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Happiness and Sexual Minority Status

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Abstract

We used logistic regression on nationally representative data (General Social Survey, $N = 10,668$ and $N = 6,680$) to examine how sexual minority status related to happiness. We considered two central dimensions of sexual minority status—sexual behavior and sexual identity. We distinguished between same-sex, both-sex, and different-sex oriented participants. Because individuals transition between sexual behavior categories over the life course (e.g., from both-sex partners to only same-sex partners) and changes in sexual minority status have theoretical associations with well-being, we also tested the effects of transitions on happiness. Results showed that identifying as bisexual, gay, or lesbian, having both male and female partners since age 18, or transitioning to only different-sex partners was negatively related to happiness. Those with only same-sex partners since age 18 or in the past five years had similar levels of happiness as those with only different-sex partners since age 18. Additional tests showed that the majority of these happiness differences became non-significant when economic and social resources were included, indicating that the lower happiness was a product of structural and societal forces. Our findings clearly and robustly underscored the importance of taking a multi-faceted approach to understanding sexuality and well-being, demonstrating that not all sexual minority groups experience disadvantaged happiness. Our study calls for more attention to positive aspects of well-being such as happiness in examinations of sexual minorities and suggests that positive psychology and other happiness subfields should consider the role of sexual minority status in shaping happiness.

Keywords

Sexual orientation; Happiness; Health; Socioeconomic status; Life course; Minority stress

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⁶Most participants with lifelong different-sex partners or who transitioned to only different-sex partners identified as heterosexual; however, in line with past studies (Xu, Sternberg, & Markowitz, 2010a; Xu et al., 2010b), a sizeable percentage of those with lifelong same-sex partners and lifelong both-sex partners (37% and 46% respectively) also identified as heterosexuals. Almost half of those with lifelong both-sex partners identified as bisexual. More information on why we did not consider identity and behavior together is in the Limitations section.

INTRODUCTION

Population studies have demonstrated that sexual minorities face many disadvantages, especially in the areas of health, socioeconomic, and social resources (Badgett, Durso, & Schneebaum, 2013; Black, Makar, & Taylor, 2003; Cochran & Mays, 2015; Ueno, Roach, & Peña-Talamantes, 2013). For example, studies have shown that same-sex and both-sex oriented people¹ report worse physical and mental health than different-sex oriented people (Institute of Medicine, 2011). However, few social scientists have examined the association between sexual minority status and more holistic and positive measures of well-being, such as happiness (for an exception, see Rieger & Savin-Williams, 2012 for exception). Happiness is a long-tested subjective assessment of general well-being that conveys people's self-evaluation of their current life condition above and beyond information gained from negative constructs (Diener, Suh, Lucas, & Smith, 1999). Measures of happiness provide insight into resilience among disadvantaged individuals, cultivating an understanding of inequality beyond objective social stratification measures (e.g., income, life expectancy) (Jesdale & Mitchell, 2012; Meyer, 2010). Articulating the distribution of happiness is an important research goal (Blanchflower & Oswald, 2004; Yang, 2008).

Drawing on theoretical and empirical understandings that sexual orientation has multiple components that differentially relate to well-being (Everett, 2013; Matthews, Blosnich, Farmer, & Adams, 2014), in this study we considered how both sexual identity and sexual behavior (i.e., sex of sexual partners²), two central and distinct yet overlapping dimensions of sexual orientation, related to happiness using nationally representative data (from the General Social Survey: Smith, Marsden, Hout, & Kim, 2015). Our approach moves beyond viewing sexual orientation as a monolith by highlighting that sexual minorities are a diverse group with within-group differences that may be associated with happiness (Everett & Mollborn, 2014; Ueno, 2010). For example, as Savin-Williams (2001: 6) suggested, sexual minorities as a singular group perpetuates the idea that “only one type of homosexuality exists,” wherein some sexual minority groups are understudied and inequalities obscured (see also Institute of Medicine, 2011; Rust, 2002). Moreover, building on literature that found greater disadvantage among those with both-sex orientations compared to only same-sex orientations (Savin-Williams & Ream, 2007), we tested whether disadvantage among the both-sex oriented also extended to happiness. Additionally, based on empirical evidence and theoretical frameworks that patterns of sexual behavior are dynamic rather than static (Dickson, Paul, & Herbison, 2003; Everett, 2015; Ueno, 2010), we analyzed whether there were happiness differences based on changes in the sex of one's partners across the life course (e.g., transitioning from any different-sex partners to only same-sex partners). Finally, we examined whether health, economic resources, and social resources—key correlates of both happiness (Aldous & Ganey, 1999; Haller & Hadler, 2006; Yang, 2008) and sexual minority status (Institute of Medicine, 2011; Ueno et al., 2013)—contributed to our

¹We use the shorthand “both-sex orientation” to refer to participants who identify as bisexual and/or participants with sexual partners of both the same-sex and the different-sex as themselves (i.e., both male and female partners). Similarly, “different-sex orientation” refers to participants who identify as heterosexual and/or have only different-sex partners, and “same-sex orientation” refers to participants who identify as gay or lesbian and/or have only same-sex partners.

²Throughout the article, “partners” refers to one or more partner. Thus, it should be read as neither exclusively singular nor exclusively plural.

understanding of the factors related to any reported happiness differences between and among sexual minority groups.

Background

Sexual orientation is a multidimensional aspect of individuals' lives composite of one's sexual identity and sexual behavior; sexual minorities are a heterogeneous population, wherein identity and behavior have independent predictors and consequences (Meyer & Wilson, 2009; Moradi, Mohr, Worthington, & Fassinger, 2009). In our study, we considered four distinct aspects of diversity in sexual minority status that, based on empirical and theoretical research, might have unique consequences for happiness.

First, we considered that resources associated with well-being are unevenly distributed within and across sexual minority groups. Most notably, health, economic, and social resources are distributed unevenly by sexual minority status; these differences should theoretically explain any differences in happiness across and within sexual orientation groups as studies have shown that each of these resources is associated with happiness (Aldous & Ganey, 1999; Haller & Hadler, 2006; Yang, 2008). Sexual minorities experience greater stress and discrimination than heterosexuals as a result of the dominant society being generally homophobic and hostile. According to minority stress theory, this discrimination and stress translates into fewer economic and social resources and worse health for sexual minority populations compared to heterosexual populations (Meyer, 2003).

