, it would make little sense to ask non-gay identified individuals about their regard of gay identity or connectedness to the community—both central elements of our investigation. The group we did study, LGB-identified individuals, is a group that is distinct from non-gay identified MSM/WSW and that sometimes gets neglected by researchers motivated by studying general questions about sexual behaviors. We therefore remind researchers that both groups are important to study on their own right (Rothblum, 2006; Young & Meyer, 2005).

Our study is also limited in that we assessed the association of stress and well-being among white, Black, and Latino men and women. Future studies should assess health and well-being in other racial/ethnic minority groups as well as in transgender individuals. The latter are vulnerable to unique stressors related to transgression of cultural norms regarding gender expression (Grossman & D'Augelli, 2007). Regarding racial/ethnic minorities, our study focused on the commonality in Blacks and Latinos—that both are disadvantaged racial/ethnic groups in American society, subject to prejudice and discrimination. But studies should also explore unique aspects of these and other racial/ethnic minorities, including Asian/Pacific Islanders, American Indian/Alaskan Natives as well as groups among Latino and Black populations.

Because we used nonrandom sampling strategies, we are limited in our confidence of generating prevalence estimates for the level of well-being in the gay community. But our purpose was not to estimate the level of well-being, which is vulnerable to potential sampling biases in the representativeness of the entire sample (external validity), but to examine differences and relationships among subgroups in the LGB community. To limit bias in comparing subgroups in our sample we followed a strict recruitment procedure that was equal across subgroups and statistically controlled for potentially confounding demographic variables by which the groups differed. That our response and cooperation rates do not vary much by subgroup suggests that the former strategy may have been successful. But clearly, because we used a nonrandom methodology we cannot exclude the possibility of bias.

Also, our conclusions are limited in their implications for social stress theory. Although our hypotheses stemmed from social stress theory, we did not directly test the impact of stress. Instead, we used social group status as a proxy indicator of stress (Aneshensel & Pearlin, 1987; Pearlin, 1989; Thoits, 1999). Thus, although our findings provide some support to the extra burden associated with disadvantaged status, we do not directly test whether, in fact, this is the working of specific stressors, per se, or whether the mediators we examined work by ameliorating the impact of specific stressors. We note that the social strata of race/ethnicity and gender are among the most common and influential categories in social and political science, in health research, as well as in popular discourses (Massey, 2007), but future research should examine mechanisms underlying the relationship between disadvantaged social status and mental health.

Research implications

We tested hypotheses stemming from social stress theory about group differences in well-being and depressive symptoms. Clearly, however, this paper provides only a partial test of minority stress and its results, like the results of any one study, cannot prove or disprove the veracity of the model. We attempt to test one component of the minority stress model—that disadvantaged social groups would have poorer mental health outcomes, measured here as well-being and depressive symptoms. If our findings were entirely consistent with minority stress hypotheses, they would support minority stress model but a further step would require investigators to show that group differences are in fact caused by excess stress in the disadvantaged groups (Meyer, Schwartz, & Frost, 2008). That our results show inconsistent support for minority stress hypotheses should lead to a reexamination and, if necessary, elaboration of the minority stress model. We are particularly struck by the finding that Black LGB respondents—clearly a disadvantaged social group in American society—do not show higher levels of depressive symptoms and lower levels of well-being than their white counterparts. This finding clearly challenges minority stress theory. That this finding is consistent with findings about Black-white differences in well-being in the general population (Ryff et al., 2003) as well as findings regarding differences in prevalence of mental disorders between Black and white LGBs (Meyer, Schwartz, & Dietrich, 2008) strengthens our confidence that these findings are not a result of some bias in our study.

