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Relationship Quality and Mental Health among Sexual and Gender Minorities

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Abstract

Sexual and gender minorities assigned female at birth (i.e., sexual minority women, transgender men, and gender diverse [SMW TGD] individuals) experience disproportionately high rates of anxiety, depression, and substance use problems. Romantic relationship involvement has been shown to be beneficial for mental health and substance use among sexual and gender minorities. However, few studies have explored the impact of relationship quality on mental health, or if high relationship quality can reduce the negative impact of minority stress on wellbeing in this population. The present study examined within-persons associations of romantic relationship quality with symptoms of anxiety and depression, and alcohol and cannabis use problems among SMW TGD individuals in romantic relationships, and tested relationship quality as a moderator of associations of minority stress with mental health and substance use. Participants were 213 SMW TGD individuals (mean age: 20.63; 70.9% cisgender women, 7.5% transgender men, 19.2% gender diverse). Within-persons, higher relationship quality was associated with better mental health and substance use outcomes. Relationship quality at the between-persons level moderated the within-persons association of internalized heterosexism with depression, and of microaggressions with cannabis use problems. No other interaction effects were significant. The within-persons associations found in this study lend important support to relationship interventions based on theories that improvements in romantic relationship quality will result in improved wellbeing over time. Results can inform relationship education interventions to reduce mental health and substance use disparities in SMW TGD communities.

Keywords

sexual and gender minorities; relationships; anxiety; depression; substance use

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Sexual and gender minority (SGM) individuals are at increased risk for anxiety, depression, and substance use problems compared to heterosexual cisgender individuals (King et al., 2008; McCabe et al., 2009). These disparities are particularly pronounced for sexual and gender minorities assigned female at birth (SGM-AFAB; Kerridge et al., 2017), who experience higher rates of anxiety and depression than those assigned male at birth (Newcomb et al., 2020), but are significantly underrepresented in SGM research (Coulter et al., 2014). There is, therefore, a critical need for research focused specifically on SGM-AFAB (i.e., sexual minority women, transgender men, and gender diverse [SMW TGD] individuals)^a aimed at identifying factors associated with positive mental health, and specifically those that buffer the detrimental psychological effects of minority stress in this population. According to Minority Stress Theory, originated by Brooks (1981) and expanded upon by Meyer (2003), the mental health and substance use disparities faced by SGM are a consequence of unique stressors resulting from societal stigma against their minority identities. These stressors include both distal minority stressors, defined as external stressful events (e.g., victimization, microaggressions) and proximal stressors, including the internalization of negative societal attitudes (e.g., internalized heterosexism; Meyer, 2003). Consistent with this theory, a substantial body of research indicates that distal and proximal minority stressors contribute to heightened anxiety, depression, and substance use problems among SGM communities (Dyar et al., 2020; Kidd et al., 2018).

High quality romantic relationships (i.e., relationships that are satisfying and function healthily) are a widely acknowledged protective factor for mental health among people who engage in different-sex partnerships (Dush & Amato, 2005). Among partnered individuals, higher relationship quality is a robust predictor of good mental health, including decreased symptoms of depression and anxiety and lower rates of substance-related (e.g., alcohol use, illicit drug use) disorders (Whisman & Baucom, 2012). Further, within-individuals, improvements in relationship quality are associated with improved psychological wellbeing (e.g., Whitton et al., 2008) and a growing literature supports the effectiveness of couples therapy to treat substance use and depression among different-sex couples (Barbato & D'Avanzo, 2008; Powers et al., 2008). High quality relationships can also have stress-buffering effects (e.g., Cohen & Wills, 1985) in which the support provided by a romantic partner is protective against the detrimental effects of stressful events. Research with married heterosexual couples has shown that spousal support reduces the negative effects of a range of stressors on mental health (Jackson, 1992).

The benefits that high quality romantic relationships confer for different-sex couples suggest that they represent a promising potential protective factor that might help reduce the disparities SMW TGD individuals face in terms of depression, anxiety, and substance use. Sexual minority women are more likely than sexual minority men to be in long-term romantic relationships (Lau, 2012); thus, interventions aimed at building and sustaining relationship quality may also be promising avenues for reducing mental health and substance

^aWe acknowledge that the term SGM-AFAB can center sex assigned at birth and can be invalidating to individuals' gender identities. We do not intend to marginalize gender minority participants by using sex assigned at birth to describe this population. However, we use this terminology because this is the most precise description of the study's sample, which is purposefully inclusive of individuals with diverse gender identities to ensure fair representation. Throughout the rest of the manuscript, we use the term sexual minority women, transgender men, and gender diverse individuals (SMW TGD) in place of SGM-AFAB to be more affirming and inclusive.

use disparities among SMW TGD individuals. However, the existing literature on romantic relationship quality and mental health among SGM is quite small and limited in what it can tell us about the potential for improving SGM mental health via relationship-focused interventions.

To date, three cross-sectional studies have found that romantic relationship quality was negatively associated with depression among male and female same-sex couples (Hidalgo et al., 2018; Starks et al., 2017; Whitton & Kuryluk, 2014). One longitudinal study of sexual minority adults found that relationship discord at baseline was positively associated with depressive symptoms one year later (Gilmour et al., 2019). We could locate only one study on romantic relationship quality and substance use, which found that although positive relationship functioning was negatively associated with alcohol use, associations with recreational drug (e.g., cannabis) use were inconsistent (Starks et al., 2019). Because this study was conducted with sexual minority men, it is unclear how the results might generalize to SMW TGD people. One previous study found sexual minority women had wider substance use disparities relative to their heterosexual counterparts, and stronger associations between minority stress and substance use than sexual minority men (Kidd et al., 2018). We found no studies examining within-person associations of romantic relationship quality with mental health or substance use in SGM people.