Minority stress theory suggests that individual, institutional, and social discrimination processes such as social exclusion, microaggressions, internalized homonegativity, and stigma contribute to a variety of poor health outcomes for individuals with same-sex or both-sex orientations (Berg, Ross, Weatherburn, & Schmidt, 2013; Lick, Durso, & Johnson, 2013). Economic resources (e.g., education, income, financial satisfaction, employment) are an additional site of disadvantage for those with same- or both-sex orientations, largely because sexual minority status is associated with discriminatory processes throughout the life course that hinder the accumulation of economic resources (Black et al., 2003). Furthermore, studies have indicated that social resources—namely union status, parental status, and religious participation—are unequally distributed by sexual orientation (Hsieh, 2014; Ueno, 2005). Same-sex marriage was unrecognized in most U.S. states until very recently (Soule, 2004), and thus many with same-sex or both-sex orientations were historically unable to enter into marriage. Regarding parental status and religious participation, relative to those with different-sex orientations, people with same-sex or both-sex orientations are less likely to have children (Gates, 2012) and have lower rates of religious participation (Sherkat, 2002).

A second way that the present study highlights heterogeneity is by drawing attention to the ways in which sexual orientation has multiple components that, at least theoretically, differentially affect happiness. Sexual identity and sexual behavior are two distinct components of sexual orientation that often, but do not always, align (Laumann et al., 1994). For example, one study found that 50% of women who reported a same-sex partner also reported a heterosexual identity (Xu, Sternberg, & Markowitz, 2010b; see also Everett, 2013; Reback & Larkins, 2010). Sexual identity is a limited measure because the traditional

sexual minority identity categories available on surveys (i.e., lesbian, gay, bisexual) do not fully capture the sexual minority population; some individuals may feel discomfort choosing a non-heterosexual identity, may not personally identify with a non-heterosexual identity, or may prefer an alternative label (Austin, Conron, Patel, & Freedner, 2007). Additionally, due to factors such as structural barriers, stigma, and/or internalized homophobia, sexual behavior measures overlook sexual minorities without same-sex sexual experiences (Austin et al., 2007).

Thus, sexuality scholars have called for research to consider both identity and behavior in order to ascertain which aspect of sexual orientation might be most salient for different well-being outcomes (Meyer & Wilson, 2009; Moradi et al., 2009). Both sexual behavior and sexual identity reflect multiple factors, including social stigma, lack of opportunity, geographic location, social networks, age, religiosity, and socioeconomic status, and it may be that predictors of sexual behavior are distinct from sexual identity predictors (Everett, 2013; Lindley, Walsemann, & Carter, 2012). For example, studies have found that strength of association between sexual minority status and mental health depends upon which sexual orientation measure is used (Bostwick, Boyd, Hughes, & McCabe, 2010; Lindley et al., 2012; McCabe, Hughes, Bostwick, West, & Boyd, 2009); one study found that lesbian- and bisexual-identified women had more mood or anxiety disorders than heterosexual-identified women but women reporting only same-sex sexual partners had the lowest rates of mood or anxiety disorders (Bostwick et al., 2010).

Third, theoretical and empirical work has emphasized the need to not only represent sexuality as either same-sex or different-sex relationship orientations but also to account for both-sex orientations. Therefore, in order to test for any possible variation across these factors, we considered both-sex orientation alongside same-sex and different-sex orientations rather than simply dichotomizing sexuality. Past studies have highlighted the particular disadvantages of both-sex oriented people as compared with same-sex and different-sex oriented people (Conron, Mimiaga, & Landers, 2010; Meyer, 2003); both-sex oriented people report worse physical and mental health, more disabilities, lower wages, less employment, and less religious participation than same-sex and different-sex oriented people (Everett & Mollborn, 2014; Matthews et al., 2014; Sherkat, 2002; Ueno, 2005; Ueno et al., 2013). Theoretically, these disadvantages occur because both-sex oriented people do not fit into normative understandings of a dichotomous sexuality (i.e., heterosexual or homosexual) and face prejudice and discrimination from different-sex and same-sex oriented communities (Herek, 2002; Rust, 2002). Additionally, both-sex oriented people may experience compounded stress and few social resources due to the “double closet,” wherein they are compelled to hide past same-sex partners and orientations from different-sex oriented persons and hide past different-sex partners and orientations from same-sex oriented persons (Zinik, 2000).

Finally, a focus on heterogeneity brings attention to the demonstrated fact that sexual behaviors—including the sex of partners³—can change over the life course (Dickson et al.,

³We only considered changes in sexual behavior categories because the GSS did not have sufficient data on changes in sexual identity categories.

2003; Everett, 2015); these changes reflect a fluidity in sexual attractions, shifts in social acceptability and norms across time and in one's environment, and changes in social networks. Taking into account the sex of only recent sexual partners does not capture the full range of an individual's experiences across time; such variations may confer differential disadvantage (Ueno, 2010). One possibility, drawing on the large literature demonstrating that stress and social conditions accumulate over the life course (Dupre, 2007), is that minority stress from occupying a sexual minority status at any point in the past might negatively influence present-day happiness. If this is the case, the sex of past sexual partners would be important for understanding present happiness. Alternatively, the sex of current or recent partners might be more salient for current happiness than the sex of past partners. This hypothesis is supported by a study that showed that having a recent same-sex partners matters for self-rated health while same-sex partners present earlier in the life course do not (Thomeer, 2013). A third possibility, building on a life course framework, is that the sex of both past and current partners together shape present-day happiness—specifically that any changes in sex of sexual partners would be detrimental to well-being compared to no changes. Thus, while the former hypotheses suggest that a sexual minority status would negatively impact well-being, the latter suggests that a stable sexual minority status would actually have positive implications. In support of this third possibility, recent work has found that a stable sexual orientation among young adults is protective against depressive symptoms compared to transitioning across categories (Everett, 2015; Ueno, 2010).

Building on this literature, we considered four research questions: (1) Does sexual orientation—measured by sexual identity and sexual behavior—relate to happiness? (2) Are there differences in happiness between the both-sex oriented and the different-sex oriented? (3) Do transitions between sexual behavior categories relate to differences in happiness? and (4) Do differences in health, economic, and social resources between and within sexual minority categories explain differences in happiness?

