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Partnership Status and Mental Health in a Nationally Representative Sample of Sexual Minorities

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Abstract

Research has consistently shown mental health differences between sexual minority subgroups with bisexual people often reporting higher levels of psychological distress than lesbians and gay men. Relationship status has been suggested, but not well studied, as a potential factor contributing to subgroup differences in mental health. Using a national probability sample of non-transgender sexual minority adults across 3 age cohorts (18–25, 34–41, 52–59 years), we assessed group differences in psychological distress (Kessler 6) between lesbian/gay (N = 505), bisexual (N = 272), and queer/pansexual (N=75) respondents. We examined whether relationship status (single/partnered) moderated the relationship between sexual identity and psychological distress. Among those that were partnered, we tested whether key partner characteristics related to sexual identity - gender of partner (cisgender same-sex/transgender or cisgender different-sex) and partner sexual identity (same or mixed sexual orientation relationship) - were significantly associated with psychological distress. In bivariate analyses, bisexual and queer/pansexual respondents reported more psychological distress than gay/lesbian respondents, among both men and women. In multivariable analyses, there was not a significant main effect of sexual identity, but there was a significant interaction between sexual identity and partnership status on psychological distress among women. Specifically, while there were no significant differences in psychological distress between subgroups of single women, among partnered women, queer/pansexual women had more distress than lesbian/gay women. Further, partnership was associated with reduced distress among lesbian/gay women, but not among bisexual or queer/pansexual women. Among men, there were no significant interaction effects between sexual identity and partnership status on psychological distress. Being in a mixed orientation relationship, but not gender of partner, was a significant predictor of psychological distress among both women and men across sexual identities. Additional research should assess the partnership dynamics contributing to the association between partnership characteristics and mental health among sexual minority populations.

Keywords

bisexual; queer; mental health; sexual minority; community

Bisexual people make up 2.1% of the U.S. population and contemporary estimates indicate they make up approximately 40% of the LGBT population (Badgett et al., 2019; Goldberg et al., 2019). Public health research consistently shows that bisexual people experience mental health disparities. Moreover, studies have shown that bisexual people have higher levels of psychological distress and mental health issues compared to lesbian and gay people (Bostwick et al., 2010; Kerridge et al., 2017; Ross et al., 2018). Health disparities research points to risk factors such as minority stress experienced within and outside of the LGBT community (Roberts et al., 2015), lack of social support (Shilo & Savaya, 2012) and high rates of poverty (Wilson et al., 2020). One factor that has been noted, but not often studied, is the significance of partner status and partner characteristics on the observed differences in health and wellbeing between LGB people. The current study seeks to examine differences in mental health between non-transgender[1] sexual minority groups (bisexual, lesbian/gay, and queer/pansexual), with attention to key factors that may be relevant to the relationship experiences among sexual minority people (partner status and partner characteristics).

Sexual Identity and Mental Health

As a result of the inclusion of sexual identity questions in large-scale population-based studies over the past 15 years, there is a solid body of evidence demonstrating marked mental health disparities among bisexual adults, with the concentration of risk most notable among women (Bostwick et al., 2010; Kerridge et al., 2017; Ross et al., 2018; Salway et al., 2019). For example, in comparison to both heterosexual and lesbian women, bisexual women demonstrate higher rates of depression (Bostwick et al., 2010; Kerridge et al., 2017; Ross et al., 2018); suicidality (Bolton & Sareen, 2011; Conron et al., 2010; Salway et al., 2019); and post-traumatic stress disorder (Kerridge et al., 2017; A. L. Roberts et al., 2010). Bisexual men tend to look more similar to gay men, with the magnitude of difference in mental health levels between the groups much less pronounced than among sexual minority women, though both bisexual and gay men fare consistently worse on mental health outcomes in comparison to heterosexual men (Bostwick et al., 2010; Kerridge et al., 2017).

There are additional sexual identities that, like bisexual identities, represent an attraction to more than one gender. Collectively called non-monosexual or plurisexual identities (Galupo et al., 2015), some of these identity labels are emerging in significant numbers in large-scale surveys (Goldberg et al., 2019), such as queer and pansexual. Much less is known about the mental health of queer and pansexual populations as distinct from bisexual and gay/lesbian populations. Findings to date are inconsistent about how similar or different those under the plurisexual “umbrella” are from one another with regard to mental health. For example,

[1]The sample for this study came from a larger study focused on sexual minorities who did not identify as transgender. The majority of the sample is cisgender, meaning their assigned sex at birth is the same as their current gender identity, but a small subset identified as non-binary/genderqueer.

Puckett and colleagues (Puckett et al., 2016) found that queer-identified women were similar to bisexual women in reporting higher levels of psychological distress than lesbians. A New Zealand study directly comparing (cisgender and transgender) bisexual to pansexual women showed that pansexual women reported significantly higher rates of recent psychological distress (Greaves et al., 2019). Such evidence points to additional within group variation among sexual minorities vis-à-vis mental health and highlights the need for additional work in this area.