A handful of studies have explored stress-buffering effects of romantic relationships among SGM individuals. Two found that romantic relationship involvement reduced negative associations between minority stress and psychological distress (Feinstein et al., 2016; Whitton et al., 2018b), but these did not speak to how relationship *quality* may buffer the effects of minority stress on mental health and substance use. Three other studies explored the potential stress-buffering effects of dyadic coping, defined as collective efforts by both partners in a romantic relationship to cope with stress (Bodenmann, 2005). One found that dyadic coping moderated the associations between heterosexist microaggressions and symptoms of anxiety and depression among male same-sex couples, such that these associations were weaker for couples who engaged in more dyadic coping (Sarno et al., 2021). In two others, dyadic coping reduced the associations between sexual orientation discrimination and depression among same-sex couples (Randall, Tao, et al., 2017), and between workplace minority stress and anxiety among women in same-sex relationships (Randall, Totenhagen, et al., 2017). Although dyadic coping is strongly predictive of overall relationship satisfaction (Falconier et al., 2015), it is not clear whether general relationship quality will function similarly as a stress buffer.

Social support from one's romantic partner has also reduced the negative associations between stressful life events and individual wellbeing among same-sex couples (Graham & Barnow, 2013). However, stressful life events were defined generally (e.g., starting a new business, becoming disabled, or having a child), and minority stressors were not examined. Minority stress is unique given that it can involve stigmatization or marginalization of the relationship itself (e.g., when a same-sex couple experiences harassment for holding hands in public), which is not captured in other conceptualizations of dyadic stressors. Thus, it is not clear how romantic relationship quality may buffer the impact of minority stress on mental health among SGM couples. Further, though we found no published research

testing romantic relationship quality as a moderator of the link between minority stress and substance use among SGM, it is plausible that the support of high quality romantic relationships could reduce the impact of minority stress, thereby reducing use of substances to cope.

Present Study

The present study aimed to address gaps in existing research by using multiwave longitudinal data to examine within-persons associations of romantic relationship quality (i.e., satisfaction with the relationship and social support from partner) with symptoms of anxiety and depression, and alcohol and cannabis use problems among SMW TGD individuals in relationships. Couple-based interventions for mental health and substance use in one or both members of the dyad rely on the assumption that changes in relationship quality will correspond with changes in mental health within an individual, over time (Powers et al., 2008). However, this assumption has not yet been tested in SGM individuals. Existing cross-sectional studies are unable to address changes in variables over time, and two time-point longitudinal studies focused on between-persons effects can only show that individuals who have higher relationship quality at one point in time also have better mental health at a subsequent point in time, compared to those with poorer initial relationship quality. These findings are not able to demonstrate whether increases in relationship quality and partner support experienced over time in romantic relationships (i.e., within-persons) are associated with corresponding reductions in depression and anxiety symptoms or substance use. By doing so, the present study has the potential provide a rigorous empirical rationale for couples-based interventions to prevent and treat mental health and substance use problems among SMW TGD communities.

In addition, to add to the limited literature on romantic relationship quality as a buffer of the association between minority stress on wellbeing, the present study tested relationship quality as a moderator of within-persons effects of distal (sexual orientation microaggressions) and proximal (internalized heterosexism) minority stress on the mental health/substance use outcomes (symptoms of anxiety and depression, and alcohol and cannabis use problems). We chose sexual orientation microaggressions (i.e., daily environmental, behavioral, verbal occurrences that convey negative messages to marginalized individuals; Sue et al., 2007) as our distal minority stress variable because distal minority stress can more often manifest as microaggressions, rather than in more overt forms of heterosexism (e.g., victimization). We investigated internalized heterosexism as our proximal minority stress variable given that it has been theorized as being “in the most proximal position along the continuum from the environment to the self” (Meyer, 2003, p. 682), and has been shown to be a robust predictor of internalizing mental health problems in previous research (Newcomb & Mustanski, 2010).

We made the following hypotheses: (1) Within-persons, romantic relationship quality would be negatively associated with mental health and substance use problems. (2) Romantic relationship quality would moderate associations of minority stress with mental health and substance use problems. Specifically, for individuals in higher quality relationships, minority

stress would show less positive associations with mental health and substance use problems than it would for those in lower quality relationships.

Method

Participants and Procedure

Participants were 213 SMW TGD individuals. Participant demographics are presented in Table 1. Data were collected as a part of FAB 400, an ongoing longitudinal cohort study of young SMW TGD individuals (total $N = 488$). The present study used data from Waves 1–6 from participants who reported having had the same serious romantic partner for at least three consecutive waves ($N = 216$; as described in the Data Analysis section, three participants were removed due to missing data). In order to assess participants' serious romantic partners, participants were asked at each wave to report the names of up to three romantic and/or sexual partners they had in the last six months. If participants reported more than one partner, they selected one as the "most significant;" this person was considered to be their serious romantic partner for these analyses. Participants were then asked if the partner they reported is the same partner from a previous wave, and if so, at which wave(s) this partner was reported.