METHOD

Participants

We analyzed pooled cross-sectional data from the General Social Survey (GSS) from 2002 through 2014. The National Opinion Research Center (NORC), a social science research center at the University of Chicago, conducts the GSS biannually using a multi-stage area probability sampling design and including a wide range of topics (Smith et al., 2015). The multi-stage design protected against re-interviewing the same participants from wave to wave, as each wave used a different sampling area. The GSS was one of the first national probability surveys in the United States to collect information on sexual behavior and, beginning in 2008, the GSS also collected information on sexual identity. To increase our available sample size, we pooled the data, analyzing all participants from 2002 to 2014 in our analysis of sexual partners ($N = 10,668$) and 2008 to 2014 in our analysis of sexual identity ($N = 6,680$). The GSS has been used to identify population-level trends by sexual orientation (Black, Gates, Sanders, & Taylor, 2000; Cochran & Mays, 2015; Thomeer, 2013) as well as trends of happiness (Hughes & Thomas, 1998; Yang, 2008).

Measures

Happiness—The primary outcome variable was happiness. In the GSS, participants were asked: “Taken all together, how would you say things are these days: Would you say that you are very happy, pretty happy, or not too happy?” A single-item happiness measure serves as a reliable and valid indicator of subjective well-being in the general population and is highly correlated with more complex measures and scales, such as the Oxford Happiness Inventory and the Satisfaction with Life Scale (Diener et al., 1999).

Sexual Behavior (Sex of Sexual Partners)—The GSS asked participants, “Now thinking about the time since your 18th birthday (including the past 12 months), how many male partners have you had sex with?” A parallel question was asked about number of female partners. The GSS also asked, “Have your sex partners in the last five years been exclusively male, both male and female, or exclusively female?” Using these questions, we created five mutually exclusive categories: (1) lifelong different-sex partners (i.e., those who reported only different-sex partners since age 18 including in the last five years, $n = 9,798$); (2) lifelong same-sex partners (i.e., those who reported only same-sex partners since age 18 including in the last five years, $n = 152$); (3) lifelong both-sex partners (i.e., those who reported both same-sex and different-sex partners since age 18 including in the last five years, $n = 201$); (4) transitioned to only same-sex partners (i.e., those who reported any different-sex partners since age 18 but only same-sex partners in the last five years, $n = 102$), and (5) transitioned to only different-sex partners (i.e., those who reported any same-sex partners since age 18 but only different-sex partners in the last five years, $n = 415$). Partners referenced in the last five years were also referenced as partners since age 18. Therefore, we were not able to distinguish those who “transitioned to both-sex partners” in our data; these participants are thus included in the “lifelong both-sex partners” category. Additionally, because of the overlap between the “last five years” and “since age 18” for those ages 23 and younger, we dropped this age group from our analysis ($n = 792$). Dropping this group did not substantially alter the results reported in this article. Because those who reported no sexual partners since age 18 ($n = 128$) provided no information about the sex of their sexual partners, we excluded these participants from our analysis. Those who reported no sexual partners in the last five years but did report sexual partners since age 18 ($n = 1,164$) were placed in one of the first three categories (“lifelong different-sex partners,” “lifelong same-sex partners,” or “lifelong both-sex partners”).

The sexual behavior measures in the GSS have been shown to be highly valid. One study comparing sexual behavior questions in the GSS and seven other national surveys found that responses regarding sex of sexual partners were relatively similar across surveys; differences were significantly smaller than those associated with demographic attributes (Hamilton & Morris, 2010). In the GSS, 9% of participants chose to not give an answer or responded with “don’t know” when asked about number and sex of sexual partners.⁴ Because the sexual behavior questions were central to our analysis, we excluded participants who did not answer or responded with “don’t know” for this question.

⁴By comparison, for the personal income question, 11.6% of participants refused to answer or responded with “don’t know.”

Sexual Identity—Beginning in 2008, the GSS asked participants, “Which of the following best describes you?” with the options of gay, lesbian, or homosexual; bisexual; heterosexual or straight; or don’t know. Between 2008 and 2014, only 25 participants chose “don’t know” and 113 did not answer; these participants were excluded from our analysis. We considered three categories of sexual identity—gay/lesbian, bisexual, and heterosexual—and excluded participants age 23 or younger to be consistent with our sexual behavior sample. Within this sample, 1.72% identified as gay or lesbian, 1.97% identified as bisexual, and 96.31% identified as heterosexual.

Health—Our health indicator was self-rated health. For the GSS, participants were asked: “Would you say your own health, in general, is excellent, good, fair, or poor?” A single-item self-rated health measure is a reliable and valid indicator of health status in the general population and is highly predictive of morbidity and mortality (Idler & Benyamini, 1997). Since only a small number of participants described their health as “poor” ($n = 572$), we combined “poor” and “fair” into one category as has been done in previous research (Idler & Benyamini, 1997). As a sensitivity analysis, we fitted a model with four separate categories; this did not alter the results statistically or substantively.

Economic Resources—Our economic resources measures were educational attainment, family income, financial satisfaction, and employment status. These four factors represented separate components of economic resources; studies have indicated that they exhibit related but independent effects on well-being (Mirowsky & Ross, 2003). For educational attainment, participants reported their highest degree earned. We created three categories: less than high school, high school, and some college and higher. For income, participants reported their family income within 23 categories in 10,000 dollar units. The GSS provided income values recoded at the midpoint of these categories in six-digit numbers and adjusted for inflation so that income across all years reflected values from the year 1986 (Smith et al., 2015). We used the logarithm of income in our regression models as studies have shown diminishing returns to well-being when increases occur at higher incomes (Kahneman & Deaton, 2010). For financial satisfaction, the GSS asked, “So far as you and your family are concerned, would you say that you are pretty well satisfied with your present financial situation, more or less satisfied, or not satisfied at all?” We coded this variable from 0 to 2, with 0 being “not satisfied” and 2 being “pretty well satisfied.” The employment status variable included four categories: unemployed; employed full-time; employed part-time; and retired, in school, or keeping house.