The lack of parsimony in our results represents a challenge to social stress theory. It suggests that the theory cannot be applied uniformly and that greater definition and distinctions are necessary in future research (Meyer, Schwartz, & Frost, 2008). One area for future investigation of inconsistent evidence regarding minority stress is suggested by work on intersectionality (Collins, von Unger, & Armrister, 2008; Glenn, 2000). Our work was based on the additive stress model suggesting that multiple disadvantaged identities add to the stress burden and therefore will have an overall negative impact on health. The intersectional approach suggests that identities are better understood in combination. That is, for example, that the category “Black” does not capture important differences between Black men and women, that Black women cannot capture differences between poor and middle class Black women, etc. Therefore studying identity intersection (Black poor women) will be more informative than studying Blacks, women, and poor individuals separately. Applied to minority stress theory, a researcher may formulate hypothesis about such intersections instead of the group as a whole. It is plausible that an intersection amalgam (Black poor women) would show minority stress effects that Blacks or Women as a whole do not show. It should be noted, however, that when moving from basic group constructions (e.g., Black, women) to intersection amalgams, an important aspect of minority stress is revised. In studying intersections, researchers suggest that it is not global social processes such as racism or sexism—constructs that are at the core of underlying psychosocial and sociological theories—that have a health impact, but a particular combination of disadvantage that matters.

Conclusions

We conclude that social well-being, as a measure of positive mental health, is an important yet neglected aspect of LGB mental health. Understanding social well-being as part of a larger assessment of positive mental health contributes to a more complete characterization of mental health (Keyes, 2005). Similarly, ongoing study of social well-being in LGB persons along with other assessments of positive mental health would provide a richer description of psychosocial functioning as it co-exists with minority stress in LGB persons. For example, our examination of social well-being among young LGB persons suggests that the diminished stigmatization of homosexuality does not necessarily translate into advantages for young LGB persons in terms of a broader measure of how well individuals relate to their social worlds. Our findings of diminished social well-being in bisexual and young LGB persons and increased depressive symptoms in women without reciprocal changes in other mental health outcomes support the assertion that positive mental health outcomes and negative mental health outcomes are not parallel, synonymous constructs. Research questions regarding the mental health of LGB populations should be assessed by measures of both positive mental health that consider psychological and social well-being, along with measures of negative mental health—together they capture a more complete picture of LGB mental health.

Acknowledgments

This research was supported by a grant from the National Institute of Mental Health (R01MH066058)

References

- Adams, CL.; Kimmel, D. Exploring the lives of older African American gay men. In: Greene, B., editor. *Ethnic cultural diversity among lesbian and gay men*. Thousand Oaks, CA: Sage; 1997. p. 132-151.
- American Association for Public Opinion Research (AAPOR). *Standard definitions: Final dispositions of case codes and outcome rates for surveys*. Ann Arbor, MI: AAPOR; 2005.
- Aneshensel, CS.; Pearlin, LI. The structural contexts of sex differences in stress. In: Barnett, RC.; Biener, L.; Baruck, GK., editors. *Gender and stress*. New York: Free Press; 1987. p. 75-95.
- Antonovsky, A. Sense of coherence: An historical and future perspective. In: McCubbin, HI.; Thompson, EA.; Fromer, JE., editors. *Sense of coherence and resiliency: Stress, coping, and health*. Madison, WI: University of Wisconsin Press; 1994. p. 3-40.
- Balsam KF, Mohr JJ. Adaptation to sexual orientation stigma: A comparison of bisexual and lesbian/gay adults. *Journal of Counseling Psychology* 2007;54:306–319.
- Baron RM, David KA. The moderator-mediator variable distinction in social psychological research: Conceptual, strategic and statistical considerations. *Journal of Personality and Social Psychology* 1986;51:1173–1182. [PubMed: 3806354]
- Berger, RM.; Kelly, JJ. Gay men and lesbians grown older. In: Cabaj, RP.; Stein, TS., editors. *Textbook of homosexuality and mental health*. Washington, D.C.: American Psychiatric Press; 1996. p. 305-316.
- Bowleg L, Craig ML, Burkholder G. Rising and surviving: A conceptual model of active coping among Black lesbians. *Cultural Diversity and Ethnic Minority Psychology* 2004;10:229–240. [PubMed: 15311976]
- Brown, GW.; Harris, T. *Social origins of depression: A study of psychiatric disorder in women*. New York: The Free Press; 1978.
- Cass, VC. Sexual orientation identity formation: A western phenomenon. In: Cabaj, RP.; Stein, TS., editors. *Textbook of homosexuality and mental health*. Washington, D.C.: American Psychiatric Press; 1996. p. 227-252.
- Cochran SD, Sullivan GJ, Mays VM. Prevalence of mental disorders, psychological distress, and mental health services use among lesbian, gay, and bisexual adults in the United States. *Journal of Consulting and Clinical Psychology* 2003;71:53–61. [PubMed: 12602425]