Data collection began in November 2016 and is ongoing. To achieve a multiple cohort, accelerated longitudinal design, FAB 400 includes SMW TGD participants from two cohorts: (1) a late adolescent cohort recruited for FAB 400 in 2016–2017 ($N = 400$; 16- to 20-years-old at baseline); and (2) SMW TGD participants from Project Q2, a previous cohort study of SGM youth recruited in 2007 ($N = 88$; 23- to 32-years old at the FAB 400 baseline). Eligibility criteria at original cohort enrollment were being ages 16–20 years old, assigned female at birth, and either identifying with a sexual or gender minority label or reporting same-sex attractions or sexual behavior. This age range was selected for the larger project to allow us to capture the profound changes in socio-environmental factors, close relationships, and mental health that occur from late adolescence through early adulthood (Arnett, 2000). The sample's age range is well suited to the present study as it corresponds to the normative age range during which youth begin engaging in serious romantic relationships (Connolly et al., 2013). The FAB 400 cohort was recruited using venue-based recruitment, social media, and incentivized snowball sampling. Participants were compensated \$50 for each study visit and completed visits in 6-month intervals. The study protocol was approved by the Institutional Review Board at Northwestern University with a waiver of parental permission for participants under 18 years of age under 45 CFR 46, 408(c). Participants provided written informed consent, and we used mechanisms to safeguard participant confidentiality (i.e., a federal certificate of confidentiality).

Measures

Sexual orientation microaggressions.—On the 19 item Sexual Orientation Microaggressions Inventory (SOMI; Swann et al., 2016), participants were asked "In the past six months, how often have you had the following experiences?" Sample item: "You heard someone say 'that's so gay' in a negative way." Items are rated on a scale from 1 (*not at all*) to 5 (*almost every day* and averaged, with higher scores reflecting more frequent

experiences of sexual orientation microaggressions ($\alpha = .91$). A previous study using the SOMI with a different sample of SMW TGD participants from the FAB 400 cohort provided evidence of validity (e.g., expected associations with LGBT victimization and internalizing symptoms (Dyar et al., 2020)).

Internalized heterosexism.—On the Desire to be Heterosexual subscale of Puckett et al. (2017)'s adapted and validated measure, participants rate their agreement with each of eight statements (e.g., “Sometimes I think that if I were straight, I would probably be happier”; 1 = *strongly disagree* to 4 = *strongly agree*). For items that included reference to participants' sexual orientation, each participant's sexual orientation was piped in from responses on the demographic survey. The measure was developed on a sample of sexual and gender minorities assigned male at birth (SGM-AMAB); thus, the word “men” was changed to “women” in several items for our sample. Scores reflect the average response across items, with higher scores indicating higher levels of internalized heterosexism ($\alpha = .84$). In a different sample of SMW TGD participants from FAB 400, this measure demonstrated a unidimensional factor structure and expected correlations with victimization, anxiety, and depression (Dyar et al., 2020).

Social support from partner.—Four items were drawn from the six-item source-specific Social Provisions Scale, which evaluates the extent to which provisions of social support are currently available from one's romantic partner (Cutrona, 1989). Two items (recognition of one's competence and skills and a sense of belonging to a group that shares similar interests, concerns, and recreational activities) were excluded because they were not relevant to partner support. Participants rated their agreement with each of four statements with the name of their partner piped in (e.g., “I can depend on [partner name] if I really need it”; 1 = *strongly disagree* to 4 = *strongly agree*). Item responses were averaged, with higher scores indicating more social support from one's partner ($\alpha = .94$). The measure showed negative correlations with depression among different-sex couples, providing evidence of the validity of the measure (Cutrona, 1989), and has been used with same- and different-sex couples (Graham & Barnow, 2013).

Relationship quality.—On the 7-item Relationship Quality subscale of the Relationship Assessment Scale (RAS; Vaughn & Matyastik Baier, 1999), participants respond to each item on a 5-point Likert-type scale (e.g., “In general, how satisfied are you with your relationship?” was rated from 1 (*not satisfied*) to 5 (*very satisfied*)). Items were averaged into a single score, with higher scores indicating higher relationship quality ($\alpha = .86$). The RAS showed evidence of convergent validity during development (e.g., high correlations with other established measures of relationship satisfaction; Vaughn & Matyastik Baier, 1999).

Anxiety.—Anxiety was assessed using the 8-item Patient-Reported Outcomes Measurement Information System (PROMIS) Anxiety Short Form 8a, which has demonstrated strong internal consistency and content validity (Pilkonis et al., 2011). Participants rate how often they experienced each symptom of anxiety (e.g., “I felt nervous”; $\alpha = .95$) in the last seven days on a 5-point Likert-type scale from 1 (*never*) to 5 (*always*).

Raw scores are calculated by summing item scores, with higher scores indicating more symptoms of anxiety (possible range: 8–40). This scale has shown strong psychometric properties in a different sample of SMW TGD participants from FAB 400 (Dyar et al., 2020).

Depression.—Symptoms of depression were assessed using the 8-item PROMIS Depression Short Form 8a (Pilkonis et al., 2011). Participants rate how often they experienced each symptom (e.g., “I felt worthless”; $\alpha = .95$) in the last seven days on a 5-point Likert-type scale from 1 (*never*) to 5 (*always*). Raw scores are calculated by summing item scores, with higher scores indicating more symptoms of depression (possible range: 8–40). This measure demonstrated strong internal consistency ($\alpha = .95$) and content validity during development (Pilkonis et al., 2011), and with a different sample from FAB 400 (Dyar et al., 2020).

