Sexual Orientation, Perceived Discrimination, and Well-being Outcomes: A Mediation Model

Brian Canning, Shelby Tuthill & Neil Yetz

Colorado State University

Department of Psychology

**Introduction**

The lesbian, gay, and bisexual (LGB) community is at heightened risk for experiencing health disparities (IOM, 2011). It is additionally recognized that the LGB population is consistently stigmatized as a result of negative attitudes toward their sexual orientations (Herek & McLemore, 2012; Meyer, 2003). Despite more accepting trends in recent years, many members of the LGB community still experience discrimination. Discrimination against the LGB community ranges from less obvious forms, such as microaggressions, to more hate-driven and salient discrimination such as protests by groups aimed against the LGB community, employment and housing discrimination, and acts of violence such as the 2016 mass shooting at Orlando’s Pulse nightclub.   
 These constant burdens from heightened societal stigmatization and discrimination are likely to have impacts on individuals’ mental health and well-being. In turn, this discrimination leads to disparities in outcomes – physical, social, and psychological – between LGB and heterosexual populations. This study seeks to understand the relationship of perceived discrimination experienced by sexual minorities and disparities in specific outcomes. Specifically, our study addresses the following research question:   
 Do individuals in the LGB community experience heightened discrimination, and do these differences in discrimination lead to differences in well-being outcomes relative to the heterosexual population?  
 Taking steps towards understanding this research question is of great importance  
from a public health standpoint. Understanding differences in psychological and social well-being could lead to specific interventions that improve quality of life for members of the LGB community. Additionally, by understanding the pathway toward disparities in well-being outcomes, interventions can become more focused and effective.

**Mental health in LGB populations**  
 The nature of psychological research on the mental health of LGB individuals has shifted considerably in recent decades. The inclusion of homosexuality in the *Diagnostic and Statistical Manual of Mental Disorders* (*DSM*) until 1973 meant that minority sexual orientation itself was considered itself pathological. Despite its removal from the *DSM*, LGB populations continue to face mental health issues at higher rates than their heterosexual counterparts. For example, the LGB community has higher incidence of psychological issues such as anxiety, depression, negative affect, and suicidality (Jorm, Korten, Rodgers, Jacomb & Christensen, 2002; Meyer, 2003). In addition to these issues, some studies report higher levels of nicotine dependence and substance use in LGB populations relative to heterosexuals (Fergusson, Horwood & Beautrais, 1999).

**Theoretical framework: Minority stress**  
 The framework of minority stress was developed to account for the persistent mental health disparities related to marginalized groups, including minority sexual orientation; this is the theoretical framework that will be used for assessing our research question. The model was developed by Meyer in specific reference to LGB populations, starting with gay men (1995) and extending to the entirety of the LGB community (2003). It was conceptualized as a broadening of stress theory, in which stressors are defined as events and circumstances causing change in one’s life and requiring adaptation. Meyer extends this definition beyond personal life events, incorporating social circumstances and structures as possible sources of stress, particularly for people who belong to one or more marginalized groups. This is what he calls minority stress; individuals in marginalized groups experience an accumulation of stress responses as a result of stigmatization and perceived discrimination. It has since been studied extensively and found to be associated with mental health (Meyer, 1995; Meyer, 2003), physical health (Frost, Lehavot, & Meyer, 2015), substance use (Fergusson, Horwood & Beautrais, 1999; Lehavot & Simoni, 2014), body image (Kimmel & Mahalik, 2005), and more.  
 This model proposes that individuals in marginalized groups face a combination of stigma and overt discrimination, resulting in frequent or constant stress responses that add up to poorer mental and physical health relative to individuals in non-marginalized groups. This study will focus specifically on perceived discrimination, an element of minority stress that often helps to explain some of the disparities in outcomes between LGB and heterosexual populations (Almeida, Johnson, Corliss, Molnar & Azrael, 2009; Mays & Cochran, 2011).

