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ORIGINAL PAPER

Perceptions of Relationship Quality Before and During COVID-19 Pandemic Among Young Sexual Minority Men in Romantic Relationships

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Abstract

The COVID-19 pandemic has impacted the well-being of people worldwide; however, there has been limited research examining ways in which the pandemic has created changes in relationship quality among young sexual minority men. We analyzed data from a sample of 150 young sexual minority men, aged 15–24 years. In total, 25% reported their relationship quality decreased during the pandemic, 47% reported no change, and 28% reported increased relationship quality due to COVID-19. In multinomial models, intimate partner violence, lower commitment, and spending less time with a partner due to COVID-19 were associated with decreased relationship quality during the pandemic compared to those who reported no change or increased relationship quality due to the pandemic. More efforts are needed to understand and address the impact of COVID-19 on the romantic relationships of young sexual minority men.

Keywords Young Adults · Romantic relationships · Sexual minority men · COVID-19 pandemic · Sexual orientation

Introduction

There is strong evidence that the COVID-19 pandemic has increased the existing health inequities experienced by sexual minority populations (Drabble & Eliason, 2021; Fish et al., 2021; Galinsky et al., 2018), with significant reductions in access to services, social capital and community (Qiao et al., 2021; Santos et al., 2021; Waterfield et al., 2021) that are vital in protecting the health of sexual minority populations (Operario et al., 2020). Several studies have demonstrated that romantic relationships are fundamental in maintaining health and well-being for sexual minorities, acting to provide a sense of social and emotional support, and buffering against the effects of external stigma and discrimination (Feinstein et al., 2018; Gamarel & Revenson, 2015; LeBlanc et al., 2015; Rostosky & Riggle, 2017). One recent study has demonstrated that the COVID-19 pandemic was associated with shifts in relationship quality among sexual minority men (Walsh & Stephenson, 2021), with changes in relationship quality associated with COVID-19 related stressors such as loss of employment. However, the impact of the pandemic on the relationship quality of young sexual minority men (ages 15 to 24) has received less attention (Salerno et al., 2020), and it is plausible that young sexual minority men may experience more significant shifts in their relationship quality due to reduced opportunities to interact with partners and heightened exposure to sexuality-based stigma, for example from living with family members. However, to our knowledge, research has yet to examine associations between relationship characteristics and sexuality-based stigma on perceptions of relationship quality during the COVID-19 pandemic.

Adolescence and early adulthood are critical developmental periods for relationship development (Collins et al., 2009), and

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positive relationships can impact an individual's health and future relationship functioning (Seiffge-Krenke, 2003). Young sexual minority men disproportionately experience sexuality-based stigma and victimization (Hatzenbuehler, 2009; Katz-Wise & Hyde, 2012; Meyer, 2003). Although romantic partners can be a source of support, stigma and victimization, such as discrimination and internalized heterosexism, can undermine the relationship quality of sexual minority men (Feinstein et al., 2018; LeBlanc et al., 2015; Rostosky & Riggle, 2017). During the COVID-19 pandemic, sheltering-in-place, lockdown orders, and related educational and employment consequences have negatively influenced young peoples' mental, physical, and social health (Lee, 2020). These daily life changes and stressors due to the pandemic may also have profound impact on the ways in which young sexual minority men cope with stigma (Salerno et al., 2020) and may also shape the quality of their relationships. For example, young sexual minority men may have needed to shelter-in-place or return to their families or moved in with their romantic partners during the COVID-19 pandemic, which may have reduced the amount of time spent with partners, commitment, and produced additional stress on relationships. Importantly, sexuality-based stigma and stress can result in depressive and anxious symptoms, conflictual communication and even intimate partner violence among youth (Edwards & Sylaska, 2013; Song et al., 2020).

Using baseline data collected from a larger study that sought to pilot test a relationship-based HIV prevention intervention (Gamarel et al., 2019), this short report seeks to understand changes in self-reported relationship quality among an online sample of young sexual minority men, aged 15–24 years old, during the COVID-19 pandemic. We examined whether relationship characteristics, sexuality-based stigma, and intimate partner violence were related to self-reported changes in relationship quality due to COVID-19 pandemic. Findings have the potential to extend future conceptual frameworks and public health programs designed to address the health and well-being of young sexual minority during and in the aftermath of the COVID-19 pandemic.