Alcohol use problems.—The 10-item Alcohol Use Disorders Identification Test (AUDIT) was used to assess alcohol use and problems (Saunders et al., 1993). Participants are asked to respond to each item regarding their alcohol use on different scales (e.g., “How often do you have a drink containing alcohol?” was rated from 0 (*Never*) to 4 (*4 or more times a week*)). Scores, calculated by summing item scores, range from 0 to 40; 0–7 indicates low levels of alcohol problems; 8–15 indicates moderate alcohol use problems; and > 16 indicates severe alcohol use problems. Scores showed acceptable internal consistency in the present study ($\alpha = .75$) and in a previous study with a different sample from FAB 400 (Dyar et al., 2020).

Cannabis use problems.—Cannabis use and problems were assessed using the 8-item Cannabis Use Disorder Identification Test (CUDIT; Adamson et al., 2010). Participants are asked to respond to each item regarding their cannabis use on different scales (e.g., “How often do you use marijuana?” was rated from 0 (*Never*) to 4 (*4 or more times a week*)). Raw scores are calculated by summing item scores. Scores range from 0 to 32, with scores from 8–11 indicating hazardous cannabis use and scores over 12 indicating a possible cannabis use disorder. Scores showed acceptable internal consistency in the present study ($\alpha = .73$) and in a previous study with a different sample from FAB 400 (Dyar et al., 2020).

Data Analysis

Analyses were conducted with Mplus Version 8. There were 216 participants who reported having had the same significant romantic partner for at least three consecutive waves of data collection. Of these 216, three participants were excluded because they had missing data on predictor variables (i.e., sexual orientation microaggressions, internalized heterosexism, social support from partner, and/or relationship quality), so their missingness was not addressed with full maximum likelihood estimation, which focuses on handling missingness on endogenous variables (final analytic $N = 213$). The final analytic sample had less than 1% missing data. There were a total of 924 observations across these 213 participants, with an average of 4.34 observations per participant, meaning that, on average, participants were in relationships with the same partner for about four waves of data collection (spanning 1.5 years).

Because social support from partner and relationship quality were highly correlated ($r = .79$), we created a latent relationship quality variable indicated by total scores on the source-specific Social Provisions Scale and the Relationship Quality subscale of the RAS (hereafter referred to as “relationship quality”). We constrained the factor loadings of the two indicators to be equal to avoid convergence problems arising from local under-identification. Hypothesis 1 was tested using multilevel structural equation modeling (MSEM) to examine within-person associations of relationship quality with mental health (i.e., depression and anxiety) and substance use problems (i.e., alcohol and cannabis use problems), with waves (Level 1; $N = 924$ observations) nested within persons (Level 2; $N = 213$ participants). MSEM treats repeated measures as indicators of latent variables, which estimate the between-person level variable while adjusting for nonindependence at the within-person level. Based on Ledermann and Kenny’s (2017) recommendations for analyzing dyadic data with multilevel modeling, model fit indices were not provided. Internalized heterosexism and sexual orientation microaggressions were centered prior to analyses; group-mean centered variables were used to test within-persons associations, and grand-mean centered variables were used to test between-persons associations.

Hypothesis 2 was tested by first examining within-persons associations of minority stress (i.e., sexual orientation microaggressions and internalized heterosexism) with mental health and substance use problems. To test the stress-buffering hypothesis among participants in relationships with the same partners over time, we were interested in understanding how the overall quality of one’s relationship influences the effects of minority stress on mental health and substance use. Thus, we tested relationship quality at the between-persons level (i.e., average relationship quality across all time points) as a moderator of the within-persons associations of minority stress with mental health and substance use problems. An alternative approach would be to test relationship quality as a moderator at the within-persons level; this would examine how fluctuations in relationship quality that were above or below one’s average had a moderating effect, which was not the aim of our analyses. We probed significant between-subjects interaction effects by examining the effects at one standard deviation above the mean and at one standard deviation below the mean (Preacher et al., 2006).

Main effects and interaction effects models controlled for age at baseline, race/ethnicity, gender identity, and sexual orientation. Race/ethnicity was recoded into four categories: White, Black, Latinx, and Other; White was used as the referent group. Gender identity was recoded into two categories: Cisgender and Gender Minority; Cisgender was used as the referent group. Sexual orientation was recoded into three categories: Lesbian, Bisexual/Queer/Pansexual, and Other; Lesbian was used as the referent group. Relationship duration at baseline was also included as a covariate in order to examine the unique contribution of relationship quality.

Results

Preliminary Results

Means, standard deviations, within- and between-persons bivariate correlations, and intraclass correlation coefficients (ICC) are presented in Table 2. ICCs can be interpreted as

the proportion of variance due to differences between people (or, alternatively, consistency within persons). Conversely, $(1 - ICC)$ can be interpreted as the proportion of variance due to differences within a person across visits (plus error). Sexual orientation microaggressions, relationship quality, social support from partner, anxiety, and depression all had ICCs that were close to .5, indicating that roughly equal proportions of variance were due to differences between persons as to differences within-persons, across visits. In contrast, the ICCs for internalized heterosexism, alcohol use problems, and cannabis use problems ranged from .65 to .75, indicating that higher proportions of their variances were due to differences between people than to differences within-persons, over time.