**The role of perceived discrimination** Perceived discrimination is an integral aspect of minority stress. Research indicates that the severity of LGB populations’ mental health issues is indeed related to perceived discrimination, such that controlling for experiences of discrimination diminishes the detrimental effect of minority sexual orientation on mental health (Almeida, Johnson, Corliss, Molnar & Azrael, 2009; Mays & Cochran, 2011; Zakalik & Wei, 2006). Perceived discrimination also has an impact on LGB students’ levels of college adjustment, as well as vocational indecision (Schmidt, Miles, & Welsh, 2011).  
 Perceived discrimination comes in many forms. In the MIDUS 2 dataset (Ryff et al., 2004-2006), which will be used for this study, discrimination is measured by two separate scales: lifetime discrimination and daily discrimination. This distinction reflects recent trends in distinguishing overt discrimination from “aversive” discrimination, or microaggressions. Sue et al. (2007) defined microaggressions as “brief and commonplace daily verbal, behavioral, or environmental indignities, whether intentional or unintentional, that communicate hostile, derogatory, or negative racial slights and insults toward people of color,” and this type of discrimination can also be directed toward to LGB populations (Balsam, Molina, Beadnell, Simoni, & Walters, 2011; Francis & Reygan, 2016; Galupo & Resnick, 2016). A similar phenomenon is referred to as aversive discrimination, which was also first applied to covert racism toward people of color (Dovidio & Gaertner, 2004). Researchers have also applied this to LGB experiences, particularly in reference to employment and hiring practices (Aberson, 2003; Nadler, Lowery, Grebinoski, & Jones, 2014).  
 While understanding microaggressions and aversive discrimination is crucial in detecting more subtle or covert forms of discrimination, overt and obvious forms of discrimination against LGB people still occur. This type of discrimination, captured by a lifetime discrimination measure in the dataset of interest, is the focus of our study. Overt discrimination toward LGB people has been documented in a variety of settings, including in the workplace and during hiring processes (Sears & Mallory, 2011; Pizer, Sears, Mallory, & Hunter, 2012), in housing and rental application processes (Lauster & Easterbrook, 2011), in interactions with police (Mallory, Hasenbush, & Sears, 2015; Wolff & Cokely, 2007), and in medical settings (Underhill et al., 2015). The lifetime discrimination scale also assesses for discrimination – in the form of denial of opportunities and services or low quality of services – in terms of acquiring scholarships, being encouraged or discouraged from pursuing education, and the provision of services including by plumbers and care mechanics.   
 Although perceived discrimination appears to mediate the effect of sexual orientation on psychological outcomes in many studies, some research shows that discrimination is not a factor in disparate outcomes between LGB and heterosexual people (Burgess, Lee, Tran, & Van Ryn, 2008). It is particularly important, therefore, to continue to explore this model across datasets.

**Possible outcomes of discrimination: Psychological and social well-being**  
 In LGB populations, researchers tend to explore the effect of perceived discrimination on outcomes such as psychological distress, major depressive disorder, anxiety, suicidality, and health-risk behaviors such as nicotine dependence and substance use. Little attention, however, has been paid to outcomes such as psychological well-being and social well-being. Psychological well-being differs from these more frequently measured psychological outcomes (e.g., distress, clinically significant psychological symptoms); in the dataset that will be utilized in this study, the measure is based on participants’ experience of autonomy, environmental mastery, personal growth, positive relations with others, sense of purpose in life, and self-acceptance. Such outcomes are important to measure, as they assess individuals from a perspective of health rather than disorder and may capture different elements of one’s life than measures of depression and anxiety. Social well-being, in our dataset, relates to participants’ perceptions of the meaningfulness of society, their own social integration, acceptance of others, social contribution, and social actualization.   
 It is important to test the minority stress model with both psychological and social well-being because of the important distinctions between them. Psychological well-being is focused on the self; it measures feelings toward oneself, perceptions of one’s relationships with others, the degree to which one has a sense of purpose, and the extent to which this purpose is being realized (Ryff & Singer, 2008). Social wellbeing focuses on the self in the context of the broader society, exploring participants’ quality of relationship with society and community and how they perceive and understand their social world (Keyes & Shapiro, 2004).   
 Keyes and Shapiro (2004) find that elements of both psychological and social well-being vary by categories such as age, sex, and marital status, but sexual orientation was not assessed in their study. We might expect that psychological well-being differs by sexual orientation based on the literature suggesting higher incidence of emotional distress and psychological diagnoses among LGB people. Indeed, features of psychological well-being such as autonomy, self-acceptance, and positive relations with others may be impeded by discrimination and general social attitudes toward LGB people. We might also expect that social well-being differs by sexual orientation considering that the broader social environment is often hostile toward LGB people, making it more difficult to perceive a positive relationship with the environment or to perceive that social progress is possible. On the other hand, the resilience that comes with a strong sense of belonging to the LGB community (Wong, 2015) may attenuate any differences in social well-being between LGB and heterosexual populations. One study finds that, in an LGB sample, bisexual participants report lower social well-being, but this disparity is partially explained by bisexuals’ lower levels of connectedness to the LGB community (Kertzner, Meyer, Frost, & Stirratt, 2010).