Social Resources—Social resource variables included union status, parental status, number of sexual partners in last 12 months, and religious participation. We created the union status variable using two questions: “Are you currently married, widowed, divorced, separated, or have you never been married?” and “Was one of the partners [from the last year] your husband or wife or regular sexual partner?” We coded unmarried participants who reported a regular sexual partner as “dating” and unmarried participants without a regular sex partner as “single.” We created four categories for the union status variable: currently married; previously married and single; never married and single; and unmarried and dating. Number of sexual partners in the last 12 months was constructed as a categorical variable

with no sexual partners, one partner, and two or more partners. We created two categories for parental status: those without children compared to those with one or more children. We also coded religious participation as a categorical variable with three categories denoting how often one participated in religious services: never or less than once a year, once a month to once a year, and more than once a month.

Covariates—In each model, we controlled for year of interview, age, sex, race (categorical with White, Black, and other race), and urbanicity. We included these as covariates because they have been shown to be associated with happiness and/or sex of sexual partners (Black et al., 2000; Yang, 2008) and thus were potential confounders. Age was reported in years and treated as continuous. Participants aged 89 years and older were coded as “89” in the original GSS data, so participants ranged in age from 23 to 89 years. Race was self-reported, and participants who did not self-identify as Black or White were coded as “other race.” We included urbanicity in the models with two categories: urban and suburban compared to rural. Descriptive statistics regarding all measures are shown in Tables 1 and 2.

Statistical Analysis

We fitted a series of multinomial logistic regressions using our categorical measures of sex of sexual partners as the primary predictor variables; in separate models, we fitted our sexual identity measures as the primary predictor variables. We did not use an ordered logistic model because the Brant test and likelihood ratio test indicated that the proportional odds assumption was violated. We used Stata SE 11.0 for all analyses (StataCorp, 2009).

Multinomial logistic regression uses maximum-likelihood to estimate the log-odds of being in a given happiness category (not too happy; pretty happy) compared with the reference category (very happy), allowing for separate slope estimates (Long, 1997). In the baseline model, we controlled for year of interview, age, sex, race, and urbanicity. In the second model, we added self-rated health. In the third model, we added economic resource controls to the baseline model; in the fourth model, we added social resource variables to the baseline model; and in the fifth model, we fitted the model with all covariates included. We also tested for sex, age, year of interview, race/ethnicity, health, and economic and social resources interactions with sex of sexual partners and sexual identity measures in order to evaluate whether these happiness patterns differed by these factors, but no interactions were significant.

As discussed above, we excluded participants missing data on sexual minority status. Additionally, since almost 12% of the sample did not provide their personal income, we employed multiple imputation in order to retain these cases. About one-third of participants were not asked about self-rated health; for these participants, we created a missing flag which was not significantly associated with happiness in any models. For all other variables, only 79 participants were missing data for any variables, and we created missing flags in order to include the maximum number of cases.

We were unable to formally test our multinomial logistic regression models for mediation due to the fact that in logistic regression the variance of the outcome variables shifts as other variables are added to the model, limiting comparisons across coefficients (Mood, 2010).

Therefore, we conducted additional analyses to examine whether the associations between sexual orientation and happiness were statistically explained by health, economic resources, or social resources. We did this using binary logistic regressions with the odds of being “very happy” compared to the odds of being “not too happy” or “pretty happy.” We then used the “binary_mediation” command in Stata to standardize the coefficients by dividing them by the estimated SD of the latent variable, allowing the coefficients to be compared across models and the indirect effects to be calculated as the product of the coefficients (MacKinnon, Fairchild, & Fritz, 2007; Mood, 2010). We bootstrapped these estimations, drawing on 500 random samples, which allowed us to obtain SE for the direct and indirect effects along with 95% confidence intervals.⁵ This strategy facilitated comparisons of coefficients between nested logistic regression models.

RESULTS

In Tables 1 and 2, statistical differences are tested using the χ^2 test for categorical variables and ordinary least squares regression for continuous variables. Table 1 shows descriptive statistics for happiness, the sociodemographic covariates, and the potential explanatory variables stratified by the five sex of sexual partners categories. As discussed above, these five categories were mutually exclusive and reflected participants’ reports of sex of sexual partners since age 18 and in the last five years. Overall, 30% of participants reported being very happy, 57% reported being pretty happy, and 13% reported being not too happy. Statistical tests indicated that, contrary to expectations based on previous literature, there were no significant differences in happiness between participants with lifelong different-sex partners, participants with lifelong same-sex partners, and participants who transitioned to only same-sex partners. Statistical tests further demonstrated that participants with lifelong different-sex partners report significantly greater happiness than participants with lifelong both-sex partners and participants who transitioned to only different-sex partners.⁷

Table 2 shows descriptive statistics for happiness, the sociodemographic covariates, and the potential explanatory variables stratified by sexual identity. Statistical tests did not indicate any significant differences in happiness by sexual identity.

Sexual Behavior (Sex of Sexual Partners) and Happiness

The sexual behavior multinomial logistic regression results are shown in Table 3. The first column in each model indicates the odds of reporting “very happy” or “pretty happy” compared to “not too happy” along with corresponding 95% confidence intervals. For ease of interpretation, the relative risk ratios, ($\exp(b)$), are presented. In the baseline model, participants with lifelong both-sex partners, compared to participants with lifelong different-sex partners, were 90% more likely to report that they were pretty happy compared to very happy and 196% more likely to report that they were not too happy compared to very happy. Those who transitioned to only different-sex partners were 92% more likely to report being not too happy compared to those with lifelong different-sex partners. Including self-rated health in the model (Model 2) only moderately reduced the difference in happiness between

⁵These analyses are available from the authors upon request.

those with lifelong different-sex partners and lifelong both-sex partners, while standardizing the logistic coefficients indicated that self-rated health did not significantly undergird the happiness disadvantage of those with lifelong both-sex partners or those who transitioned to only different-sex partners.