Within-Persons Associations of Romantic Relationship Quality with Mental Health and Substance Use Problems

Results for within- and between-persons associations of relationship quality with anxiety, depression, alcohol use problems, and cannabis use problems are presented in Table 3. Relationship quality showed negative within-persons associations with anxiety, depression, alcohol use problems, and cannabis use problems. Specifically, at waves when a participants' relationship quality was higher, they reported lower anxiety, depression, and alcohol/cannabis use problems than at waves when their relationship quality was lower. At the between-persons level, relationship quality was negatively associated with depression and cannabis use problems, but not associated with anxiety or alcohol use problems.

Tests of Romantic Relationship Quality as a Moderator of the Effects of Minority Stress on Mental Health and Substance Use Problems

First, we tested for main effects of minority stress on the four outcome variables. Results are presented in Table 3. Microaggressions were positively associated with anxiety and depression at the within- and between-persons levels, and with alcohol and cannabis use problems at the between-persons level, but not at the within-persons level. Internalized heterosexism was positively associated with anxiety and depression at the within- and between-persons levels, but was not associated with alcohol or cannabis use problems.

Results of cross-level interactions of relationship quality and minority stress on mental health and substance use problems are displayed in Table 4 and Figure 1. Relationship quality moderated the within-persons association of internalized heterosexism with depression (Figure 1a). Specifically, internalized stigma was positively associated with depressive symptoms within-persons for those who had lower levels of relationship quality (on average across waves), but was unrelated to depressive symptoms among those who reported higher relationship quality across waves. That is, only participants in lower quality relationships experienced higher depressive symptoms at waves when experienced more internalized stigma than usual; those in high quality relationships did not. Relationship quality also moderated the within-persons association of microaggressions with cannabis use problems as expected, such that the association was less positive for those in higher, versus lower, quality relationships. Interestingly, however, simple slopes (Figure 1b) indicated that there was no association for participants with lower relationship quality whereas the association was negative for those with high relationship quality. That is, at times when those in lower quality relationships experienced more microaggressions than usual, they

did not necessarily experience more cannabis use problems but when those in higher quality relationships experienced more microaggressions than usual, they experienced fewer cannabis use problems. No other interactions were significant.

Discussion

The present study is, to our knowledge, the first to examine within-persons associations of romantic relationship quality with mental health and substance use problems among SMW TGD individuals. We used longitudinal data from participants who were in relationships with the same romantic partner across at least three time points to assess whether, within individuals, changes in symptoms of anxiety, depression, and alcohol and cannabis use problems co-occurred with changes in the quality of these relationships. We also tested whether relationship quality moderated the within-persons associations of minority stress with mental health and substance use problems. We made the following hypotheses: within-persons, romantic relationship quality would be negatively associated with anxiety, depression, and alcohol and cannabis use problems; and romantic relationship quality would have a stress-buffering effect (i.e., moderating) effect on the associations of minority stress with mental health and substance use problems.

Within-Persons Associations of Romantic Relationship Quality with Mental Health and Substance Use Problems

Results showed that our first hypothesis was supported. We found that relationship quality had significant negative within-persons associations with symptoms of anxiety and depression, as well as with alcohol and cannabis use problems. Previous cross-sectional studies have found that same-sex couples with better relationship quality also reported less depression (Hidalgo et al., 2018; Starks et al., 2017; Whitton & Kuryluk, 2014), and one longitudinal study found that relationship discord at baseline was associated with more depressive symptoms one year later (Gilmour et al., 2019). An additional study found mixed results with regard to relationship quality and substance use among male same-sex couples (Starks et al., 2019). However, studies that do not examine within-persons associations are limited in their ability to test the fundamental assumption of many couples-based interventions that improvements in relationship quality will correspond with improvements in mental health. Although these within-persons associations have been previously demonstrated among different-sex couples (Whitton et al., 2008), this is the first study to show that over time, for SMW TGD individuals in relationships, when relationship quality was higher, anxiety and depression symptoms, as well as alcohol and cannabis use problems, were lower.

Romantic Relationship Quality as a Moderator of the Effects of Minority Stress on Mental Health and Substance Use Problems

Our second hypothesis, that high relationship quality would protect SMW TGD individuals from the adverse mental health and substance use effects of minority stress, was partially supported. First, consistent with stress-buffering models (Cohen & Wills, 1985), relationship quality moderated the within-person association of internalized heterosexism with symptoms of depression. Specifically, for those whose relationships were characterized by lower

quality, depressive symptoms were higher at waves in which they experienced more internalized heterosexism; in contrast, for those in high quality relationships, there was no within-persons association of internalized heterosexism and depression. This finding suggests that individuals in relationships providing them with more satisfaction and support may have been protected from depressive reactions to internalized heterosexism. As such, it builds upon previous research showing that romantic relationship involvement reduced associations between minority stress and psychological distress (Feinstein et al., 2016; Whitton et al., 2018b) and that social support from one's romantic partner reduced the negative effect of general stress on psychological wellbeing among SGM people (Graham & Barnow, 2013). By showing that relationship quality buffers against the depressogenic effects of minority stress, specifically, this result supports the use of relationship-focused interventions that strengthen SGM couple functioning as one way to reduce the deleterious effects of minority stress on SMW TGD individuals' mental health, particularly depression.