Method

Participants and Procedure

Data analyzed for the current short report were collected as part of ongoing study called "*We Prevent*," which is designed to develop and pilot test a relationship-focused HIV prevention intervention for young sexual minority men (aged 15–24 years) in romantic relationships (Gamarel et al., 2019). Enrollment for *We Prevent* occurred between December 2019 and September 2021. In total, 318 participants were enrolled into *We Prevent* with 47.2% ($n = 150$) enrolled after March 2020. In April 2020, we included COVID-19 related questions; thus, the analytic sample represents the 150 participants who completed the COVID-19-related questions between April 2020 and September 2021.

Participants were eligible to enroll in the study if they met the following criteria: (1) aged 15 to 24; (2) resided in the USA; (3) met the age for sexual consent in their current state of residence; (3) self-identified that they were in an emotional and/or sexual relationship with a cisgender man; (4) identified as cisgender or transgender man; (5) self-reported any form of sex (oral, vaginal, anal) in their lifetime; (6) had access to a computer, personal device, or smartphone with internet access; (7) self-reported an HIV-negative or unknown HIV status; and (8) were able to speak and read English.

Participants were recruited through geo-social network applications (i.e., Facebook, Instagram, and Jack'd) and referrals from the Annual American Men's Internet Survey (AMIS) (Wiatrek et al., 2021). Participants who clicked on the advertisement or were referred from AMIS were directed to the study webpage that provided basic information with a study screener and consent form. A study staff member then verified their responses. Those who were interested, screened eligible, gave informed consent, and were verified to be eligible by a staff member (i.e., verify eligibility from screener data and identify potential duplicates) were then directed to an electronic study management system (Study Management and Retention Toolkit [SMART] developed by Emory University (Khosropour et al., 2013) where they entered their contact information and were provided with instructions on how to download the study-specific SMART app where all study activities occur (e.g., order STI kits, complete baseline and follow-up surveys). After participants completed their baseline survey, they were compensated with a $40 Amazon electronic gift card. All study procedures were approved by the University of North Carolina at Chapel Hill institutional review board with a waiver of parental permission for those under 18 years of age.

Measures

Relationship Quality

Participants responded to a single question "Compared to the time before COVID-19/Coronavirus, please tell us how satisfied you are feeling with your relationship with your boyfriend or partner…" with response options 0 = has not changed, 1 = has highly decreased because of COVID-19, 2 = has somewhat decreased because of COVID-19, 3 = has somewhat increased because of COVID-19, and 4 = has highly increase because of COVID-19. In total, 50% reported no change, 6% reported highly decreased, 14% reported somewhat decreased, 18% reported somewhat increased, and 10% reported highly increased. Given the small number of participants who reported "highly" increased or decreased, we created a three-category variable (-1 = decreased due to COVID-19, 0 = no change due to COVID-19, 1 = increased due to COVID-19).