Adding economic resource variables (Model 3) reduced the relative risk ratios and significance levels for those who transitioned to only different-sex partners and those with lifelong both-sex partners. Standardizing the coefficients to compare across models supported the conclusion that economic resources statistically explained some of the happiness disadvantage for those groups. However, those who transitioned to only different-sex partners were still 56% more likely to report being not too happy compared to those with lifelong different-sex partners and those with lifelong both-sex partners were still 117% more likely to report being not too happy. After including social resources, as shown in Model 4, those with lifelong both-sex partners were 68% more likely to report that they were not too happy relative to reporting that they were very happy. Standardizing the coefficients indicated that social resources partially explained the happiness disadvantage among those with lifelong both-sex partners. For those who transitioned to only different-sex partners, standardizing the coefficients in a binomial logistic regression model indicated that social resources statistically accounted for some of the happiness disadvantage for this group, although these variables statistically explained less than economic resources. This group was still 81% more likely to report being not too happy compared to those with lifelong different-sex partners. Model 5 showed that when health, economic resources, and social resources were all included in the model, the happiness disadvantage for those with lifelong both-sex partners was fully statistically explained. However, those who transitioned to only different-sex partners were still 49% more likely to report being not too happy relative to very happy compared to those with lifelong different-sex partners.

Sexual Identity and Happiness

We next considered how sexual identity was related to happiness. These results are shown in Table 4. At baseline in Model 1, compared to heterosexual-identified participants, we found that gay- and lesbian-identified participants were 80% more likely to report that they were not too happy—relative to reporting that they were very happy—and bisexual-identified participants were 92% more likely to report that they were not too happy. Including the self-rated health measure in Model 2 did not significantly change the coefficient. Economic resources, included in Model 3, reduced the happiness difference between bisexuals and heterosexuals to non-significance; standardizing the coefficient confirmed that differences in economic resources did statistically account for differences in happiness between bisexual-identified participants and heterosexual-identified participants. However, economic variables did not account for any statistical differences in happiness between gay- and lesbian-identified participants and heterosexual-identified participants. Including social resources in Model 4 reduced happiness difference between gay- or lesbian-identified participants, bisexual-identified participants, and heterosexual-identified participants to non-significant. Standardizing the coefficients confirmed that social resources were a key explanatory factor. There were also no happiness differences between the sexual identity groups when all variables were included in Model 5.

DISCUSSION

An Institute of Medicine report released in 2011 emphasized the need for population-based research on sexual minority well-being that examined multiple dimensions of heterogeneity within the sexual minority category. Moreover, this report called for a greater emphasis on resilience across potentially disadvantaged groups by including positive well-being outcomes, such as happiness, in order to complement research on stress and stigma outlined in the minority stress model (Meyer, 2010). Our study was a step toward these goals, contributing to a legacy of research on minority stress by using nationally-representative data to examine how sexual identity and sexual behavior were associated with happiness.

Our findings confirmed multiple studies indicating that sexual behavior and sexual identity do not always directly overlap with one another (i.e., different outcomes depending on whether examining identity or behavior) (Bostwick et al., 2010; McCabe et al., 2009); considering only one of the components of sexual orientation but not the other would lead to an incomplete picture of sexual minority status and happiness. Regarding sexual identity, we found that gay-, lesbian-, and bisexual-identified adults reported less happiness than heterosexual-identified adults in baseline models. In other words, we found a clear sexual minority disadvantage in regard to happiness when considering identity. Yet, our findings regarding sexual behavior and happiness revealed a more complicated picture. In terms of sexual behavior, analyses revealed no significant difference in happiness between those with lifelong different-sex partners and two groups of sexual minorities: those with lifelong same-sex partners and those who transitioned to only same-sex partners. These findings were somewhat surprising in light of the large number of previous studies showing that people with any same-sex partners are disadvantaged in terms of health, economic, and social resources (see Institute of Medicine, 2011; Meyer & Northridge, 2007). In the face of consistent evidence of stigma and discrimination against people with same-sex partners and the historical, social, and legal struggles faced by this group (Berg et al., 2013; Lick et al., 2013; Meyer, 2003), our results suggested there may be high resilience among many individuals with exclusively same-sex partners.

Our findings regarding sexual behavior also demonstrated the unique disadvantages faced by people who reported sex with both men and women, as well as those who transitioned to only different-sex partners. These disadvantages among individuals with both-sex partners might be, in part, due to the stigmatization this group experiences from both society at large and within broader sexual minority communities (Rust, 2002). Moreover, we found that investigating lifetime and current measures of the sex of sexual partners revealed important happiness disparities, which suggested that stability in sex of sexual partners was associated with greater well-being. For example, it was not the case that all groups with different-sex partners experienced a happiness advantage; those who transitioned to only different-sex partners reported lower happiness compared to those with lifelong different-sex partners. At the same time, not all individuals with transitions in sex of sexual partners experienced a happiness disadvantage; those who transitioned to only same-sex partners from any different-sex partners had similar levels of happiness as those with lifelong different-sex partners. Failing to consider lifetime and current measures together would have obscured the happiness disadvantage among those who transitioned to different-sex partners as well as the

general happiness of those who transitioned to same-sex partners. Our research suggested that lifelong sexual behavior interacts with current sexual behavior to associate with present happiness, and we call for careful reconsideration of past and future research relying on only lifetime or only current measures.

Our study further expanded some prior conceptualizations of the sexual minority group, highlighting that those with current different-sex partners but histories of same- or both-sex partners may be disadvantaged. For instance, few past studies categorized adults in heterosexual marriages as sexual minorities, but our study suggested that if these adults have past same-sex partnerships, this group may face certain disadvantages that are overlooked. People who transitioned from both-sex or same-sex partners to exclusively different-sex partners may no longer be perceived as needing stress-reducing social supports present provided within the minority community (Rust, 2002). This group may also have faced pressure to act “closeted” (e.g., only have different-sex partners despite a both-sex or same-sex orientation) and may be unhappy with their current sexual arrangements (Hernandez, Schwenke, & Wilson, 2011). Additionally, in line with cumulative disadvantage theory (Dupre, 2007), stress from occupying a sexual minority status earlier in the life course may accumulate over time, resulting in lower happiness later in the life course regardless of consistency in status over time. Future studies should consider how transitions in sexual identity—in conjunction with transitions in sexual behavior categories—shape happiness.