Romantic relationship quality also moderated the within-person association of microaggressions with cannabis use problems in the expected direction (i.e., with a less positive association for individuals in higher quality relationships). This suggests that individuals who have the emotional and supportive benefits of a high quality relationship may rely less on maladaptive coping strategies, such as substance use, in the face of heightened microaggressions. However, the simple slopes for high- and low-quality relationships were unexpected: Experiencing more microaggressions than usual was not associated with current cannabis use problems for those whose relationships were lower in quality, and those in higher quality relationships experienced *fewer* cannabis use problems at waves when they experienced more microaggressions. This may have been related to the lack of an (unmoderated) within-person association between microaggressions and cannabis use problems in this sample. Though it is not clear why this association was not present, it may reflect that our participants had all been in serious romantic relationships for at least 1.5 years. Because serious romantic partners monitor one another's behavior and discourage unhealthy behaviors (e.g., alcohol and drug use; Umberson, 1987), substance use tends to be lower among romantically involved individuals (e.g., Whitton et al., 2018). Therefore, there may have been less variance in substance use than samples including non-partnered individuals. Previous research has found mixed associations of minority stress with cannabis use among SMW TGD individuals (Dyar et al., 2020), and that there are a variety of reasons people may use cannabis unrelated to coping with stress, such as for social enhancement (Lee et al., 2007). Future research is needed to explore the multifaceted roles that cannabis may play in coping with stress, and how it may be impacted by relationship quality, among SMW TGD people.

In contrast to hypotheses, romantic relationship quality did not moderate the association of microaggressions with anxiety, depression, or alcohol use problems, or of internalized heterosexism with anxiety or substance use problems. It is possible that high relationship quality alone is not sufficient to reduce the negative impact of minority stress on mental health. Rather, engagement in more intentional coping strategies may be necessary. Joint dyadic coping, which involves collective efforts by both partners to cope with stress including joint problem-solving, joint information seeking, sharing of feelings, and relaxing together (Bodenmann, 2005) has been shown to weaken the associations

between heterosexist microaggressions and symptoms of anxiety and depression (Sarno et al., 2021). Cross-sectional studies have also shown that engaging in dyadic coping decreased associations of discrimination with anxiety and depression among same-sex couples (Randall, Tao, et al., 2017; Randall, Totenhagen, et al., 2017); thus, it may be a more robust buffer of minority stress on mental health than global relationship quality or support. Future research is needed to further disentangle the specific relationship factors that are most crucial for couples to be resilient in the face of minority stressors.

Limitations and Future Directions

Several limitations warrant consideration. First, although the total sample size was substantial for a longitudinal cohort study of SMW TGD individuals, numbers of specific gender, sexual orientation, and racial/ethnic subgroups were too small to explore potential demographic differences in associations of minority stress, relationship quality, mental health, and substance use problems (although we did include these demographics as covariates in all analyses). Previous research has shown that, for example, bisexual individuals experience unique stressors in their romantic and sexual relationships (Feinstein & Dyar, 2017), do not experience the benefits of being in a romantic relationship to the same extent as gay/lesbian individuals, and can even experience increased risk for negative health outcomes by being in a relationship (Whitton et al., 2018a, 2018b). In addition, racial and ethnic minority individuals in same-sex relationships have been shown to experience unique stressors related to simultaneously being both a racial/ethnic and sexual minority, including experiences of racism, lack of family acceptance, and cultural norms around masculinity (Martinez et al., 2017). Lastly, gender minorities, which encompasses a diverse group of individuals whose sex assigned at birth differs from their gender identity, experience considerable stigma in their relationship, dating, and sexual relationships (James et al., 2016). However, previous research has shown that among transgender men, support from a romantic partner moderated associations of being in a relationship with symptoms of depression and anxiety (Meier et al., 2013), indicating that our results may be generalizable to gender diverse individuals. Given the notable diversity of experiences among SMW TGD people in relationships, future research focusing specifically on these subgroups is needed to assess the complex implications that romantic relationship quality may have for mental health, substance use, and buffering against the effects of heterosexism, racism, cissexism, and monosexism.

Second, we did not examine gender of serious relationship partners. Sizeable minorities of SMW TGD individuals have relationships with cisgender men and gender minority individuals (Bauermeister et al., 2010), and previous research has shown that involvement in same-sex versus different-sex relationships may have different implications for experiences of stigma and psychological wellbeing (Molina et al., 2015). Third, we only examined two dimensions of minority stress, and did not include other aspects of minority stress, such as sexual orientation concealment or disclosure, which may be particularly relevant for SMW TGD people in relationships. In addition, the construct of microaggressions has received criticism for its conceptual and methodological limitations, and scholars have argued for substantial changes to the microaggression research program (Lilienfeld, 2017), in which case, the present study would warrant replication. Fourth, our sample included

only people in serious romantic relationships with the same partner for at least three waves of data collection (spanning one year). While this enabled us to look at within-persons associations while participants were in relationships with the same partner, it excluded individuals in shorter-term romantic relationships, those who were single, or those who had multiple partners simultaneously, which may have restricted our sample to those who had generally lower anxiety, depression, and substance use. Future research that examines fluctuations in relationship quality and mental health in shorter time intervals (e.g., Whitton et al., 2008) could examine these effects in relationships of shorter duration, and could include assessments after these relationships end. Future research is also needed to assess these effects for those with multiple partners. Lastly, our results do not enable us to draw conclusions about the directions of associations. Better mental health and lower substance use may lead to higher relationship quality, or these may be bidirectional effects. Continued longitudinal research is needed to provide more evidence of causality among these variables.