Relationship Characteristics

Participants reported their relationship length (less than 3 months, 4–11 months, one year or more) and sexual agreement (monogamous, open, don't know). Participants also completed two validated measures of relationship dynamics, specifically communication and commitment, which have been used in studies with sexual minority populations (Kurdek, 1994; Oren, 2021). Participants completed a 16-item general communication style questionnaire (Kurdek, 1994), which assesses conflict engagement and withdrawal behaviors (example item "Launching person attacks"). Response options range from Never to Always and items were mean scored and higher scores indicate more conflict behavior. The communication scale demonstrated good psychometric properties in our sample ($\alpha = 0.85$). Commitment level was assessed with seven items assessing their commitment to their current partner (example item: "I am committed to maintaining my relationship with my partner"). (Agnew et al., 1998). Response options range from "Not at all agree" to "Completely agree," and items were mean scored and higher scores indicate more commitment. The communication scale demonstrated adequate psychometric properties in our sample ($\alpha = 0.62$). Participants indicated whether they had experienced any intimate partner violence using an abbreviated version of the IPV-GBM Scale developed and validated with sexual minority men (Stephenson & Finneran, 2013); participant's responses were dichotomized into "yes" and "no" for all 6 items. Finally, participants responded to a single question assessing whether their time spent with the partner had changed due to COVID-19. In total, 18.7% reported no change, 29.3% reported highly decreased, 12.7% reported somewhat decreased, 12.7% reported somewhat increased, and 22% reported highly increased. Given the small number of participants who reported "highly" increased or decreased, we created a three-category variable (0 = decreased due to COVID-19, 1 = no change due to COVID-19, 2 = increased due to COVID-19). In multivariable models, we then created a dichotomous variable given the small cell sizes such that 1 = no change or increase due to COVID-19 versus 0 = decreased due to COVID-19.

Sexuality-Based Stigma

Participants completed two measures of sexuality-based stigma, specifically internalized heterosexism and everyday discrimination with have both been validated with young sexual minority men (Puckett et al., 2017; Sattler & Zeyen, 2021). Participants completed the 8-item measure of Internalized Heterosexism (example item: "Sometimes I wish I were not gay," with response options ranging from "Strongly Disagree" to "Strongly Agree." Items were mean centered where higher scores indicate more internalized heterosexism. The Internalized Heterosexism scale demonstrated excellent internal consistency in our sample ($\alpha = 0.91$). Participants completed the 9-item Everyday Discrimination Scale to assess the frequency with which participants experienced various forms of interpersonal mistreatment in their day-to-day lives over the previous 12 months (Williams et al., 1997). The discrimination scale also demonstrated high internal consistency reliability ($\alpha = 0.91$) and higher scores indicate more experiences of everyday discrimination.

Mental Health

Mental health was assessed with two scales that have been used in studies with sexual minority communities (Nguyen et al., 2016; Wang et al., 2021). Depressive symptoms was assessed with the Patient Health Questionnaire, which consists of 8 items that assesses depressive symptoms in the past two weeks (example item: "Feeling down, depressed, or hopeless") (Kroenke et al., 2009). Response options range from "Not at all" to "Nearly every day," and the scale exhibited good internal consistency ($\alpha = 0.89$). Anxious symptoms was measured using the 7-item self-reported generalized anxiety disorder scale, which assesses anxious symptoms in the past two weeks (example item: "Being so restless that it is hard to sit down) (Spitzer et al., 2006). Response options also range from "Not at all" to "Nearly every day" and the scale demonstrated excellent psychometric properties ($\alpha = 0.92$).

Sociodemographic Variables

Participants reported their age, race, ethnicity, gender identity, and sexual identity. In total, 0.7% identified as American Indian or Alaskan Native, 6.7% identified as Asian, 10.0% identified as Black or African American, 3.3% reported another race, 12.0% identified as more than one race, and 67.3% identified as white. Due to small numbers of people of color, race was categorized white, Black, Multiracial, and "Other" (which included Asian, Native American/Alaskan Native, Native Hawaiian/other Pacific Islander, and other). Most participants identified as a gay (82.7%) with 13.3% identified as bisexual, 1.4% another sexual identity, and 2.7% reported more than one sexual identity; therefore, we recoded sexual identity into dichotomous variable (1 = gay, 0 = bisexual or other (e.g., queer, asexual, pansexual, other). Similarly, the majority of participants identified as a cisgender man (89.3%), 9.3% identified as a transgender man and 1.3% identified as nonbinary; thus, we had to recode gender identity into dichotomous variable (1 = cisgender man, 0 = trans man or nonbinary).