Factors Associated with Sexual Minority Group Differences in Mental Health

Research demonstrating that sexual minorities as a population tend to have poorer mental health compared to heterosexual people has been able to draw on the minority stress model (Meyer, 2003), which connects heterosexism and sexual minority-specific stigma and prejudice to mental health as an explanatory framework. However, the field is not as clear about how best to explain differences in mental health among sexual minorities, e.g., bisexual compared to gay/lesbian subgroups. A growing body of research examining factors that may explain higher rates of mental health concerns and psychological distress among bisexual people has focused on a number of "bisexual-specific" stressors, including the role of anti-bisexuality bias, both within and outside of LGBT community spaces (Friedman et al., 2014), the lack of identifiable bisexual community (Bostwick & Hequembourg, 2014; Mereish et al., 2017) and isolation from LGBT community resources (Frost & Meyer, 2012). One factor that has been raised, but rarely directly assessed, is the structure and characteristics of bisexual people's romantic/sexual relationships, as this may be a significant factor differentiating the lives of people who have sexual identities primarily focused on one gender versus those open to more than one gender (see, e.g.,Vencill & Israel, 2018 for discussion of the need to better understand the dimensions of bisexual people's relationships in the context of therapeutic interventions). A starting place in examining the impact of relationship status on mental health is whether or not someone is partnered (Sandfort et al., 2007; Taylor, 2018).

Research on heterosexual people has established a strong positive association between marriage and mental health (Brown, 2000; Gove et al., 1990; Horwitz et al., 1996; Simon, 2002). When this line of scholarship is extended to sexual minority people before and after legalized same-sex marriage, it shows that both being married or partnered without legal recognition is associated with lower psychological distress and other mental health problems among LGB people (Parsons et al., 2013; Riggle et al., 2010; Wight et al., 2012). However, previous studies of the impact of partnership status on mental health concerns among LGB people have not disaggregated monosexual and bisexual respondents. The lack of disaggregation within sexual minority populations leaves the field with a lack of understanding of whether bisexual respondents experience similar patterns of mental health effects when partnered as compared to gay men and lesbians. When the experiences of bisexual people and their partnership status *are* examined separately, the picture that emerges is mixed and demonstrates differences based on sex. In studies including bisexual men, no differences in psychological distress were found among bisexual men in relationships

compared to those who were not (Dubois et al., 2019; Hsieh & Liu, 2019; Taylor, 2018); however, bisexual women who were partnered experienced lower levels of psychological distress compared to those who were single (Hsieh & Liu, 2019). Conversely, two recent studies found that bisexual young adults reported worse mental health outcomes when partnered than when they were single (Whitton et al., 2018a, 2018b).

In addition to whether or not someone is partnered, the characteristics of people's partners may play a role in mental health as well. For instance, the sex/gender of a partner and a partner's sexual orientation may be factors that help explain the complicated findings regarding the saliency of partnership status for mental health among bisexual people (Vencill & Israel, 2018). One important partner characteristic that may vary among bisexual people is the gender of their partner. Research on this topic has highlighted the importance of partner gender among bisexual people because it may signal whether or not they are seen as a sexual minority person in various contexts, which can make them vulnerable to homophobia in some contexts and/or attacks on the credibility of their sexuality in others (Davids & Lundquist, 2018; Hayfield et al., 2018; Li et al., 2013; Ross et al., 2017). Studies that have assessed the unique experiences of bisexual people with regard to relationship status find that bisexual women in different-sex relationships report less connectedness to LGBT communities and greater relationship strain compared to bisexual women in same-sex relationships, resulting in feelings of social isolation and depression (Dyar et al., 2014; Molina et al., 2015; Morandini et al., 2018; Ross et al., 2017). Other qualitative and quantitative studies of bisexual women demonstrate that the gender of their partner is relevant to other dimensions of health, typically indicating that bisexual women with "opposite sex"[2] partners report more physical health problems than those who are in same-sex relationships and less than those who are single (Hsieh & Liu, 2019).

In addition to the gender of a person's partner, whether partners share the same sexual orientation is another characteristic of partnership that could be relevant to varying relationship dynamics, and therefore, an important factor to consider in mental health across sexual identity groups. Relationships between people with different sexual orientations, or mixed orientation relationships (MOREs), are theorized to be associated with the wellbeing of bisexual people through their potential impact on bisexual partners' opportunities to remain connected to LGBT communities and ability to find support and understanding of bisexual-related minority stress (Vencill et al., 2018; Vencill & Wiljamaa, 2016). Bisexual people also face stigma from both LGBT and non-LGBT communities; thus, if their partner is not bisexual, this anti-bisexual stigma could be present within their relationship with a partner of any gender. Using a small community sample, Vencill and colleagues (2018) showed that being in a MORE is a key factor affecting relationship quality and connections to LGBT community, particularly for bisexual women who were partnered with heterosexual men compared to those partnered with bisexual men. The extent to which partners' sexual orientations are the same is a factor that may differentiate not only the experiences of different subgroups of bisexual people, but also explain differences in experiences between monosexual and plurisexual subgroups.

[2]Research on partner gender often defer to a binary perspective on the sex/gender of partners, using terms such opposite-sex. We take this to mean cisgender other gender partners, such as cisgender men in relationships with cisgender women.