Despite these limitations, results of our study play an important role in supporting couples-based interventions to address mental health and substance use disparities among SMW TGD communities by supporting the notion that by improving relationship quality for couples, there may be subsequent improvements in individual wellbeing. Relationship education programs tailored toward female same-sex couples, such as the Strengthening Same-Sex Relationships Program (Whitton et al., 2017; now called *Better Together* to be more gender inclusive) and Rainbow CoupleCARE (Pepping et al., 2020), have shown preliminary effectiveness in improving both mental health and relationship functioning. Further, a recently developed adaptation of cognitive-behavioral couple therapy for female same-sex couples experiencing sexual minority stress demonstrated promising effects on relationship quality and couple coping skills in a small open trial (Pentel et al., 2020). Results of the current study support the expansion of such efforts, including the adaptation of other evidence-based couple therapies (e.g., Behavioral Couples Therapy; Powers et al., 2008) to be culturally appropriate for SMW TGD communities.

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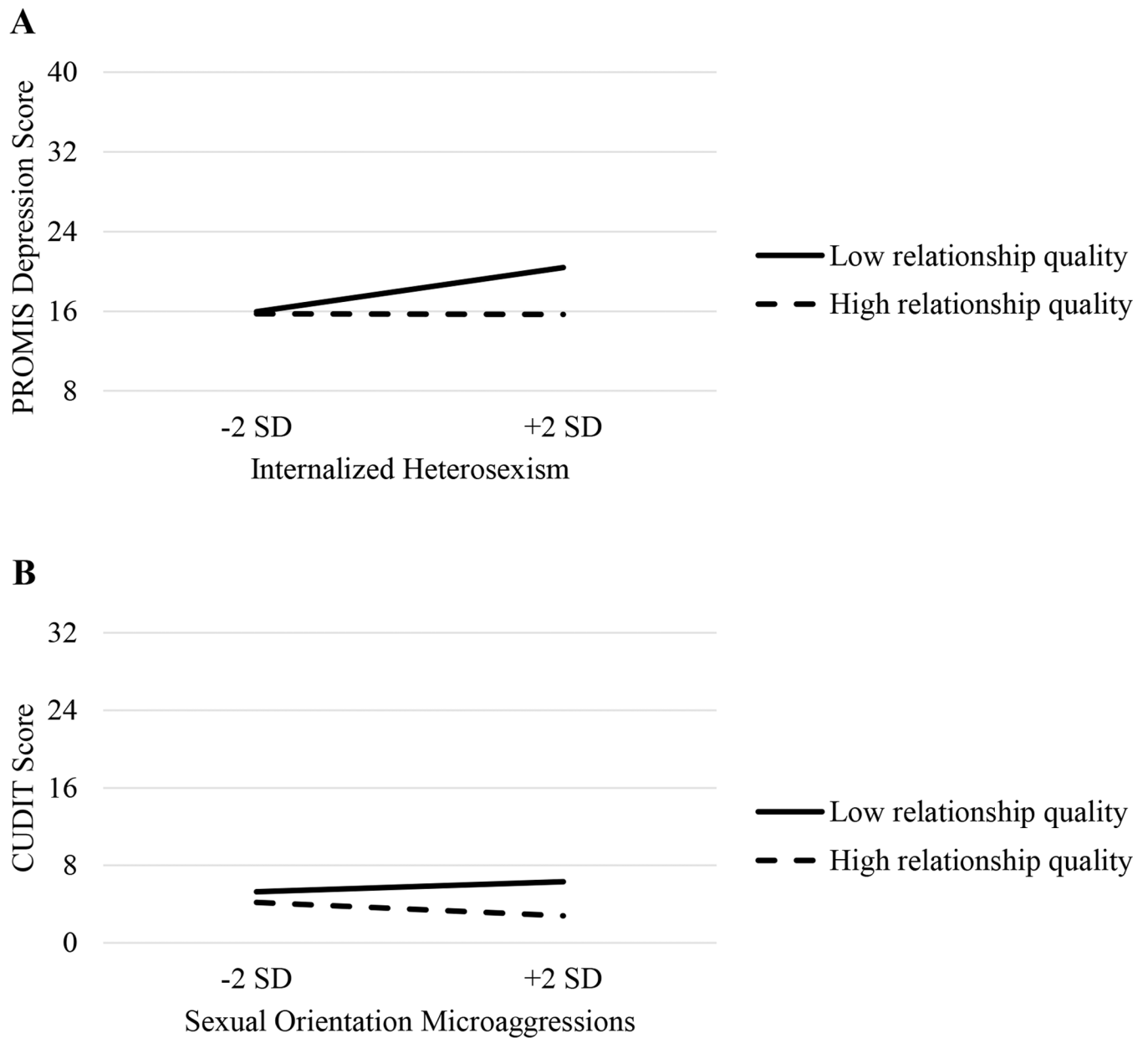


Figure 1. Simple slopes of significant interaction effects. Because predictor variables were group-means centered prior to analysis, the range of internalized heterosexism and microaggressions are expressed in terms of standard deviation ($\pm 2SD$), rather than scale scores, on the X-axis. A. Internalized heterosexism \times relationship quality on depression. B. Microaggressions \times relationship quality on cannabis use problems. CUDIT = Cannabis Use Disorders Identification Test.