- Cochran SD, Mays VM, Alegria M, Ortega AN, Takeuchi D. Mental health and substance use disorders among Latino and Asian American lesbian, gay, and bisexual adults. *J Consulting and Clinical Psychology* 2007;75:785–94.
- Cohler, BJ.; Galatzer-Levy, RM. *The course of gay and lesbian lives: Social and psychoanalytic perspectives*. Chicago: University of Chicago Press; 2000.
- Cohler, BJ.; Hostetler, AH.; Boxer, AM. Generativity, social context, and lived experience: Narratives of gay men in middle adulthood. In: McAdams, DP.; de St Aubin, E., editors. *Generativity and adult development*. Washington, D.C.: American Psychological Association; 1998. p. 265-310.
- Collins PY, von Unger H, Armbrister A. Church ladies, good girls, and locas: stigma and the intersection of gender, ethnicity, mental illness, and sexuality in relation to HIV risk. *Soc Sci Med* 2008;67:389–97. [PubMed: 18423828]
- Conger RD, Wallace LE, Sun Y, Simons RL, McLoyd VC, Brody GH. Economic pressure in African American families: A replication and extension of the family stress model. *Developmental Psychology* 2002;38:179–193. [PubMed: 11881755]
- Crocker J, Major B. Social stigma and self-esteem: The self-protective properties of stigma. *Psychological Review* 1989;96:608–630.
- David S, Knight BG. Stress and coping among gay men: Age and ethnic differences. *Psychology and Aging* 2008;23:62–69. [PubMed: 18361655]
- Dean, L.; Wu, S.; Martin, J. Trends in violence and discrimination against gay men in New York City: 1084-1990. In: Herek, GM.; Berrill, KT., editors. *Hate crimes: Confronting violence against lesbians and gay men*. Newbury Park, CA: Sage; 1992. p. 46-64.
- Deboeck P, Rosenberg S. Hierarchical classes: Model and data analysis. *Psychometrika* 1988;53:361–381.
- Diaz RM, Ayala G, Bein E, Jenne J, Marin BV. The impact of homophobia, poverty, and racism on the mental health of Latino gay men. *American Journal of Public Health* 2001;91:927–932. [PubMed: 11392936]
- Dodge, B.; Sandfort, TGM. Mental health among bisexual individuals when compared to homosexual and heterosexual individuals. In: Firestein, BA., editor. *Becoming visible: Counseling bisexuals across the lifespan*. New York: Columbia University Press; 2006. p. 16-32.
- Durkeim, E. *Suicide*. New York, NY: Free Press; 1951.
- Eliason MJ. Identity formation for lesbian, bisexual, and gay persons: Beyond a “minoritizing” view. *Journal of Homosexuality* 1996;30:31–58. [PubMed: 8743116]
- Erikson E. Identity and the life cycle. *Psychological Issues* 1959;1(1):50–100.
- Espin, OM. Issues of identity in the psychology of Latina Lesbians. In: Garnets, LG.; Kimmel, DC., editors. *Psychological perspectives on lesbian and gay male experiences*. New York: Columbia University Press; 1993. p. 348-363.
- Fox, RC. Bisexuality: An examination of theory and research. In: Cabaj, RP.; Stein, TS., editors. *Textbook of homosexuality and mental health*. Washington, D.C.: American Psychiatric Press; 1996. p. 147-172.
- Frank J, Bakeman R. Coming-out across the life course: implications of age and historical context. *Archives of Sexual Behavior* 2006;35:287–296. [PubMed: 16804747]
- Frost DM, Meyer IH. Internalized homophobia and relationship quality among lesbians, gay men, and bisexuals. *Journal of Counseling Psychology* 2009;56:97–109. [PubMed: 20047016]
- Frost DM, Meyer IH. Measuring connectedness to the lesbian, gay, bisexual and transgender community among diverse sexual minority populations. 2008 Unpublished Manuscript.
- Gabby SG, Wahler JJ. Lesbian aging: A review of a growing literature. *Journal of Gay and Lesbian Social Services* 2002;14:1–21.
- Glenn, NE. The social construction and institutionalization of gender and race. In: Marx Ferree, M.; Lorber, J.; Hess, BB., editors. *Revisioning gender*. Walnut Creek, CA: AltaMira Press; 2000. p. 3-43.
- Greene, B. Lesbian women of color: triple jeopardy. In: Comas-Diaz, L.; Greene, B., editors. *Women of color: Integrating ethnic and gender identities in psychotherapy*. New York: Guilford; 1994. p. 389-427.
- Greene B. African American Lesbian and Bisexual Women. *Journal of Social Issues* 2000;56:239–249.