**Hypotheses** We posit that differences in psychological and social well-being exist between LGB and heterosexual groups, and that this relationship will be partially mediated by perceived lifetime discrimination. This approach is based on previous findings linking sexual orientation with perceived discrimination and further linking perceived discrimination with mental health outcomes. This study will utilize a mediation model to identify and explain the mechanism between minority sexual orientation and differences in outcomes of social and psychological well-being, taking into account the effect of perceived discrimination resulting from sexual minority status.   
 The proposed model acknowledges that being of minority sexual orientation is not directly responsible for differences in well-being outcomes, as the former diagnosis of homosexuality in the DSM may have suggested; in other words, there is nothing inherent to sexual orientation that contributes well-being outcomes. Any differences in outcomes are likely the result of discrimination based on sexual orientation, and other social factors that disadvantage LGB people relative to heterosexuals. Therefore, this study aims to approach and answer two hypotheses:   
 1.  Being of LGB sexual orientation leads to heightened perceived discrimination which, in turn, results in lower psychological well-being relative to heterosexuals.   
 2.  Being of LGB sexual orientation leads to heightened perceived discrimination which, in turn, results in lower social well-being relative to heterosexuals.

**Methods**

           This study utilized data from the second wave of the National Survey for Midlife in the United States (MIDUS 2; Ryff et al., 2004 – 2006). The MIDUS 2 study included a combination of phone interviews and mailed questionnaires across the United States to gain a nationally representative sample of English speaking middle aged adults aged 25 to 74 years of age. Data collection for the MIDUS 2 project began in 2002 and the data collection was completed in 2009. The overall sample size within the MIDUS 2 project is 4,963 participants.

**Sample**

           From the MIDUS 2 sample, only participants with all demographic variables and responses to the measures were used in this study’s sample. Including participants based on these characteristics, the sample size was reduced to 3,701 participants. Respondents self-reported demographic information from the MIDUS 2 questionnaire. The sample population had an average age of 55.59 (*SD* = 12.14). *Table 1* shows the demographic characteristics of the sample for sexual orientation, race, and sex.

*Table 1: Demographics*

| Race | N | % |
| --- | --- | --- |
| White | 3425 | 92.5 |
| Non-White | 276 | 7.5 |
| Sex | N | % |
| Female | 2015 | 54.4 |
| Male | 1686 | 45.6 |
| Sexual Orientation | N | % |
| Heterosexual | 3597 | 97.2 |
| Homosexual/  Bisexual | 104 | 2.8 |

**Well-being Outcome Measures**

            To understand the outcomes of psychological and social well-being, two measures were incorporated into this study. The MIDUS 1 version of the psychological well-being was used for purposes of this study and consists of six subscales (Ryff, 1989). Each subscale is described in *Table 2*.

*Table 2: Psychological Well-Being Scale Descriptions*

|  |  |
| --- | --- |
| **Scale Variable Name** | **Description** |
| Autonomy | Degree to which respondent actualizes autonomy |
| Environmental Mastery | How in control of one’s environment/circumstances one feels |
| Personal Growth | How important personal is growth to respondent |
| Positive Relations with Others | Quality of relationships with other people |
| Purpose in Life | Degree to which respondent feels their life has purpose |
| Self-Acceptance | Degree to which respondent accepts their self |

Social well-being was assessed using the MIDUS 2 social well-being measure (Keyes, 1995).  Similar to the psychological well-being scale, this scale consists of 5 subscales. The subscales and descriptions are outlined in *Table 3*.

*Table 3: Social Well-Being Scale Descriptions*

|  |  |
| --- | --- |
| **Scale Variable Name** | **Description** |
| Social Coherence | How intelligible respondent’s social world appears to them |
| Social Integration | How integrated respondent feels in their community |
| Acceptance of Others | Measures positive assessment of others |
| Social Contribution | Degree to which respondent feels they contribute to their community |
| Social Actualization | Degree to which respondent feel social progress is being made |

The psychological and social well-being scales were scored identically. Each variable is comprised of three items scored using a 7-point Likert-type scale, with scores ranging from 1 (strongly agree) to 7 (strongly disagree).  Variables are coded so that higher scores on these measures represent greater well-being (Brim et al., 2009). We then summed the scale scores together to create a composite score of psychological and social well-being. Therefore, the psychological well-being scores ranged from 18, indicating the lowest level of psychological well-being, to 126, indicating the highest level of psychological well-being. The social well-being scores ranged from 15, indicating the lowest level of social well-being to 105, indicating the highest level of social well-being.