Current Study

It is well established that bisexual identified people in the U.S. experience mental health disparities, both compared to heterosexual people and other sexual minorities (e.g., Ross et al., 2019). However, there is limited population-level research examining risk and protective factors for differences in health among sexual minority subpopulations, and even less on the outcomes of bisexual men and queer and pansexual identified people. In this study, we seek to add to the current literature on sexual minority mental health by examining differences in psychological distress between sexual minority subpopulations with attention to the role of key factors along which sexual identity subgroups might differ: partnership status, partner gender, and partner sexual orientation. Drawing on previous studies on the relationship between sexual identity and mental health, and on the possible factors explaining plurisexual mental health disparities, we hypothesized that:

1. Both groups of plurisexual (bisexual and queer/pansexual) identified participants will report higher levels of psychological distress than monosexual identified participants (gay and lesbian).
2. Participants who report having a current partner will report lower levels of psychological distress compared to those without a partner.
3. Partnership status will moderate the association between sexual identity and psychological distress; we expect that while partnership status will predict distress among monosexual participants, it will not be associated with distress among plurisexual participants.
4. Among those that are partnered, partner gender and partner's sexual orientation will be independently associated with psychological distress. We expect that participants in relationships with people who are cisgender and different-sex will have higher levels of psychological distress than those who are partnered with same-sex or transgender partners. We also expect that participants in MOREs (i.e., with people who do not share their sexual orientation identities) will have higher levels of psychological distress than those with partners who have the same sexual orientation.

Methods

Study design

Respondents participated in the *Generations* survey, a five-year longitudinal study designed to assess health and social experiences across three generations of lesbian, gay, and bisexual people (LGB). The survey research consulting company Gallup recruited participants using the Gallup Daily Tracking Survey (GDTS) between 2016–2017. Preliminary eligibility was determined using a single question on the GDTS: "do you personally identify as lesbian, gay, bisexual, or transgender?" Those responding affirmatively were further assessed for final eligibility. Respondents were eligible if, at recruitment, they identified as lesbian, gay, bisexual, queer, or same-gender loving, were not transgender, and were in one of three age cohorts: 18–25, 34–41, 52–59 years. These age cohorts represent distinct historical contexts relevant to the social life of sexual minorities in the U.S. (Krueger et al., 2020). The

investigators developed the framework for these cohorts by composing a list of major events relevant to the social environment of LGB people starting in 1969 (details on which events were included are available on the study website at www.generations-study.com). Three events stood out to characterize distinct periods or "generations" of LGB life: the Stonewall Inn riots (1969), the formation of ACT UP (1987), and the Massachusetts Supreme Court ruling that it was unconstitutional to deny marriage to same-sex couples (2003). Cohorts were then defined by the current age group who would have been 10 years old (+/− 3 years), that is, approaching puberty, at the time of that event. With these social events as anchors for defining distinct cohorts, the resulting groupings were 18–25 years, 34–41 years, and 52–59 years old at the time of recruitment. Though not all adult age groups in the U.S. population are included, the sample is representative of the population of people in the targeted age cohorts in the United States.

Eligible participants were White, Black, or Latinx, completed a 6th grade education or higher, and spoke English. Interested eligible respondents then provided oral consent and were provided access to the baseline Generations survey, either online or by mail. Follow-up waves were conducted in 2017 and 2018. Data from the Wave 2 survey were used for these analyses (N = 894). While all respondents indicated they did not identify as transgender at baseline, respondents who identified as gender non-binary or another gender identity at Wave 2 (n = 54) or transgender (n = 4) were included in this sample. All analyses (bivariate and multivariate) were restricted to lesbian/gay, bisexual, and queer/pansexual respondents (n = 852), and multivariate analyses were additionally restricted to respondents with valid responses for psychological distress, partnership status, and covariates (n = 826). The Generations study was reviewed and approved by the University of California, Los Angeles Office of the Human Research Protection Program.

Study variables

Psychological distress was assessed using the 6-item Kessler 6 scale (National Comorbidity Survey, n.d.). Respondents were asked how often in the past 30 days that they felt "nervous," "hopeless," "restless or fidgety," "so depressed that nothing could cheer you up," "that everything was an effort," and "worthless." Responses were recorded on a 5-point scale from "none of the time" (0) to "all of the time" (4), and a total scale score was created as a sum of each of the items (range: 0–24). Twelve respondents were missing a psychological distress score and were excluded from multivariate analyses. The 6-item scale was found to be highly reliable (α = .89).

Sexual identity.—Respondents were asked, "which of the following best describes your current sexual orientation?" Response options were "straight/heterosexual," "lesbian," "gay," "bisexual," "queer," "same-gender loving," and "other (write-in)." Write-in responses were re-categorized into existing categories when possible (e.g., "dyke" was recoded as "lesbian"), and new categories were also created for commonly-endorsed write-in responses (e.g., a "pansexual" category was created for those who wrote in "pansexual"). Otherwise, write-in responses were not re-categorized. Respondents were then categorized into one of three response categories: gay/lesbian (n = 505), bisexual (n = 272), or queer/pansexual (n = 75). While pansexual and queer are distinct identities, preliminary research suggests that

mental health outcomes and relationship factors may be sufficiently distinct enough from monosexual and bisexual people to warrant their own sub-group (Goldberg et al., 2019; Greaves et al., 2019). In order to include these emerging identities and in the absence of any extant research suggesting that these two groups are markedly different than one another, we combined them in comparison to the other sexual identity groups with a longer history of inclusion in mental health research. Respondents from other sexual identity categories were excluded from all analyses (n = 42).