- Grossman, AH. The unique experiences of older gay and bisexual men. In: Wolitski, RJ.; Stall, R.; Valdiserri, RO., editors. *Unequal opportunity: Health disparities affecting gay and bisexual men in the United States*. New York: Oxford University Press; 2008. p. 303-326.
- Grossman AH, D'Augelli AR. Transgender youth and life-threatening behaviors. *Suicide Life Threat Behav* 2007;37:527–37. [PubMed: 17967119]
- Halpin SA, Allen MW. Changes in psychosocial well-being during stages of gay identity development. *Journal of Homosexuality* 2004;47:109–26. [PubMed: 15271626]
- Harper GW, Zernewell N, Zea CM. Giving voice to emerging science and theory for lesbian, gay, and bisexual people of color. *Cultural Diversity and Ethnic Minority Psychology* 2004;10:187–199. [PubMed: 15311973]
- Hatch SL, Dohrenwend BP. Distribution of traumatic and other stressful life events by race/ethnicity, gender, SES and age: a review of the research. *American Journal of Community Psychology* 2007;40:313–332. [PubMed: 17906927]
- Herek GM. Heterosexuals' attitudes toward bisexual men and women in the United States. *Journal of Sex Research* 2002;39:264–274. [PubMed: 12545409]
- Herek, GM.; Glunt, EK. Identity and community among gay and bisexual men in the AIDS era: Preliminary findings from the Sacramento's men's health study. In: Herek, GM.; Greene, B., editors. *AIDS, identity, and community: Psychological perspectives on the HIV epidemic and lesbians and gay men*. Newbury Park, CA: Sage Publications; 1995. p. 55-84.
- Huebner DM, Rebchook GM, Kegeles SM. Experiences of harassment, discrimination, and physical violence among young gay and bisexual men. *American Journal of Public Health* 2004;94:1200–1203. [PubMed: 15226143]
- Hughes M, Thomas ME. The continuing significance of race revisited: A study of race, class, and quality of life in America. *American Sociological Review* 1998;63:785–795.
- Jordan KM, Deluty RH. Coming out for lesbian women: Its relation to anxiety, positive affectivity, self-esteem, and social support. *Journal of Homosexuality* 1998;35:41–63. [PubMed: 9524921]
- Jorm AF, Korten AE, Rodgers B, Jacomb PA, Christensen H. Sexual orientation and mental health: Results from a community survey of young and middle-aged adults. *British Journal of Psychiatry* 2002;180:423–427. [PubMed: 11983639]
- Kertzner RM. The adult life course and homosexual identity in midlife gay men. *Annual Review of Sex Research* 2001;XII:75–92.
- Kessler RC, Mickelson KD, Williams DR. The prevalence, distribution, and mental health correlates of perceived discrimination in the United States. *Journal of Health and Social Behavior* 1999;40:208–230. [PubMed: 10513145]
- Keyes CLM. Social well-being. *Social Psychology Quarterly* 1998;61:121–140.
- Keyes CLM. The mental health continuum: From languishing to flourishing in life. *Journal of Health and Social Behavior* 2002;43:207–222. [PubMed: 12096700]
- Keyes CLM. Mental illness and/or mental health? Investigating axioms of the complete state model of health. *Journal of Consulting and Clinical Psychology* 2005;73:539–548. [PubMed: 15982151]
- Keyes, CLM.; Waterman, MB. Dimensions of well-being and mental health in adulthood. In: Bronstein, MH.; Davidson, L.; Keyes, CLM.; Moore, KA., editors. *Well-being: Positive development across the life course*. New Jersey: Lawrence Erlbaum Associates; 2003. p. 477-498.
- Keyes CLM, Shmotkin D, Ryff CD. Optimizing well-being: The empirical encounter of two traditions. *Journal of Personality and Social Psychology* 2002;82:1007–1022. [PubMed: 12051575]
- Kimmel, DC.; Sang, BE. Lesbians and gay men in midlife. In: D'Augelli, AR.; Patterson, CJ., editors. *Lesbian, gay, and bisexual identities over the lifespan: Psychological perspectives*. New York: Oxford University Press; 1995. p. 190-214.
- Kooden, H. *The power of gay midlife*. New York: Avon Books; 2000.
- Massey, D. *Categorically unequal*. New York, NY: Russell Sage Foundation; 2007.
- Matteson, DR. Psychotherapy with bisexual individuals. In: Cabaj, RP.; Stein, TS., editors. *Textbook of homosexuality and mental health*. Washington, D.C.: American Psychiatric Press; 1996. p. 433-450.