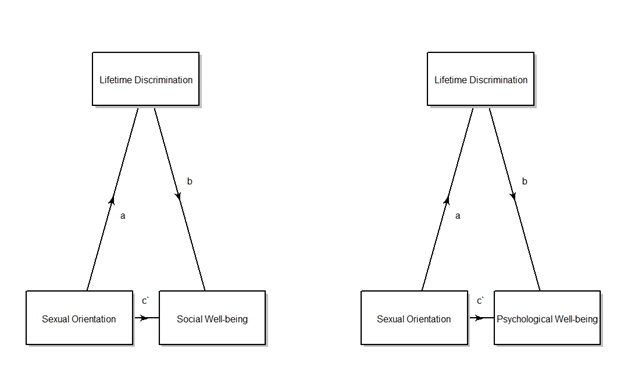
**Lifetime Discrimination**

           Lifetime discrimination was measured using the William, Jackson & Anderson (1997) perceived discrimination scale, which was distributed as part of the MIDUS 2 questionnaire. This eleven-item self-report scale measures the number of experiences each participant has had with each type of discrimination. Item examples include, “You were hassled by the police”, “You were not given a promotion” or “You were denied or provided inferior medical care.” For scaling, items were constructed by summing the number of “1 or higher” responses to the items. Therefore, the perceived lifetime discrimination scale ranges from 0 – 11 with higher scores representing a higher amount of perceived lifetime discrimination.

**Study Design & Analytical Procedures**

           Using the MIDUS 2 dataset, a cross-sectional study design was used to assess the relationship between sexual orientation and well-being outcomes through experiences of lifetime discrimination. Therefore, the goal of this project is to obtain the effects from sexual orientation through lifetime discrimination (*a* path), to our two well-being outcome measures (*b* path). Additionally, the residualized effect of sexual orientation on the well-being outcomes (*c`* path) will also be assessed. Two mediation models were used to assess this relationship (Shown in *figure 1*). Both models controlled for participant race and sex based on prior research on LGB populations (Mays & Cochran, 2001; Riggle, Rostosky & Danner, 2009).

*Figure 1: Proposed mediated pathways from sexual orientation to psychological well-being and social well-being outcomes. Both models also controlled for race and gender.*

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**Model 1**

**Model 2**

To test the mediated effects, the methods of path analyses proposed by Hayes, Preacher & Myers (2011) were used. The direct path from sexual orientation to the well-being outcome will first be assessed using a linear regression model (known as the *c* path). If a significant *c* path coefficient is found, then the effect of the mediator will be calculated using the path coefficients from sexual orientation to lifetime discrimination (*a* path). If the *a* path produces significant results, the path coefficient from lifetime discrimination to each well-being outcome while holding constant sexual orientation (*b* path) will next be computed. Lastly, the indirect effect of sexual orientation to each well-being outcome path coefficient (*c’* path) and confidence intervals will be computed using the product coefficient approach and bootstrap methods proposed by Hayes, Preacher & Myers (2011). All analyses performed in in this study were performed using R version 3.4.4 (R Core Team, 2018).

**Results**

**Social Well-Being**

A linear regression model was first used to assess *c* path of sexual orientation to social well-being scores. After controlling for race and gender, no significant effect of sexual orientation on social well-being was detected (b = -1.90, p = 0.144). Results from the regression model are reported in *Table 4*. Because sexual orientation did not significantly predict social well-being scores, this study did not proceed to assess the mediation of lifetime discrimination on the relationship between sexual orientation and social well-being.

Table 4: *c path* r*egression results using Social Well-Being as the criterion*

|  |  |  |  |
| --- | --- | --- | --- |
| Predictor | *b* | *b*  95% CI  [LL, UL] | *r* |
| (Intercept) | 61.97\*\* | [60.38, 63.55] |  |
| Sexual Orientation  (LGB =1) | -1.90 | [-4.44, 0.65] | -.02 |
| Race  (White = 1; Non-white = 0) | 2.77\*\* | [1.17, 4.37] | .06\*\* |
| Sex  (Male = 1) | 0.54 | [-0.30, 1.38] | .02 |

*R2*  = .004\*\*

*Note.* A significant *b*-weight indicates the beta-weight and semi-partial correlation are also significant. *b* represents unstandardized regression weights. *r* represents the zero-order correlation. *LL* and *UL* indicate the lower and upper limits of a confidence interval, respectively.  
\* indicates *p* < .05. \*\* indicates *p* < .01.