In a final stage of analysis, we identified how including self-rated health, socioeconomic resources, and social resources gave further insight into the association between sexual minority status and happiness. Economic resources appeared to be the most central driver of reported happiness disadvantages for bisexual-identified people, for those with lifelong both-sex partners, and for those who transitioned to different-sex partners. This is likely undergirded by complex and unmeasured social and psychological factors such as stress, mental health, disability, chronic conditions, discrimination, and community integration that shape access to economic resources (Lick et al., 2013). This disadvantage may also be a reflection of economic resources as a fundamental cause ultimately underlying inequality in well-being (Link & Phelan, 1995). Social resources played a smaller role in explaining happiness disparities by sexual behavior categories, yet social resources were key in understanding happiness disparities for gay- and lesbian-identified adults. Health played a minimal role in explaining lower rates of happiness by sexual minority status, but this may be due to our measures; more comprehensive measures of morbidity, including disability, number of chronic conditions, and mental health measures, would likely improve the explanatory power of health.

This study’s unique contributions to research on happiness and sexual minority status using a nationally representative sample should be considered within the context of several limitations. First, because of small sample sizes, we pooled 12 years of data collections for the sexual behavior measure and 6 years for the sexual identity measure. This approach did not allow us to account for the important social, political, and cultural changes that have occurred for sexual minorities during this historical period (Eliason & Schope, 2007). Further, more sexual minorities were surveyed in later study years compared to earlier study years; economic recessions and other societal changes may have introduced important

spuriousness into our study. We adjusted for year of interview in every model and tested for year interactions, but this did not necessarily account for important period and cohort effects. Second, our measure of transitions around sex of sexual partners was limited in that we could not include transitions to both-sex partners. We call for future studies to continue to interrogate transitions in sex of sexual partners over the life course, considering multiple dimensions, including timing and duration of transitions, and whether transitions around sexual behavior correspond with transitions in sexual identity and/or sexual attraction. Finally, although past studies of sexual minorities found important gender differences around sexuality (Cochran & Mays, 2015; Thomeer, 2013; Ueno et al., 2013) and well-being (Rieger & Savin-Williams, 2012), we did not find similar effects with happiness as an outcome. Notably, however, we found that more females than males were represented in three of the groups which experienced a happiness disadvantage—those with lifelong both-sex partners, those who transitioned to only different-sex partners, and those who identified as bisexual. This suggested that disadvantages faced by sexual minorities may be especially concentrated among women. We call on future studies to continue to analyze how gender and sexual minority status interact to shape other well-being outcomes.

Conclusion

Our study moved away from a dichotomous measure of sexual orientation (e.g., only same-sex partners or only different-sex partners) by examining sexual identity and sexual behavior within the same study, considering those with both-sex orientations alongside those with same-sex and different-sex orientations, and articulating how transitions in sex of sexual partners matter for happiness. Our findings clearly and robustly underscore the importance of taking a multifaceted approach to understanding sexuality and well-being, demonstrating that not all sexual minority groups experience disadvantaged happiness. Our study also calls for more attention to positive aspects of well-being such as happiness in examinations of sexual minorities; incorporating these positive aspects into the sexual minority literature will facilitate framing happiness as part of buffer and resilience processes that protect individuals against heightened minority stress. In the same vein, we suggest that positive psychology and other happiness subfields should consider the role of sexual minority status in shaping happiness. Our exploration of health, socioeconomics, and social resources as potential factors that underlie happiness demonstrates that the lower happiness of certain sexual minority groups is a product of structural and societal forces.

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Table 1
Descriptive Statistics (Sexual Behavior): Means/Proportions (General Social Survey, 2002–2014; $N = 10,668$)

	Lifelong different-sex partners $n = 9,798$	Lifelong same-sex partners $n = 152$	Lifelong both-sex partners $n = 201$	Transitioned to only same- sex partners $n = 102$	Transitioned to only different-sex partners $n = 415$
Not too happy	0.13	0.13	0.21**	0.17	0.20***
Pretty happy	0.56	0.57	0.62	0.55	0.55
Very happy	0.31	0.30	0.17***	0.28	0.25*
Year of interview	2008.72	2008.67	2009.59**	2008.63	2009.91***
Age (years)	48.85	45.41**	43.02***	46.54	45.58***
Female	0.55	0.38***	0.65**	0.46	0.53
Race:					
White	0.79	0.81	0.77	0.80	0.76
Black	0.13	0.12	0.14	0.14	0.14
Other race	0.08	0.07	0.09	0.06	0.10
Rural	0.21	0.18	0.17	0.17	0.17
Self-rated health:					
Fair/poor	0.24	0.23	0.35**	0.21	0.30*
Good	0.48	0.40	0.42	0.52	0.45
Excellent	0.28	0.37*	0.23	0.27	0.25
Education:					
Less than high school	0.11	0.10	0.13	0.03**	0.16**
High school	0.50	0.45	0.52	0.39*	0.52
Some college and higher	0.39	0.45	0.35	0.58***	0.32**
Family income (\$)	27,797.88	26,915.45	17,232.14**	23,386.03	20,736.69*
Financial satisfaction (0–2)	1.01	1.04	0.69***	0.94	0.84***
Employment status:					
Full-time	0.52	0.58	0.51	0.53	0.50
Part-time	0.10	0.10	0.12	0.07	0.12
Unemployed	0.09	0.12	0.11	0.20***	0.13*

	Lifelong different-sex partners <i>n</i> = 9,798	Lifelong same-sex partners <i>n</i> = 152	Lifelong both-sex partners <i>n</i> = 201	Transitioned to only same-sex partners <i>n</i> = 102	Transitioned to only different-sex partners <i>n</i> = 415
Retired, keeps house, or in school	0.29	0.20 [*]	0.26	0.20	0.25
Union status:					
Currently married	0.52	0.26 ^{***}	0.21 ^{***}	0.06 ^{***}	0.45 ^{**}
Past married and currently single	0.17	0.07 ^{**}	0.17	0.11	0.11 ^{**}
Never married and currently single	0.07	0.18 ^{***}	0.21 ^{***}	0.20 ^{***}	0.07
Unmarried with regular sexual partner	0.24	0.49 ^{***}	0.41 ^{***}	0.63 ^{***}	0.37 ^{***}
Any children	0.77	0.39 ^{***}	0.59 ^{***}	0.37 ^{***}	0.78
Number of sexual partners (last 12 months):					
None	0.22	0.17	0.29 [*]	0.13 [*]	0.12 ^{***}
1	0.67	0.60	0.32 ^{***}	0.55 ^{**}	0.68
2+	0.11	0.23 ^{***}	0.39 ^{***}	0.32 ^{***}	0.20 ^{***}
Religious participation:					
Never/less than once a year	0.29	0.37 [*]	0.43 ^{***}	0.37	0.35 [*]
Once a month to once a year	0.32	0.39	0.30	0.32	0.33
More than once a month	0.39	0.24 ^{***}	0.27 ^{***}	0.31	0.32 ^{**}

Notes:

 $p < .001$,**
 $p < .01$,*
 $p < .05$ (two-tailed tests).