- Mays VM, Cochran SD. Mental health correlates of perceived discrimination among lesbian, gay, and bisexual adults in the United States. *American Journal of Public Health* 2001;91:1869–1876. [PubMed: 11684618]
- Mays VM, Cochran SD, Roeder MR. Depressive distress and prevalence of common problems among homosexually active African American women in the United States. *Journal of Psychology & Human Sexuality* 2003;15:27–46.
- McLean K. Inside, outside, nowhere: Bisexual men and women in the gay and lesbian community. *Journal of Bisexuality* 2008;8:63–80.
- McDowell, I.; Newell, C. *Measuring health: A guide to rating scales and questionnaires*. 2nd. New York, NY: Oxford University Press; 1996.
- Meyer IH. Minority stress and mental health in gay men. *Journal of Health and Social Behavior* 1995;36:339–367.
- Meyer IH. Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: Conceptual issues and research evidence. *Psychological Bulletin* 2003;129:674–697. [PubMed: 12956539]
- Meyer, IH.; Dean, L. Internalized homophobia, intimacy, and sexual behavior among gay and bisexual men. In: Herek, GM., editor. *Stigma and sexual orientation: Understanding prejudice against lesbians, gay men, and bisexuals Psychological perspectives on gay and lesbian lives*. Thousand Oaks, CA: Sage; 1998. p. 160-186.
- Meyer IH, Dietrich JD, Schwartz S. Lifetime prevalence of mental disorders in diverse lesbian, gay, and bisexual populations. *American Journal of Public Health* 2008;98(6):1004–1006. [PubMed: 17901444]
- Meyer IH, Schwartz S, Frost DM. Social patterning of stress and coping: Does disadvantaged social status confer more stress and fewer coping resources? *Social Science & Medicine*. 2008;10.1016/j.socscimed.2008.03.012
- Mills TC, Stall R, Pollack L, Paul JL, Binson D, Canchola J. Health related characteristics of men who have sex with men: A comparison of those living in ‘gay ghettos’ with those living elsewhere. *American Journal of Public Health* 2001;91:980–983. [PubMed: 11392945]
- Munoz-Laboy MA. Familism and sexual regulation among bisexual Latino men. *Archives of Sexual Behavior* 2008;37:773–782. [PubMed: 18521735]
- Pearlin LI. The sociological study of stress. *Journal of Health and Social Behavior* 1989;30:241–256. [PubMed: 2674272]
- Pearlin, LI. The stress process revisited: Reflections on concepts and their interrelationships. In: Aneshensel, CS.; Phelan, JC., editors. *Handbook of the sociology of mental health*. New York: Springer; 2006. p. 395-415.
- Radloff LS. The CES-D Scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement* 1977;1:385–401.
- Rothblum, E. From science fiction to computer-generated technology: Sampling lesbian, gay, and bisexual individuals. In: Meyer, IH.; Northridge, ME., editors. *The health of sexual minorities: Public health perspectives on lesbian, gay, bisexual and transgender populations*. New York: Springer; 2006. p. 442-454.
- Ryff CD. Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology* 1989;57:1069–1081.
- Ryff CD, Keyes CLM. The structure of psychological well-being revisited. *Journal of Personality and Social Psychology* 1995;69:719–727. [PubMed: 7473027]
- Ryff CD, Keyes CLM, Hughes DL. Status inequalities, perceived discrimination, and eudaimonic well-being: Do the challenges of minority life hone purpose and growth? *Journal of Health and Social Behavior* 2003;44:275–291. [PubMed: 14582308]
- Sandfort TM, de Graaf R, Bijl RV, Schnabel P. Same-sex behavior and psychiatric disorders. *Archives of General Psychiatry* 2001;58:85–91. [PubMed: 11146762]
- Seeman, M. Alienation and anomie, in measures of personality and social psychological attitudes. In: Robinson, JP.; Shaver, PR.; Wrightsman, LS., editors. *Measures of personality and social psychological attitudes*. San Diego, CA: Academic Press; 1991. p. 291-374.
- Springer KW, Hauser RM. An assessment of the construct validity of Ryff's Scales of Psychological Well-Being: Method, mode, and measurement effects. *Social Science Research* 2006;35:1080–1102.