**Psychological Well-Being**

           Another linear regression model was used to determine the c path of sexual orientation to psychological well-being while controlling for participant race and sex. Results for the regression model may be found in *Table 5.*

Table 5: *c path* r*egression results using Psychological Well-Being as the criterion*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Predictor | *b* | *b*  95% CI  [LL, UL] | *r* | |
| (Intercept) | 228.85\*\* | [224.61, 233.09] |  | |
| Sexual Orientation  (LGB =1) | -10.36\*\* | [-17.17, -3.55] | -.05\*\* | |
| Race  (White = 1; Non-white = 0) | 2.72 | [-1.56, 7.00] | .02 | |
| Sex  (Male = 1) | 1.20 | [-1.06, 3.46] | .02 | |
|  |  |  |  |

*R2*  = .003\*

*Note.* A significant *b*-weight indicates the beta-weight and semi-partial correlation are also significant. *b* represents unstandardized regression weights. *r* represents the zero-order correlation. *LL* and *UL* indicate the lower and upper limits of a confidence interval, respectively.  
\* indicates *p* < .05. \*\* indicates *p* < .01.

Next, because there was a significant association between sexual orientation and psychological well-being after controlling for race and sex, the *a* path of sexual orientation to lifetime discrimination was modeled. Results for this model are shown in *Table 6*.

Table 6: *a path regression results using perceived lifetime discrimination as the criterion*

|  |  |  |  |
| --- | --- | --- | --- |
| Predictor | *b* | *b*  95% CI  [LL, UL] | *r* |
| (Intercept) | 1.58\*\* | [1.41, 1.76] |  |
| Sexual Orientation  (LGB =1) | 0.61\*\* | [0.33, 0.89] | .07\*\* |
| Race  (White = 1; Non-white = 0) | -0.75\*\* | [-0.93, -0.57] | -.14\*\* |
| Sex  (Male = 1) | -0.11\* | [-0.20, -0.02] | -.04\* |
|  |  |  |  |

*R2*  = .024\*\*

*Note.* A significant *b*-weight indicates the beta-weight and semi-partial correlation are also significant. *b* represents unstandardized regression weights. *r* represents the zero-order correlation. *LL* and *UL* indicate the lower and upper limits of a confidence interval, respectively.  
\* indicates *p* < .05. \*\* indicates *p* < .01.

The a path coefficient is shown in *Table 6* as the Sexual Orientation beta-coefficient (b = 0.61, p <0.01). The significant relationship between sexual orientation and lifetime discrimination provided justification to assess the mediated effect (the b path). The *b* path coefficient was estimated using a linear regression model looking at the relationship of lifetime discrimination and psychological well-being, holding constant sexual orientation, race and sex. Results are shown in *Table 7*.

Table 7: *b path* r*egression results using Psychological Well-Being as the criterion*

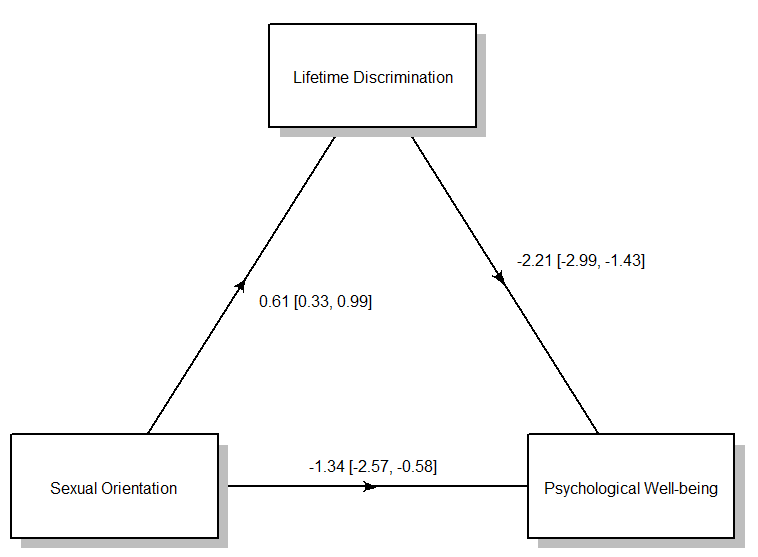
|  |  |  |  |
| --- | --- | --- | --- |
| Predictor | *b* | *b*  95% CI  [LL, UL] | *r* |
| (Intercept) | 232.34\*\* | [227.94, 236.74] |  |
| Sexual Orientation  (LGB =1) | -9.02\*\* | [-15.81, -2.22] | -.05\*\* |
| Lifetime Discrimination | -2.21\*\* | [-2.99, -1.43] | -.10\*\* |
| Race  (White = 1; Non-white = 0) | 1.07 | [-3.24, 5.37] | .02 |
| Sex  (Male = 1) | 0.96 | [-1.29, 3.21] | .02 |
|  |  |  |  |
|  |  |  |  |

*R2*  = .011\*\*

*Note.* A significant *b*-weight indicates the beta-weight and semi-partial correlation are also significant. *b* represents unstandardized regression weights. *r* represents the zero-order correlation. *LL* and *UL* indicate the lower and upper limits of a confidence interval, respectively.  
\* indicates *p* < .05. \*\* indicates *p* < .01.