Partnership and partner characteristics.—Three items were included. First, *partnership status* was assessed with the question "are you currently in a relationship or feel a special commitment to someone?" Responses to the partnership status question were dichotomous (yes/no). Among respondents who were partnered, *partner gender* was assessed with the question "what's your current partner's gender?" (woman, non-transgender; man, non-transgender; transgender woman/male-to female [MTF]; transgender man/female-to-male [FTM]; non-binary/genderqueer). Responses were compared to each respondents' own sex at birth, and responses were dichotomized according to partner's sex (different sex vs. same sex/transgender/non-binary/genderqueer). Further, among partnered respondents, whether or not participants were in a MORE, we used the data on *partner sexual identity* which was assessed with the question "which of the following describes your current partner's sexual orientation?" (straight/heterosexual, lesbian, gay, bisexual, queer, same-gender loving, other). Responses were compared against participants' own sexual identities, and were categorized as either concordant (e.g., lesbian/gay respondent + lesbian/gay partner) or discordant (e.g., lesbian/gay respondent + bisexual partner). All respondents who answered questions about their partners' characteristics were asked to do so with regard to their current partner, or if they had more than one partner, thinking of their primary partner. In total, 5 respondents were missing a partnership status, and were excluded from multivariable analyses.

Covariates.—All analyses were stratified by respondents' sex assigned at birth. Respondents' *sex at birth* was assessed with the question "what sex were you assigned at birth, on your original birth certificate?" (female/male). *Age* was assessed based on the year respondents participated in the survey, and respondents were assigned to one of three cohorts: younger (ages 18–25), middle (ages 34–41), older (ages 52–59). *Education* was assessed with the question, "what is the highest level of school you have completed or the highest degree you have received?" Based on their responses, respondents were sorted into one of four education categories: high school education or less, some college, completed a four-year university degree, completed more than a university degree.[3]

Data analysis

First, we examined sample characteristics and made comparisons between lesbian/gay, bisexual, and queer/pansexual respondents using design-adjusted Wald (continuous variables) and F tests (categorical variables). Second, we used multiple linear regression

[3]Race/ethnicity and LGBT community connectedness (Frost & Meyer, 2012) were also considered as potential covariates, but were not significantly associated with psychological distress in bivariate models. As such, these variables were included in the descriptives table, but excluded from analyses to increase analytic power.

analyses to assess whether sexual identity and partnership status were independently associated with psychological distress. To assess the moderating role of partnership status on the association between sexual identity and psychological distress, we added an interaction term (sexual identity*partnership status) to the linear regression models. Third, among those who were partnered, we conducted multiple linear regression analyses to assess whether partner gender and partner's sexual orientation were independently associated with psychological distress. All analyses were stratified by respondents' sex at birth and adjusted for model covariates. In addition, analyses were sample weight adjusted to allow for generalization to the U.S. population of sexual minority adults.[4]

Results

Table 1 displays sample characteristics for lesbian/gay, bisexual, and queer/pansexual respondents, separately by respondents' birth sex. Compared to lesbian/gay women (M = 8.00), bisexual (M = 10.18) and queer/pansexual (M = 10.66) respondents had higher psychological distress scores (p<0.01). There were no differences among women in terms of partnership status, but among those in partnerships, all lesbian/gay women were in same sex/transgender/GNB partnerships, compared to 11.30% of bisexual and 40.74% of queer/pansexual women (p<0.001). With regard to the sexual identity of partners, compared to lesbian/gay women (19.27%), more bisexual (84.44%) and queer/pansexual (76.91%) women were in a MORE (p<0.001). There were also significant age differences, with bisexual and queer/pansexual respondents being younger than lesbian/gay respondents (p<0.001). There were significant differences by education, with a larger proportion of bisexual women reporting high school or less, compared to other groups (p<0.05).

Among men, bisexual (M = 9.45) and queer/pansexual (M = 8.12) men reported higher psychological distress than gay men (M = 6.37; p<0.01). There were no differences by partnership status, but among those in partnerships, 100% of gay-identified men were in a same sex/trans/GNB partnership, compared to 44.53% of bisexual and 59.19% of queer/pansexual men (p<0.001). Similar to women, a smaller proportion of gay men (15.82%) were in identity-concordant partnerships, compared to bisexual (71.42%) and queer/pansexual (70.25%) men.

There were significant age differences, with bisexual and queer/pansexual men being younger than gay men (p<0.001). There were no differences by education.

Table 2 presents results from multiple linear regressions which assessed the main and interaction effects of sexual identity and partnership status on psychological distress, accounting for model covariates. Among women, there were no main effects of either sexual identity or partnership status on psychological distress. However, there was a positive interaction effect between sexual identity and partnerships status on psychological distress (B = 5.43, SE = 1.72) for queer/pansexual women.