- Stirratt MJ, Meyer IH, Ouellette SC, Gara M. Measuring identity multiplicity and intersectionality: Hierarchical Classes Analysis (HICLAS) of sexual, racial, and gender identities. *Self & Identity* 2008;7:89–111.10.1080/15298860701252203
- Szymanski DM, Chung YB. Internalized homophobia in lesbians. *Journal of Lesbian Studies* 2003;7:115–125.
- Szymanski DM. Heterosexism and sexism as correlates of psychological distress in lesbians. *Journal of Counseling and Development* 2005;83:355–360.
- Thoits, PA. Sociological approaches to mental illness. In: Horwitz, AV.; Schied, TL., editors. *A handbook for the study of mental health: Social contexts, theories, and systems*. Cambridge, UK: Cambridge University Press; 1999. p. 121-138.
- Twenge JM, Crocker J. Race and self-esteem: meta-analyses comparing whites, Blacks, Hispanics, Asians, and American Indians and comment on Gray-Little and Hafdahl. *Psychological Bulletin* 2002;128:371–408. [PubMed: 12002695]
- Warner J, McKeown E, Griffin M, Johnson K, Ramsay A, Cort C. Rates and predictors of mental illness in gay men, lesbians, and bisexual men and women: Results from a survey based in England and Wales. *British Journal of Psychiatry* 2004;185:479–485. [PubMed: 15572738]
- Williams DR, González HM, Neighbors H, Nesse R, Abelson JM, Sweetman J, Jackson JS. Prevalence and distribution of major depressive disorder in African Americans, Caribbean Blacks, and Non-Hispanic whites: Results from the National Survey of American Life. *Archives of General Psychiatry* 2007;64:305–15. [PubMed: 17339519]
- Young R, Meyer IH. The trouble with “msm” and “wsw”: Erasure of the lesbian, gay and bisexual person in public health discourse. *American Journal of Public Health* 2005;95:1144–1149. [PubMed: 15961753]
- Zea MC, Reisen CA, Poppen PJ. Psychological well-being among Latino lesbians and gay men. *Cultural Diversity and Ethnic Minority Psychology* 1999;5:371–379.

Table 1

Select demographic characteristics of lesbians, gay men, and bisexuals (LGB) presented separately by race/ethnicity and gender (N = 396).

Variable	Total (n = 396)		LGB White Men (n = 67)		LGB White Women (n = 67)		LGB Black Men (n = 67)		LGB Black Women (n = 64)		LGB Latino Men (n = 64)		LGB Latina Women (n = 67)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Age Cohort														
18 - 29	176	44.40%	28	41.80%	32	47.80%	31	46.30%	30	46.90%	27	42.20%	28	41.80%
30 - 44	174	43.90%	28	41.80%	25	37.30%	32	47.80%	27	42.20%	34	53.10%	28	41.80%
45 - 59	46	11.60%	11	16.40%	10	14.90%	4	6.00%	7	10.90%	3	4.70%	11	16.40%
Bisexual ^a	64	16.20%	5	7.50%	5	7.50%	11	16.40%	15	23.40%	15	23.40%	13	19.40%
Socioeconomic Variables														
Unemployed ^b	74	18.70%	9	13.40%	8	11.90%	12	17.90%	21	32.80%	15	23.40%	11	16.40%
Negative Net Worth ^c	212	53.50%	30	44.80%	31	46.30%	38	56.70%	47	73.40%	38	59.40%	37	55.20%
≤ High School Education ^d	85	21.50%	10	14.90%	3	4.50%	17	25.40%	18	28.10%	18	28.10%	20	29.90%

^a Chi-square = 12.38, p = .03

^b Chi-square = 12.51, p = .03

^c Chi-square = 14.21, p = .01

^d Chi-square = 19.76, p < .01

Table 2

Means, standard deviations, and correlations among the study variables.