Statistical Analyses

Descriptive statistics (e.g., means, standard deviations, frequencies) were obtained for all variables. We then conducted bivariate analyses to examine whether there were differences in changes in relationship quality due to COVID-19 by demographics, relationship factors, mental health, and sexuality-based stigma measures using independent t-tests and Chi-square tests. Next, we fit an age-adjusted multivariable multinomial logistic regression model to examine associations between self-reported changes in relationship quality due to COVID-19 and the demographic, relationship, and sexuality-based stigma factors that were significant in bivariate analyses and their association with. For each multinomial effect, we report the adjusted odds ratio (aOR), the 95% confidence interval of the adjusted odds ratio, and the p-value testing the null hypothesis that the aOR = 1.00 (i.e., the null hypothesis of no association). Finally, we fit an age-adjusted linear regression to examine self-reported changes in relationship quality due to COVID-19 to provide comparable results using continuous variables.

Results

Participants ranged in age from 15 to 24 ($M = 20.63$, $SD = 2.13$), and the majority were 18 to 24 years of age (89.3%, $n = 134$). Participants predominantly self-identified as white (67.3%), cisgender men (89.3%), and gay (82.7%) (Table 1). Relationship length ranged from less than 30 days to over 3 years, over half reported that the time spent with their partner decreased due to COVID-19 (53.3%), and nearly two-thirds reported a monogamous sexual agreement. Approximately one-quarter reported IPV in their current relationship (22.0%). Conflictual communication scores ranged from 1.00 to 3.25 ($M = 1.98$, $SD = 0.52$), commitment scores ranged from 1.29 to 32.00 ($M = 6.77$, $SD = 2.81$), internalized heterosexism scores ranged from 1.00 to 4.00 (M = 2.01, SD = 0.76), discrimination scores ranged from 0 to 4.11 ($M = 1.43$, $SD = 1.01$), depressive symptom scores ranged from 0 to 24.00 ($M = 8.21$, $SD = 6.18$), and anxious symptoms scores ranged from 0 to 21 ($M = 7.53$, $SD = 5.76$). In total, 24.7% of participants reported that their relationship quality decreased, 47.3% reported no change, and 28.0% reported an increase due to COVID-19.

In bivariate analyses, a greater proportion of participants who reported that their relationship quality decreased due to COVID-19 compared to those who reported no change or increased due to COVID-19 experienced also reported IPV. A greater proportion of participants who said that their relationship quality decreased compared to those who reported no change or increases also reported that their time had decreased with the partner due to COVID-19. Those who reported decreased relationship quality had lower commitment scores compared to those who reported relationship quality increased due to COVID-19. Participants who reported decreased relationship quality reported higher levels of internalized heterosexism compared to those who reported that their relationship quality increased due to COVID-19. Additionally, those who reported decreased relationship quality had higher discrimination scores reported compared no changes or increases in relationship quality due to COVID-19. There were no significant bivariate differences in perceptions of changes in relationship quality due to COVID-19 and race, ethnicity, gender identity, sexual identity, relationship length, sexual agreement, commitment, or depressive or anxious symptoms. Bivariate correlations between continuous variables and changes in relationship quality due to COVID-19 are presented in the Supplementary Table. In bivariate analyses, increases in relationship quality due to COVID-19 was associated increases in reports of time spent together was positively correlated ($r = 0.43$, $p < 0.01$) and commitment ($r = 0.21$, $p < 0.05$), whereas lower levels of relationship quality due to COVID-19 were associated with experiencing IPV ($r = -0.26$, $p < 0.05$).