Statistical differences are tested using the χ^2 test for categorical variables and ordinary least squares regression for continuous variables. These tests compare each sexual behavior category to the reference group, "Lifelong different-sex partners."

Lifelong different-sex partners: reported only different-sex partners since age 18; Lifelong same-sex partners: reported only same-sex partners since age 18; Lifelong both-sex partners: reported both same-sex and different-sex partners since age 18; Transitioned to only same-sex partners: reported any different-sex partners since age 18 but only same-sex in past 5 years; Transitioned to only different-sex partners: reported any same-sex partners since age 18 but only different-sex in past 5 years

Table 2
Descriptive Statistics (Sexual Identity): Means/Proportions (General Social Survey, 2008–2014; $N = 6,680$)

	Heterosexual $n = 6,433$	Gay or Lesbian $n = 115$	Bisexual $n = 132$
Not too happy	0.29	0.22	0.24
Pretty happy	0.57	0.60	0.58
Very happy	0.14	0.18	0.18
Year of interview	2011.18	2011.29	2011.80**
Age (years)	47.49	42.78**	37.01***
Female	0.55	0.41**	0.71***
Race:			
White	0.77	0.78	0.74
Black	0.14	0.15	0.15
Other race	0.09	0.07	0.11
Rural	0.19	0.12	0.14
Self-rated health:			
Fair/poor	0.26	0.27	0.27
Good	0.48	0.39	0.51
Excellent	0.26	0.34	0.22
Education:			
Less than high school	0.12	0.07	0.15
High school	0.51	0.44	0.46
Some college and higher	0.37	0.49**	0.39
Family income (\$)	26,004.10	23,190.06	14,822.45*
Financial satisfaction (0–2)	0.98	0.90	0.81**
Employment status:			
Full-time	0.50	0.53	0.45
Part-time	0.11	0.16	0.13
Unemployed	0.09	0.14	0.14
Retired, keeps house, or in school	0.30	0.16**	0.28
Union status:			

	Heterosexual <i>n</i> = 6,433	Gay or Lesbian <i>n</i> = 115	Bisexual <i>n</i> = 132
Currently married	0.47	0.09 ***	0.25 ***
Past married and currently single	0.16	0.03 ***	0.08 *
Never married and currently single	0.11	0.30 ***	0.24 ***
Unmarried with regular sexual partner	0.26	0.58 ***	0.43 ***
Any children	0.73	0.18 ***	0.53 ***
Number of sexual partners (last 12 months):			
None	0.23	0.20	0.16 *
1	0.64	0.49 ***	0.41 ***
2+	0.13	0.31 ***	0.43 ***
Religious participation:			
Never/less than once a year	0.31	0.46 ***	0.45 ***
Once a month to once a year	0.31	0.33	0.31
More than once a month	0.38	0.21 ***	0.24 ***

Notes:

 $p < .001$,

**
 $p < .01$,

*
 $p < .05$ (two-tailed tests).

Statistical differences are tested using the χ^2 test for categorical variables and ordinary least squares regression for continuous variables. These tests compare each sexual behavior category to the reference group, "Heterosexual."

Table 3

Multinomial Logistic Regression with Sex of Sexual Partners (Pretty Happy and Not Too Happy compared to Very Happy; General Social Surveys, 2002–2014; $N = 10,668$)

	Relative Risk Ratios as Compared to Very Happy									
	Model 1 (Baseline)		Model 2 (Health)		Model 3 (Economic Resources)		Model 4 (Social Resources)		Model 5 (Full)	
	Pretty happy	Not too happy	Pretty happy	Not too happy	Pretty happy	Not too happy	Pretty happy	Not too happy	Pretty happy	Not too happy
Lifelong different-sex partners										
Lifelong same-sex partners	1.00	1.05	1.05	1.10	1.04	1.10	0.77	0.73	0.79	0.77
Lifelong both-sex partners	1.90**	2.96***	1.81**	2.68***	1.65*	2.17**	1.30	1.68*	1.12	1.25
Transitioned to only same-sex partners	1.04	1.41	1.05	1.47	1.02	1.40	0.68	0.81	0.68	0.85
Transitioned to only different-sex partners	1.19	1.92***	1.16	1.81***	1.09	1.56**	1.11	1.81***	1.03	1.49*
Year of interview	1.00	1.01	1.00	1.00	1.00	1.00	1.00	1.01	1.00	1.00
Age	0.99*	1.00	0.99***	1.00	1.01*	1.01***	0.99*	1.00	1.00	1.00
Female (male is reference)	0.92	0.84**	0.91*	0.82**	0.91*	0.76***	0.91*	0.76***	0.93	0.73***
Race:										
White										
Black	1.21**	2.38***	1.15*	2.19***	1.01	1.57***	1.05	1.85***	0.85*	1.23*
Other race	1.08	1.38**	1.04	1.29*	1.06	1.25	1.04	1.29*	1.01	1.16
Rural	1.01	1.00	0.97	0.92	0.94	0.83*	1.01	0.98	0.96	0.86
Self-rated health:										
Fair-poor										
Good			0.57***	0.23***					0.64***	0.34***
Excellent			0.28***	0.09***					0.35***	0.18***
Education:										
Less than high school					1.04	0.67***			1.22*	0.87
High school					0.92	0.47***			1.21*	0.75*
Some college and higher										