Results from *Table 7* indicate that, the *b* path, leading from lifetime discrimination to psychological well-being is significant. For every 1-unit increase on an individual’s lifetime discrimination score, a 2.21-unit decrease in their psychological well-being is expected after controlling for sexual orientation, race and sex.

The *c’* path of sexual orientation to psychological well-being, after accounting for the mediated effect of lifetime discrimination, race and sex was calculated by obtaining the product of the beta coefficient from the *a* path and *b* path. The *c’* path of sexual orientation to psychological well-being is *-1.34*. Confidence intervals for the indirect effect were obtained using a bootstrap analysis. The bootstrap analysis obtained a 95% confidence interval of LL= -2.57, UL =-0.58. It was concluded that the indirect effect (*c’* path) of sexual orientation on psychological well-being was significant, after controlling for the mediated effect of lifetime discrimination and additionally controlling for race and sex. A complete diagram of including the path coefficients is shown in *Figure 2*. Results from these regression analyses suggest that the lifetime discrimination is a partial mediator between sexual orientation and psychological well-being. Even after controlling for the mediated effects of lifetime discrimination, LGB identity tends to result in lower psychological well-being.

*Figure 2: Mediated pathways from sexual orientation to psychological well-being outcome. Model also controlled for race and gender.*

**Discussion**

The results of this study pertaining to psychological well-being are consistent with our hypothesis and with existing literature on minority discrimination.  This provides further support for the minority stress framework’s use in interpreting the experiences of the LGB population (Meyer, 1995, 2003), and perceived discrimination as a relevant source of such stress (Almeida, Johnson, Corliss, Molnar & Azrael, 2009; Mays & Cochran, 2011).

Interestingly, the results for the social well-being were inconclusive as no statistically significant effect was found (*p = .144)*.  There are several factors to consider in assessing this result.  The sample for our LGB population was extremely small (n=104) in comparison to the heterosexual population (n=3597), making it very likely that our models lacked the statistical power needed to find the effect, resulting in a type II error.  Further support for this is found in the extremely small r2value (*r2 = .004*) in our model which regressed social well-being on orientation, race and sex.  Given that the model is only predicting .4% of the variance in social well-being, greater power is needed.

Another issue is found in the way that lifetime discrimination is calculated in the MIDUS 2 dataset.  The measure asks respondents to quantify how many times they have experienced each item’s specific form of discrimination.  In scoring, each value more than one is scored as one, severely restricting the variance captured by this measure. This scoring mechanism seems to suggest that while the measure can differentiate between those who experience discrimination and those who do not, it cannot accurately capture severity and temporal stability in discrimination experiences.

Given our small LGB sample (n=104), the number of respondents who refused to answer the sexual orientation question (n=167) appears significant.  Given that a significant number of respondents are older (n=?) and may be influenced by past norms of hiding a minority sexual orientation, it is possible that many participants did not feel comfortable disclosing their true sexual orientation.  It is also important to note that the MIDUS 2 data set does not ask whether or not respondents sexual orientation is open and public in their community. If one is LGB but not public about their orientation, it might minimize the amount of discrimination that individual would be subject to (which can be understood as an incentive to stay in “the closet”).  Such issues in data collection could be adversely affecting the accuracy of our model and be contributing to type II error. Future large-scale surveys like the MIDUS 2 should seek to include assessments of whether an individual’s orientation is public or not so that more effective analyses can be made. It is likely, given current changes in culture and in acceptance of LGB persons, that future surveys will see an increase in LGB identifying respondents, increasing the potential for more conclusive analyses.

**Conclusion**

            Empirical research, including the partial findings from this study, continue to illuminate the challenges that LGB persons experience as a consequence of their minority sexual orientation.  One of these challenges is the experience of discrimination, which creates disparities in psychological well-being when compared to heterosexual persons. Given these disparities, initiatives to support LGB mental health appear of significant importance.  In addition, further research is needed to establish the valence of social well-being outcomes for LGB persons in order to more effectively target interventions. More knowledge in this domain will allow clinicians, community leaders and individuals to better serve and support this vulnerable population.