[4]Survey weights were developed by Gallup to adjust for nonresponse bias, described in detail elsewhere (Krueger et al, 2020).Briefly, the sampling frame was stratified to ensure the unweighted sample was proportionate by U.S. Census region and time zone. Then, weights were applied to compensate for disproportionalities in non-response and selection probabilities. Since LGBT population characteristics are not included in the U.S. Census, Gallup adjusted weights for the LGBT population based on all its LGBT samples collected since 2012 (separate LGB data is not available) that adjusts for nonresponse related to LGBT population characteristics.

Among men, there was a main effect of sexual identity on psychological distress, with bisexual men ($B = 2.32$, $SE = 1.03$) reporting significantly higher psychological distress than gay men in the main effects model. The interaction (sexual identity * partnership status) was not significantly associated with psychological distress among men.

Figure 1 displays the interaction between sexual identity and partnership status on psychological distress; i.e., differences in psychological distress for each sexual identity subgroup by partnership status. First, among women, Wald tests of specific pairwise comparisons (results not shown) demonstrated that, among single respondents, queer/pansexual, bisexual, and lesbian women did not differ in levels of psychological distress (all $p>0.05$). However, among those in relationships, levels of psychological distress differed between every group, with queer/pansexual women reporting the highest and lesbian/gay women the lowest levels (all $p<0.05$). Further, partnership was associated with differential psychological distress across groups, with partnership conferring a significant benefit to lesbian/gay women (i.e., lower psychological distress compared to single lesbian/gay women; $p = 0.003$). Partnered queer/pansexual women had marginally higher psychological distress, compared to single queer/pansexual women ($p = 0.09$). There were no differences between those single and partnered bisexual respondents ($p = 0.44$). Among men, psychological distress did not differ across sexual identity subgroups by partnership status.

Table 3 shows results from a multiple linear regression which assessed, among respondents who were partnered, the effect of partner's gender and partner's sexual identity on psychological distress, accounting for covariates. For both women and men, being in a relationship with a same-sex, transgender or GNB partner was not associated with significant difference in psychological distress compared to those in different-sex partnerships. However, being in a MORE was associated with higher levels of psychological distress (women: $B = 2.48$, $SE = 0.81$; men: $B = 2.19$, $SE = 0.89$). Next, we considered the possibility that lesbian/gay women and men, who were more likely to be in sexual identity concordant relationships than plurisexual respondents, drove these effects, and therefore included respondent's own sexual identity as a covariate. Among women, the effect of being in a MORE remained significant, even after including respondents' own sexual identity in the model ($B = 2.03$, $SE = 0.89$). In this context, queer/pansexual ($B = 3.31$, $SE = 1.37$), but not bisexual ($B = 1.17$, $SE = 1.54$) had higher psychological distress, compared to lesbian/gay women. Among men, the effect of being in a MORE was non-significant after including respondents' own sexual identity in the model ($B = 1.95$, $SE = 1.06$).

Discussion

Consistent with prior research, this study showed that women and men who identify as bisexual have higher levels of psychological distress than monosexual (i.e., lesbian and gay identified) participants. However, our study extends on this body of work by examining this difference in a population-based sample; thus, our results can be generalized to the U.S. population of White, Black, and Latinx sexual minority adults under 60 years old. In addition, this study expanded our understanding of plurisexual identified people's mental health by distinguishing bisexual identified respondents from other related but

distinct groups, namely queer and pansexual identified people. Specifically, in our bivariate analyses we found that both queer/pansexual and bisexual participants had higher levels of psychological distress than lesbian/gay participants, with queer/pansexual participants showing the highest levels of distress. These results suggest that there is differential risk for poor mental health not only between subgroups of sexual minority people (i.e., monosexual compared with plurisexual people) but also among plurisexual subgroups (i.e., queer/pansexual compared with bisexual people). Future research should examine the unique experiences that might put these subpopulations at risk beyond those experienced by plurisexual people generally.

Differences in psychological distress by sexual identity subgroup were moderated by partnership status among women. Among single respondents, there were no significant differences in psychological distress by sexual identity, yet among partnered respondents there were significant differences in psychological distress across all groups, with queer/pansexual women reporting the highest distress and lesbian/gay women reporting the lowest distress. Further, single lesbian/gay women reported significantly higher psychological distress compared to partnered lesbian/gay women, but single bisexual and queer/pansexual women did not report significantly different psychological distress than partnered bisexual and queer/pansexual respondents, respectively. Thus, consistent with previous research, we found that relationships are protective for sexual minority health among lesbian women (Riggle et al., 2010), but this appears not to be the case for bisexual and queer/pansexual women (Hsieh & Liu, 2019; Whitton et al., 2018a, 2018b). Also, consistent with some prior research, we found partnership status to be a less significant factor in men's mental health (Whitton et al., 2018a). Prior research shows that bisexual people report that their romantic partners stigmatize their sexual identity (Ross et al., 2010) and distrust them and fear that they will cheat (Turell et al., 2018). Negative attitudes about bisexuality might result in poor relationship quality and poor mental health. However, we were unable to examine these potential pathways in the current study; still, our findings suggest that plurisexual women's mental health might not independently benefit from romantic partnerships.