	Relative Risk Ratios as Compared to Very Happy									
	Model 1 (Baseline)		Model 2 (Health)		Model 3 (Economic Resources)		Model 4 (Social Resources)		Model 5 (Full)	
	Pretty happy	Not too happy	Pretty happy	Not too happy	Pretty happy	Not too happy	Pretty happy	Not too happy	Pretty happy	Not too happy
Log of family income					0.98	0.94			1.02	1.00
Financial satisfaction					0.52***	0.23***			0.58***	0.28***
Employment status:										
Employed full-time					0.99	1.03			0.74**	0.35***
Employed part-time					1.13	2.22***			1.57***	1.06
Unemployed					0.83**	1.25*			0.80*	0.64**
Retired, keeps house, or in school										
Union status:										
Currently married										
Past married and currently single							2.35***	4.85***	2.29***	4.17***
Never married and currently single							2.18***	5.33***	2.11***	4.23***
Unmarried and dating							2.00***	4.79***	1.87***	3.34***
Any children							1.11	1.54***	1.01	1.16
Number of sexual partners (last 12 months):										
None										
One							0.86	0.54***	0.89	0.66**
Two or more							1.26*	0.84	1.29*	0.95
Religious participation:										
Never/less than once a year										
Once a year to once a month							0.85**	0.84	0.87*	0.92
More than once a month							0.65***	0.52***	0.73***	0.67***
Log-likelihood	-10057.183		-9748.3995		-9397.2572		-9609.5462		-8834.8805	
AIC ^a	1.895		1.838		1.774		1.815		1.674	

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Note:

 $p < .001$,
**
 $p < .01$,
*
 $p < .05$ (two-tailed tests);

+ AIC = Akaike Information Criterion.

Lifelong different-sex partners: reported only different-sex partners since age 18; Lifelong same-sex partners: reported only same-sex partners since age 18; Lifelong both-sex partners: reported both same-sex and different-sex partners since age 18; Transitioned to only same-sex partners: reported any different-sex partners since age 18 but only same-sex in past 5 years; Transitioned to only different-sex partners: reported any same-sex partners since age 18 but only different-sex in past 5 years.

In interpreting relative risk ratios, a ratio of 1.0 indicates that the predictor variable has no effect on the outcome variable, a ratio higher than 1.0 shows that the predictor variable has a positive influence on the outcome variable, and a ratio lower than 1.0 a negative influence.

Table 4

Multinomial Logistic Regression with Sexual Identity (Pretty Happy and Not Too Happy compared to Very Happy; General Social Surveys, 2008–2014; $N = 6,680$)

	Relative Risk Ratios as Compared to Very Happy									
	Model 1 (Baseline)		Model 2 (Health)		Model 3 (Economic Resources)		Model 4 (Social Resources)		Model 5 (Full)	
	Pretty happy	Not too happy	Pretty happy	Not too happy	Pretty happy	Not too happy	Pretty happy	Not too happy	Pretty happy	Not too happy
Heterosexual										
Gay or lesbian	1.33	1.80 [*]	1.39	1.85 [*]	1.33	1.90 [*]	0.87	1.01	0.91	1.06
Bisexual	1.35	1.92 [*]	1.29	1.84 [*]	1.26	1.65	0.97	1.22	0.94	1.15
Year of interview	0.98	0.95 ^{***}	0.98	0.94 ^{***}	0.98	0.95 ^{***}	0.98	0.94 ^{***}	0.98	0.95 ^{***}
Age	1.00	1.00	0.99 ^{**}	1.00	1.01 [*]	1.01 ^{**}	1.00	1.00	1.00	1.01
Female (male is reference)	0.88 [*]	0.78 ^{**}	0.87 [*]	0.75 ^{**}	0.87 [*]	0.67 ^{***}	0.87 [*]	0.72 ^{***}	0.90	0.69 ^{***}
Race:										
White										
Black	1.26 ^{**}	2.47 ^{***}	1.22 [*]	2.33 ^{***}	1.08	1.68 ^{***}	1.10	1.98 ^{***}	0.93	1.41 ^{**}
Other race	1.06	1.38 [*]	1.02	1.28	1.06	1.23	1.02	1.28	1.01	1.15
Rural	0.97	0.97	0.94	0.91	0.91	0.81	0.96	0.94	0.93	0.85
Self-rated health:										
Fair-poor										
Good			0.54 ^{***}	0.21 ^{***}					0.60 ^{***}	0.33 ^{***}
Excellent			0.26 ^{***}	0.10 ^{***}					0.32 ^{***}	0.20 ^{***}
Education:										
Less than high school										
High school					1.10	0.64 ^{***}			1.28 [*]	0.80
Some college and higher					0.96	0.45 ^{***}			1.27 [*]	0.68 [*]
Log of family income					1.00	0.94			1.07	1.02
Financial satisfaction					0.52 ^{***}	0.22 ^{***}			0.59 ^{***}	0.27 ^{***}

	Relative Risk Ratios as Compared to Very Happy									
	Model 1 (Baseline)		Model 2 (Health)		Model 3 (Economic Resources)		Model 4 (Social Resources)		Model 5 (Full)	
	Pretty happy	Not too happy	Pretty happy	Not too happy	Pretty happy	Not too happy	Pretty happy	Not too happy	Pretty happy	Not too happy
Employment status:										
Employed full-time					1.01	0.98			0.75 *	0.40 ***
Employed part-time					1.09	2.00 ***			1.68 ***	1.16
Unemployed					0.90	1.44 **			0.88	0.81
Retired, keeps house, or in school										
Union status:										
Currently married							2.28 ***	4.29 ***	2.15 ***	3.69 ***
Past married and currently single							2.27 ***	4.64 ***	2.16 ***	3.92 ***
Never married and currently single							1.99 ***	3.65 ***	1.82 ***	2.88 ***
Unmarried and dating							1.11	1.33 *	1.02	0.99
Any children										
Number of sexual partners (last 12 months):										
None										
One							0.83	0.54 ***	0.82	0.61 **
Two or more							1.29	0.93	1.29	1.02
Religious participation:										
Never/less than once a year										
Once a year to once a month							0.83 *	0.82	0.88	0.94
More than once a month							0.66 ***	0.50 ***	0.74 ***	0.65 ***
Log-likelihood	-6358.9535		-6157.9576		-5925.9537		-6079.543		-5563.8626	
AIC ⁺	1.909		1.851		1.784		1.832		1.684	

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Note:

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*
+
 $p < .001$,
 $p < .01$,
 $p < .05$ (two-tailed tests);
+ AIC = Akaike Information Criterion

In interpreting relative risk ratios, a ratio of 1.0 indicates that the predictor variable has no effect on the outcome variable, a ratio higher than 1.0 shows that the predictor variable has a positive influence on the outcome variable, and a ratio lower than 1.0 a negative influence.