Table 1

Participant Demographics (N = 213)

	M (SD)
Age	20.63 (3.81)
	N (%)
Race/Ethnicity	
Black/African American	74 (34.7)
White	57 (26.8)
Hispanic or Latino/Latina/Latinx	54 (25.4)
Multiracial	16 (7.5)
Asian	10 (4.7)
Other	2 (0.9)
Sexual Orientation	
Bisexual/Pansexual	120 (56.3)
Lesbian/Gay	47 (22.1)
Queer	27 (12.7)
Unsure/Questioning	8 (3.8)
Not Listed	6 (2.8)
Asexual	4 (1.9)
Straight/Heterosexual	1 (0.5)
Gender Identity	
Female	151 (70.9)
Gender Non-Conforming/Gender Queer/Non-Binary	41 (19.2)
Transgender/Male	16 (7.5)
Not Listed	5 (2.3)

Table 2

Means, Standard Deviations, Within- and Between-Person Bivariate Correlations, and Intraclass Correlations

Variable	1	2	3	4	5	6	7	8
1. Sexual orientation microaggressions	.46	.16**	.10**	.07*	.13**	.16**	-.02	-.02
2. Internalized heterosexism	.34**	.68	.02	-.03	.09*	.09**	.02	-.04
3. Social support from partner	-.14*	-.04	.48	.52**	-.10**	-.14**	-.13**	-.07*
4. Relationship quality	-.20**	-.07	.79**	.55	-.09*	-.16**	-.15**	-.08*
5. Anxiety	.42**	.29**	-.08	-.13	.58	.69**	.14**	.04
6. Depression	.49**	.38**	-.19**	-.23**	.83**	.55	.16**	.06
7. AUDIT	.18*	.12	-.02	.00	.20**	.13	.65	.17**
8. CUDIT	.14*	.02	-.14*	-.15*	.18*	.19**	.33**	.75
Mean	1.54	1.58	3.59	4.22	18.95	17.07	3.41	4.60
Standard Deviation	.48	.52	.66	.71	8.27	7.96	3.63	5.42
Possible Range	1–5	1–4	1–4	1–5	8–40	8–40	0–40	0–32

Note. AUDIT = Alcohol Use Disorders Identification Test. CUDIT = Cannabis Use Disorder Identification Test. Within-persons correlations are located above the diagonal, between-persons correlations are located below the diagonal, and intraclass correlations are located on the diagonal and in bold text.

* $p < .05$

** $p < .001$.

Table 3

Within- and Between-Persons Associations of Relationship Quality and Minority Stress on Mental Health and Substance Use Problems

Predictor	Level	Anxiety	Depression	AUDIT	CUDIT
		<i>b</i> (<i>SE</i>)	<i>b</i> (<i>SE</i>)	<i>b</i> (<i>SE</i>)	<i>b</i> (<i>SE</i>)
Relationship quality	Within	-.64 (.23)	-.95 (.24)	-.35 (.11)	-.24 (.12)
	Between	-.84 (.44)	-1.40 (.45)	-.17 (.20)	-1.14 (.49)
Minority stress					
Sexual orientation microaggressions	Within	1.90 (.66)	2.49 (.67)	-.09 (.20)	-.16 (.46)
	Between	6.65 (1.35)	7.88 (.96)	1.71 (.80)	2.03 (.92)
Internalized heterosexism	Within	1.68 (.75)	1.65 (.84)	.11 (.23)	-.34 (.43)
	Between	3.46 (.84)	4.39 (.79)	.89 (.50)	.58 (.76)

Note. AUDIT = Alcohol Use Disorders Identification Test. CUDIT = Cannabis Use Disorder Identification Test. Values are unstandardized regression coefficients. All models were estimated controlling for age at baseline, race/ethnicity, gender identity, sexual orientation, and relationship duration at baseline. Relationship quality = latent variable indicated by scores on the four-item source-specific Social Provisions Scale and the Relationship Quality subscale of the Relationship Assessment Scale. Statistically significant associations ($p < .05$) are in bold.

Table 4

Cross-Level Interaction Effects and Simple Slopes of Relationship Quality with Minority Stress on Mental Health and Substance Use Problems

Predictor	Anxiety	Depression	AUDIT	CUDIT
	<i>b</i> (<i>SE</i>)	<i>b</i> (<i>SE</i>)	<i>b</i> (<i>SE</i>)	<i>b</i> (<i>SE</i>)
Microaggressions × Relationship quality	-.29 (.68)	-.21 (.73)	.04 (.72)	-.99 (.44)
High relationship quality	–	–	–	-1.13 (.55)
Low relationship quality	–	–	–	.84 (.61)
Internalized heterosexism × Relationship quality	-1.21 (.80)	-2.16 (1.10)	-.50 (.28)	-.26 (.62)
High relationship quality	–	-.70 (1.28)	–	–
Low relationship quality	–	4.26 (1.47)	–	–

Note. AUDIT = Alcohol Use Disorders Identification Test. CUDIT = Cannabis Use Disorder Identification Test. Values are unstandardized regression coefficients. All models were estimated controlling for age at baseline, race/ethnicity, gender identity, sexual orientation, and relationship duration at baseline. Relationship quality = latent variable indicated by scores on the four-item source-specific Social Provisions Scale and the Relationship Quality subscale of the Relationship Assessment Scale. Significant interaction effects were probed by examining effects at one standard deviation above the mean (i.e., high relationship quality) and one standard deviation below the mean (i.e., low relationship quality). Statistically significant associations ($p < .05$) are in bold.