As noted earlier, some research has found that bisexual women who are partnered with men report more challenges in their relationships than those partnered with women (Hayfield et al., 2018; Li et al., 2013). Our tests for the effect of partner gender and sexual orientation complicates this narrative. We did not find that those partnered with cisgender different-sex people were more likely than those partnered with same-sex or transgender/GNB partners to experience psychological distress. This analysis highlights a problem with efforts to compare the effect of partner gender across sexual identities when the identity labels inherently convey information about the likely gender(s) someone is relationally or erotically attracted to. That is, lesbian participants were almost exclusively partnered with same-sex or transgender partners and the majority of bisexual women were partnered with cisgender men. The high degree of correlation between sexual identity and the gender of current partners may have made it too difficult to determine any evidence for an independent main effect of partner gender on mental health. Another possible reason that there was no significant effect of partner gender is that distress results from negative experiences with both same and different sex partners for plurisexual identified people, only different kinds of stress. Research has shown bisexual women and men experience stigma from both

lesbian/gay and heterosexual people (Dodge et al., 2012; Lambe et al., 2017; Rodriguez Rust, 2012). Bisexual respondents in same-sex partnerships likely experience homophobia and other minority stressors from heterosexual people in ways similar to lesbian/gay people in same-sex partnerships do (Frost & Meyer, 2012). However, bisexual respondents might not be protected by different-sex partnerships because they experience stress resulting from invisibility or lack of support from other LGBTQ people (Dyar et al., 2014). The presence of challenges and the likelihood of stigmatization in both types of relationships for bisexual and queer people may cancel out the effect of partner gender. Or, it may be that larger experiences of bisexual stigma and associated minority distress have an impact that is neither driven by nor attenuated by their partner's gender.

Finally, we acknowledge the possibility that a partner's gender may actually play a role in psychological distress, but through a different mechanism than is typically theorized in the literature on bisexual women's mental health. We approached our construction of the variable assessing partner gender (i.e., whether they were with a different-sex cisgender partner or not) in line with the literature indicating that this construct's importance can best be understood as grounded in analysis of heteronormativity (Ross et al., 2017, 2018). In contrast to current theories focused on heteronormativity as the basis for reasons that partner gender may matter for bisexual women's mental health, another way it may matter is through a lens of simple difference. That is, if partner gender was conceptualized as mattering due to *any* difference (e.g., a cis man with a trans partner, cis woman with a cis man, gender non binary person with a cis woman), perhaps the findings would be different. Given the small sample sizes of participants partnered with either trans or gender non-binary partners, we were unable to test this "simple difference" hypothesis. Future research should examine whether there is evidence for the effect of any differences in gender identities within relationships on people's mental health across sexual identity groups.

Although partner gender was not found to be related to psychological distress, the sexual orientation of one's partner was associated with mental health for women. By definition, bisexual and queer/pansexual people are more likely than monosexual people to be in MOREs. Clinicians and scholars have found that, for bisexual people, having non-bisexual partners may mean having a relationship in which there is binegativity and heightened unfounded concerns of infidelity (Crofford, 2018; Vencill et al., 2018). We believe this is the first study to document a similar finding among a sample of monosexual and queer/pansexual identities as well. Our work suggests that, regardless of someone's sexual identity, relationship difficulties might arise when someone's partner has a different sexual orientation—thus perhaps a different set of life experiences, community ties, etc.— that then affect mental health.

It is notable that when partner sexual orientation is included in the model, the association between bisexual identity and psychological distress is no longer significant. This finding suggests that the association between bisexual identity and mental health is in part a function of being partnered with people with a different sexual orientation, most of whom are cisgender heterosexual men. Queer/pansexual identities among women, when compared to monosexual identities, continued to be a significant independent predictor of psychological distress, regardless of whether partner sexual orientation was in the model, indicating

additional factors associated with these emerging identities among plurisexual people are relevant to mental health.

We found no associations between partnership status, partner gender, and partner sexual orientation for sexual minority men. Previous literature shows that being in a relationship is beneficial for the mental health of both heterosexual (Simon, 2002) and sexual minority men (Wight et al., 2013), but results are less consistent when research is specifically focused on bisexual men (Du Bois et al., 2018); it is unclear why we did not find similar associations in the current study, particularly among gay men. It is possible that sample size affected our ability to detect a statistically significant difference; however, this likely only explains the possible lack of statistically significant effect for queer/pansexual men in relationships for whom we observed meaningfully lower scores on psychological distress for partnered compared to single respondents. With regard to gay men, we note that several of the previous studies on the benefits of relationships on mental health have narrowly focused on the impact of legal status and not on the advantages of being in any relationship compared to being single. It is possible that a greater examination of life and wellbeing for gay men who are single or not with a primary partner confers a number of benefits that are different from the benefits of being in a relationship for other gay and bisexual men, thereby masking benefits of either scenario when compared to each other.

This study provides the first examination of partnership characteristics and mental health in a racially diverse sample of sexual minorities that disaggregates sexual identity groups. Nonetheless, there are limitations on our ability to fully examine some important related questions. For example, in the assessment of the significance of partner gender in relation to psychological distress, the sample size did not allow us to separate those partnered with same-gender cisgender partners and those partnered with transgender partners as a way to examine different types of relationships that may not appear as heterosexual to others. Similarly, the study only included cisgender and other non-transgender sexual minority participants, and therefore is not generalizable to the full sexual minority population, which includes transgender sexual minority identified people. Finally, the results of some of our comparisons should be interpreted with caution due to small numbers of respondents in several of these groups. For example, it is possible that the non-significant difference in psychological distress reported between gay (N = 192) and queer/pansexual males (N = 8) in relationships would have achieved significance with a larger sample size.