References

Aberson, C. L. (2003). Aversive bias toward gay men? Current Research in Social Psychology, 8, 266-274.

Almeida, J., Johnson, R. M., Corliss, H. L., Molnar, B. E., & Azrael, D. (2009). Emotional distress among LGBT youth: The influence of perceived discrimination based on sexual orientation. Journal of Youth and Adolescence, 38, 1001-1014.

Balsam K. F., Molina, Y., Beadnell, B., Simoni, J., & Walters, K. (2011). Measuring multiple minority stress: The LGBT people of color microaggressions scale. Cultural Diversity & Ethnic Minority Psychology, 17, 163-174.

Bostwick, W. B., Boyd, C. J., Hughes, T. L., & West, B. (2014). Discrimination and mental health among lesbian, gay, and bisexual adults in the United States. American Journal of Orthopsychiatry, 84, 35-45.

Burgess, D., Lee, R., Tran, A., & Van Ryn, M. (2008). Effects of perceived discrimination on mental health and mental health services utilization among gay, lesbian, bisexual and transgender persons. Journal of LGBT Health Research, 3, 1-14.

Dovidio, J. F., & Gaertner, S. L. (2004). Aversive racism. Advances in Experimental Social Psychology, 36, 1-52.

Fergusson, D. M., Horwood, J., Beautrais, A. L. (1999). Is sexual orientation related to mental health problems and suicidality in young people? Archives of General Psychiatry, 56, 876-880.

Francis, D. A., & Reygan, F. (2016). ‘Let’s see if it won’t go away by itself.’ LGBT microaggressions among teachers in South Africa. Education as Change, 20, 180-201.

Frost, D. M., Lehavot, K., & Meyer, I. H. (2015). Minority stress and physical health among sexual minority individuals. Journal of Behavioral Medicine, 38, 1-8.

Galupo, M. P., & Resnick, C. A. (2016). Experiences of LGBT microaggressions in the workplace: Implications for policy. In T. Köllen (Ed.) Sexual Orientation and Transgender Issues in Organizations (pp. 271-287).

Hayes, A. F., Preacher, K. J., & Myers, T. A. (2011). Mediation and the estimation of indirect effects in political communication research. Sourcebook for political communication research: Methods, measures, and analytical techniques, 23, 434-465.

Herek, G. M., & McLemore, K. A. (2013). Sexual prejudice. Annual Review of Psychology, 64, 309–33.

Institute of Medicine (2011). The health of lesbian, gay, bisexual, and transgender people: Building a foundation for better understanding. Washington, DC: The National Academies Press.

Jorm, A. F., Korten, A. E., Rodgers, B., Jacomb, P. A., & Christensen, H. (2002). Sexual orientation and mental health: Results from a community survey of young and middle-aged adults. British Journal of Psychiatry, 180, 423-427.

Kelleher, C. (2009). Minority stress and health: Implications for lesbian, gay, bisexual, transgender, and questioning (LGBTQ) young people. Counselling Psychology Quarterly, 22, 373-379.

Kertzner, R. M., Meyer, I. H., Frost, D. M., & Stirratt, M. J. (2010). Social and psychological well-being in lesbians, gay men, and bisexuals: The effects of race, gender, age, and sexual identity. American Journal of Orthopsychiatry, 79, 500-510.

Keyes, C. L. M (1995). The social side of psychological well-being. *Ph. D. Dissertation,* Department of Sociology, University of Wisconsin, Madison.

Keyes, C. L. M., & Shapiro, A. D. (2004). Social well-being in the United States: A descriptive epidemiology. In O. G. Brim, C. D. Ryff, & R. C. Kessler (Eds.), How healthy are we? A national study of well-being at midlife (pp. 350-372). Chicago, IL: The University of Chicago Press.

Kimmel, S. B., & Mahalik, J. R. (2005). Body image concerns of gay men: The roles of minority stress and conformity to masculine norms. The Journal of Consulting and Clinical Psychology, 73, 1185-1190.

Lauster, N., & Easterbrook, A. (2011). No room for new families? A field experiment measuring rental discrimination against same-sex couples and single parents. Social Problems, 58, 389-409.

Lehavot, K., & Simoni, J. M. (2011). The impact of minority stress on mental health and substance use among sexual minority women. Journal of Consulting and Clinical Psychology, 79, 159-170.

Mallory, C., Hasenbush, A., & Sears, B. (2015). Discrimination and harassment by law enforcement officers in the LGBT community. The Williams Institute.