Variable	Mean		Correlations												
	1	SD	1	2	3	4	5	6	7	8	9	10	11	12	
1. ≤ High School Education	1		1												
2. Negative Net Worth	0.07		0.07	1											
3. Unemployment	.24**		.24**	.11*	1										
4. Age 30 - 44	-.02		-.02	-.03	.04	1									
5. Age 45 - 59	-.02		-.02	-.09	.08	-.32**	1								
6. Female	-0.02		-0.02	.05	.01	-.07	.08	1							
7. Racial/Ethnic Minority	.21**		.21**	.15**	.17**	.06	-.09	0	1						
8. Bisexual	.11*		.11*	.09	.12*	.02	-.08	.10*	.14**	1					
9. LGB Identity Valence	0.72	0.20	-0.04	-.11*	-.10	-.11	.04	.05	-.02	-.17**	1				
10. Community Connectedness	3.28	0.53	0.03	-.02	.06	.02	.09	.05	.03	-.18**	.15**	1			
11. Social Well-Being	4.78	0.87	-.19**	-.11*	-.19**	.03	.14*	-.08	-.13**	-.16**	.22**	.31**	1		
12. Psychological Well-	5.37	0.76	-.18**	-.17**	-.16**	.01	.03	-.01	-.14**	-.10	.28**	.17**	.53**	1	
13. Depressive Symptoms	14.21	11.28	0.06	.14**	.19**	-.06	.03	.12*	.10	.09	-.23**	-.05	-.41**	-.56**	1

** p < .01

* p < .05

Table 3

The relationships between disadvantaged social statuses and social well-being, psychological well-being, and depressive symptoms among lesbians, gay men, and bisexuals ($N = 396$).

Variable	Social Well-Being						Psychological Well-Being						Depressive Symptoms					
	Model 1		Model 2		Model 1		Model 2		Model 1		Model 2		Model 1		Model 2			
	B	SE	β	B	SE	β	B	SE	β	B	SE	β	B	SE	β			
Intercept	4.99**	.111		2.91**	.29		5.63**	.09		4.22**	.27		10.39**	1.39		21.89**	4.02	
≤ High School Education	-.27*	.11	-.13	-.29**	.10	-.14	-.23*	.10	-.12	-.23*	.09	-.13	-.01	1.41	.00	-.06	1.38	-.00
Negative Net Worth	-.07	.09	-.04	-.05	.08	-.03	-.20*	.08	-.13	-.16*	.07	-.10	2.34*	1.14	.10	1.84	1.12	.08
Unemployment	-.37**	.12	-.16	-.39**	.11	-.16	-.22*	.11	-.11	-.21*	.10	-.10	5.04**	1.59	.16	4.62**	1.56	.15
Age 30 - 44	.15	.09	.09	.15	.09	.08	.03	.08	.02	.06	.08	.04	-1.34	1.19	-.06	-1.78	1.17	-.08
Age 45 - 59	.45**	.14	.16	.38**	.13	.14	.04	.13	.02	.02	.12	.01	.40	1.86	.01	.45	1.82	.01
Female	-.13	.09	-.07	-.19*	.08	-.11	.00	.08	.00	-.04	.07	-.03	2.38*	1.12	.01	2.74*	1.10	.12
Racial/Ethnic Minority	-.09	.09	-.05	-.12	.09	-.07	-.12	.08	-.08	-.15	.08	-.09	1.28	1.22	.05	1.49	1.20	.06
Bisexual	-.24*	.11	-.11	-.07	.11	-.03	-.04	.10	-.02	.11	.10	.05	1.288	1.48	.04	.06	1.49	.00
LGB Identity				.67**	.21	.16				.94**	.19	.24				-.12.11**	2.84	-.21
Community				.50**	.08	.29				.22**	.07	.15				-.72	1.06	-.03
F	6.12**			11.32**			3.81**			7.31**			3.68**			5.04**		
R ²	0.11			0.23			.07			0.16			.07			0.12		

**
 $p < .01$

*
 $p < .05$