Conclusion

Using a nationally representative sample of sexual minority adults, we assessed the effects of partnership status, partner gender, and partner sexual orientation on psychological distress, separately by respondent gender and sexual identity. The findings demonstrated the significance of being partnered for some but not all sexual minority groups. Further, findings indicate that future research on sexual minority mental health should consider the role of partner sexual orientation across sexual identity communities.

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Public Significance Statement

This study sought to examine whether being in a relationship helped to explain mental health disparities between gay/lesbian, bisexual and queer/pansexual people. Further, it aimed to advance our understanding of whether the gender or sexual identity of people's partners are related to psychological distress, and whether these factors matter differently for various sexual minority groups. Findings show that plurisexual (bisexual, queer, pansexual) identified adults continue to report higher average levels of psychological distress compared to gays and lesbians, and that being partnered with someone of a different sexual identity than their own is related to mental health concerns across all groups.

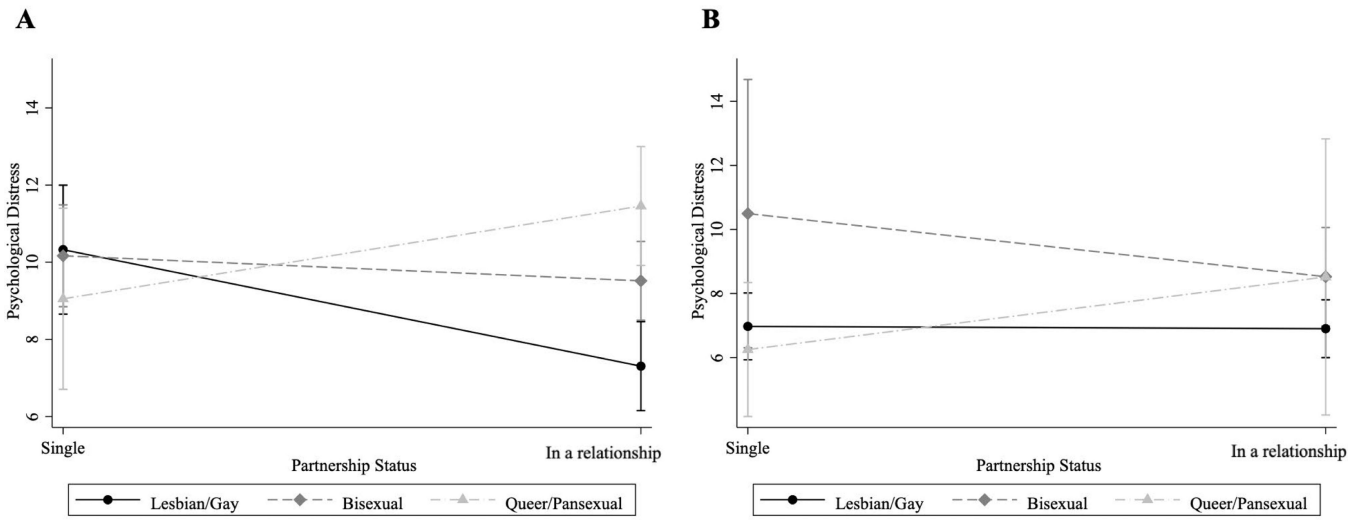

Figure 1.

Interaction Effect of Sexual Identity and Partnership Status on Psychological Distress

Note. Panel A displays results for women; Panel B displays results for men.

Table 1

Sample Characteristics by Sexual Identity

	Females							Males						
	Lesbian/Gay		Bisexual		Queer/ Pansexual			Gay		Bisexual		Queer/ Pansexual		
	N	Weighted %	N	Weighted %	N	Weighted %	F	N	Weighted %	N	Weighted %	N	Weighted %	F
	181	30.32	197	55.54	58	14.14		324	74.03	75	21.78	17	4.19	
Psychological distress, mean (SE)		8.00 (0.57)		10.18 (0.43)		10.66 (0.71)	5.93**		6.37 (0.34)		9.45 (0.95)		8.12 (1.31)	5.17**
Partnership status							2.88							0.36
Not currently in a relationship	60	38.23	62	28.34	20	47.46		131	39.95	27	36.52	9	50.10	
Currently in a relationship	121	61.77	133	71.66	38	52.54		192	60.05	47	63.48	8	49.90	
Partner gender (among those in relationships)							62.94***							33.94***
Different sex	0	0.00	116	88.70	20	59.26		0	0.00	28	55.47	3	40.81	
Same sex/trans/GNB	120	100.00	17	11.30	17	40.74		190	100.00	20	44.53	5	59.19	
Partner sexual identity (among those in relationships)							36.46***							22.96***
Same as respondent	103	80.73	18	15.56	11	23.09		170	84.18	16	28.58	3	29.75	
Different from respondent (i.e., in a MORE)	17	19.27	114	84.44	26	76.91		19	15.82	31	71.42	5	70.25	
Cohort							12.17***							5.87***
Younger	44	51.52	110	74.26	45	84.14		86	43.33	48	66.78	13	85.88	
Middle	36	20.07	59	20.47	12	14.22		84	25.07	10	21.70	3	11.55	
Older	101	28.41	28	5.27	1	1.64		154	31.60	17	11.52	1	2.57	
Race/Ethnicity							1.07							0.85
White	144	60.72	145	61.47	48	78.15		245	61.71	58	61.77	13	72.91	
Black	16	14.93	22	17.90	6	11.38		28	13.89	7	20.46	0	0.00	
Latino	21	24.35	30	20.63	4	10.47		51	24.40	10	17.76	4	27.09	
Education							2.58*							1.94
HS or less	23	37.84	44	49.01	7	28.11		55	41.32	16	43.70	3	31.42	
Some college	45	31.72	59	30.21	26	48.73		91	27.73	35	38.76	5	34.91	
College	55	16.63	55	13.04	21	19.09		102	17.89	20	14.81	8	30.58	