Mays, V. M., & Cochran, S. D. (2011). Mental health correlates of perceived discrimination among lesbian, gay, and bisexual adults in the United States. American Journal of Public Health, 91, 1869-1876.

Meyer, I. H. (1995). Minority stress and mental health in gay men. Journal of Health and Social Behavior, 36, 38-56.

Meyer, I. H. (2003). Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: Conceptual issues and research evidence. Psychological Bulletin, 129, 674-697.

Nadler, J. T., Lowery, M. R., Grebinoski, J., & Jones, R. G. (2014). Aversive discrimination in employment interviews: Reducing effects of sexual orientation bias with accountability. Psychology of Sexual Orientation and Gender Diversity, 1, 480-488.

Pizer, J. C., Sears, B., Mallory, C., & Hunter, N. D. (2012). Evidence of persistent and pervasive workplace discrimination against LGBT people: The need for federal legislation prohibiting discrimination and providing equal employment benefits. Loyola Law Review Los Angeles, 45, 715-779.

R Core Team (2018). R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. URL <https://www.R-project.org/>.

Riggle, E. D. B., Rostosky, S. S., & Danner, F. (2009). LGB identity and eudaimonic well being in midlife. Journal of Homosexuality, 56(6), 786-798.

Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological wellbeing. *Journal of Personality and Social Psychology 57*, 1069-1081.

Ryff, C. D., Almeida, D. M., Ayanian, J. S., Carr, D. S., Cleary, P. D., Coe, C., Davidson, R., Krueger, R. F., Lachman, M. E., Marks, N. F., Mroczek, D. K., Seeman, T., Seltzer, M. M., Singer, B. H., Sloan, R. P., Tun, P. A., Weinstein, M., & Williams, D. (n.d.). National Survey of Midlife Development in the United States (MIDUS II), 2004-2006: Descriptions of MIDUS Samples. Ann Arbor, Michigan: Inter-University Consortium for Political and Social Research.

Ryff, C. D., Almeida, D. M., Ayanian, J. S., Carr, D. S., Cleary, P. D., Coe, C., Davidson, R., Krueger, R. F., Lachman, M. E., Marks, N. F., Mroczek, D. K., Seeman, T., Seltzer, M. M., Singer, B. H., Sloan, R. P., Tun, P. A., Weinstein, M., & Williams, D. (2010). Documentation of Psychosocial Constructs and Composite Variables in MIDUS II Project 1. Ann Arbor, Michigan: Inter-University Consortium for Political and Social Research.

Ryff, C. D., & Singer, B. H. (2008). Know thyself and become what you are: A Eudaimonic approach to psychological well-being. Journal of Happiness Studies, 9, 13-39.

Schmidt, C. K., Miles, J. R., & Welsh, A. C. (2011). Perceived discrimination and social support: The influences on career development and college adjustment of LGBT college students. Journal of Career Development, 38, 293-309.

Sears, B., & Mallory, C. (2011). Documented evidence of employment discrimination & its effects on LGBT people. The Williams Institute.

Sue, D. W., Capodilupo, C. M., Torino, G. C., Bucceri, J. M., Holder, A. M. B., Nadal, K. L., & Esquilin, M. (2007). Racial microaggressions in everyday life: Implications for clinical practice. American Psychologist, 62, 271-286.

Underhill, K., Morrow, K. M., Colleran, C., Holcomb, R., Calabrese, S. K., Operario, D., Galárraga, O., & Mayer, K. H. (2015). A qualitative study of medical mistrust, perceived discrimination, and risk behavior disclosure to clinicians by U.S. mle sex workers and other men who have sex with men: Implications for biomedical HIV prevention. Journal of Urban Health, 92, 667-686.

Williams, D. R., YU, Y., Jackson, J. S., & Anderson, N. B. (1997). Racial differences in physical and mental health: Socioeconomic status, stress and discrimination. *Journal of Health Psycholog*y,

2, 335-351.

Wolff, K. B., & Cokely, C. L. (2007). “To protect and to serve?”: An exploration of police conduct in relation to the gay, lesbian, bisexual, and transgender community. Sexuality and Culture, 11, 1-23.

Wong, F. Y. (2015). In search for the many faces of community resilience among LGBT individuals. American Journal of Community Psychology, 55, 239-241.

Zakalik, R. A., & Wei, M. (2006). Adult attachment, perceived discrimination based on sexual orientation, and depression in gay males: Examining the mediation and moderation effects. Journal of Counseling Psychology, 53, 302-313.