	Females							Males						
	Lesbian/Gay		Bisexual		Queer/ Pansexual			Gay		Bisexual		Queer/ Pansexual		
	N	Weighted %	N	Weighted %	N	Weighted %	F	N	Weighted %	N	Weighted %	N	Weighted %	F
More than college	58	13.80	39	7.74	4	4.08		76	13.07	4	2.73	1	3.08	
LGBT Community Connectedness, mean (SE)		3.10 (0.07)		2.88 (0.04)		2.98 (0.09)	3.78 *		2.88 (0.04)		2.81 (0.08)		3.07 (0.18)	0.91

* p < 0.05;

** p < 0.01;

*** p < 0.001

Table 2

Associations Between Sexual Identity and Partnership Status on Psychological Distress

	Females		Males	
	Main Effects	**Interaction Effects**	**Main Effects**	**Interaction Effects**
	***B* (*SE*)**	***B* (*SE*)**	***B* (*SE*)**	***B* (*SE*)**
Sexual identity (ref = Lesbian/gay)				
Bisexual	1.31 (0.70)	−0.16 (1.11)	2.32 (1.03)*	3.52 (2.20)
Queer/Pansexual	1.66 (0.99)	−1.27 (1.49)	0.41 (1.39)	−0.72 (1.20)
Partnership status (ref=Single)				
Partnered	−0.96 (0.61)	−3.02 (1.00)**	-0.36 (0.71)	−0.07 (0.66)
Sexual ID *Partnership status				
Bisexual, in a relationship		2.37 (1.31)		−1.90 (2.36)
Queer/Pansexual, in a relationship		5.43 (1.72)**		2.34 (2.53)
Cohort (ref=Younger)				
Middle	0.52 (0.91)	0.49 (0.87)	−2.37 (0.82)**	−2.40 (0.83)**
Older	−3.02 (0.75)***	−2.87 (0.74)***	−2.98 (0.66)***	−2.95 (0.66)***
Education (ref=Less than HS)				
Some college	−0.95 (0.76)	−1.11 (0.74)	0.58 (0.80)	0.53 (0.80)
College	−2.47 (0.77)**	−2.73 (0.76)***	−0.11 (0.82)	−0.13 (0.82)
More than college	−3.65 (0.88)***	−3.64 (0.85)***	−0.90 (0.76)	−0.95 (0.76)
Intercept	10.54 (0.86)***	11.87 (0.98)***	8.10 (0.85)***	7.95 (0.77)***

*p < 0.05;

**p < 0.01;

***p < 0.001

Table 3

Effect of Partner's Gender and Sexual Identity on Psychological Distress among Respondents in a Relationship

	Females		Males	
	***B* (*SE*)**	***B* (*SE*)**	***B* (*SE*)**	***B* (*SE*)**
Gender of partner (ref=Different sex)				
Same-Sex, Trans, or GNB Partner	−0.40 (0.81)	0.30 (1.28)	−0.80 (1.05)	0.83 (1.43)
Partner sexual identity (ref=Same as respondent)				
Different from respondent	2.48 (0.81) **	2.03 (0.89) *	2.19 (0.89) *	1.95 (1.06)
Sexual identity (ref = Lesbian/gay)				
Bisexual		1.17 (1.54)		1.05 (1.46)
Queer/Pansexual		3.31 (1.37) *		0.89 (2.46)
Cohort (ref=Younger)				
Middle	−0.12 (1.08)	0.12 (1.09)	−2.99 (0.97) **	−3.08 (0.94) **
Older	−2.72 (0.97) **	−2.10 (1.05) *	−2.61 (0.82) **	−2.59 (0.83) **
Education (ref=Less than HS)				
Some college	−0.34 (0.92)	−0.76 (0.97)	0.89 (0.92)	0.72 (0.92)
College	−1.70 (0.90)	−2.25 (0.96) *	0.24 (0.90)	0.15 (0.90)
More than college	−3.29 (1.08) **	−3.56 (1.09) **	−0.81 (0.98)	−0.85 (0.99)
Intercept	8.92 (0.90) ***	8.06 (1.45) ***	7.51 (1.24) ***	6.66 (1.69) ***

* $p < 0.05$;

** $p < 0.01$;

*** $p < 0.001$