Table 2 presents age-adjusted multivariable multinomial regression models examining whether changes in relationship quality due to COVID-19 were associated with relationship and sexuality-based stigma variables. Decreased relationship quality compared to those who reported their relationship quality increased was associated with an increased odds of experiencing IPV (aOR = 1.32, 95%CI: 1.09, 1.98, $p < 0.05$), a reduced odds of commitment (aOR = 0.59, 95%CI: 0.42, 0.82, $p < 0.01$), and increased odds of spending less time with a partner due to COVID-19 (aOR = 3.10, 95%CI: 1.22, 5.42, $p < 0.05$). There were no multivariable associations between decreased relationship quality compared to increased relationship quality due to COVID-19 and age, internalized heterosexism, or discrimination. We fit an additional multinomial logistic regression model to examine differences between those who reported their relationship quality decreased compared to those who reported no change in their relationship quality due to COVID-19. Those who reported decreased relationship quality had an increased odds of reporting IPV (aOR = 1.19, 95%CI: 1.06, 2.64, $p < 0.05$) and reduced odds commitment (aOR = 0.52, 95%CI: 0.38, 0.72, $p < 0.001$) compared to those who reported no change in their relationship quality due to COVID-19. There were no multivariable associations between decreased and no changes in relationship quality and age, internalized heterosexism, and discrimination. Finally, the age-adjusted linear regression confirmed the findings from the multinomial models such that increased relationship quality due to COVID-19 was negatively associated with experiences of IPV (B = −0.38, 95% CI: −0.70, -0.07, $p < 0.05$) and positively associated with commitment (B = 0.46, 95%CI 0.01, 0.09, $p < 0.05$).

Table 1 Changes in relationship quality during the COVID-19 pandemic, young adult men who have sex with men, USA, 2020–2021 ($N = 150$)

	Total	Decreased ($n = 58$, 24.7)	No change ($n = 71$, 47.3)	Increased ($n = 21$, 28.0)	
		N (%)	*N* (%)	*N* (%)	Test statistic
Latinx	33 (22.0)	10 (27.0)	17 (23.9)	6 (14.3)	$\chi^2(2) = 2.16$
Race					$\chi^2(4) = 2.32$
White	101 (67.3)	27 (73.0)	46 (64.8)	28 (66.7)	
Black	15 (10.0)	3 (20.0)	6 (40.0)	6 (40.0)	
Other	34 (22.7)	7 (20.6)	19 (26.8)	8 (19.0)	
Gender Identity					$\chi^2(2) = 0.09$
Cisgender man	134 (89.3)	33 (24.6)	63 (47.0)	38 (28.4)	
Trans man/nonbinary	16 (10.7)	4 (10.8)	8 (11.3)	4 (9.5)	
Sexual Identity					$\chi^2(2) = 1.39$
Gay	124 (82.7)	29 (23.4)	58 (46.8)	37 (29.8)	
Bisexual/Other	26 (17.3)	8 (30.8)	13 (50.0)	5 (19.2)	
Relationship Length					$\chi^2(4) = 0.61$
Less than 3 months	45 (30.2)	12 (26.7)	20 (44.4)	13 (28.9)	
4 to 11 months	39 (26.2)	9 (23.1)	18 (46.2)	12 (30.8)	
A year or more	65 (43.6)	15 (23.1)	33 (50.8)	17 (26.2)	
Sexual Agreement					$\chi^2(5) = 1.03$
Monogamous	91 (61.1)	17 (45.9)	42 (60.0)	32 (76.2)	
Open	44 (29.5)	12 (27.3)	24 (54.5)	8 (18.2)	
Don't know	14 (9.4)	8 (57.1)	4 (28.6)	2 (14.3)	
Due to COVID-19, time with partner					$\chi^2(2) = 33.61$***
Decreased	70 (46.7)	31 (83.8)	31 (43.7)	8 (19.0)	
No Change	28 (18.7)	1 (2.7)	23 (32.4)	4 (14.3)	
Increased	52 (34.7)	5 (13.5)	17 (23.9)	30 (57.7)	
Any IPV	33 (22.0)	14 (42.4)	10 (30.3)	9 (27.3)	$\chi^2(2)$=8.01*
	M (SD)	M (SD)	M (SD)	M (SD)	Test statistic
Age (in years)	20.63 (2.31)	20.59 (2.53)	20.87 (2.20)	19.90 (2.00)	$F(2, 147) = 1.44$
Conflictual Communication	1.98 (0.52)	1.89 (0.50)	2.00 (0.53)	2.14 (0.54)	$F(2, 147) = 1.99$
Commitment	6.77 (2.81)	5.44 (1.91)[a]	6.84 (2.34)	7.17 (3.65)[a]	$F(2, 147) = 2.82$*
Internalized Heterosexism	2.01 (0.76)	2.30 (0.93)[a]	2.07 (0.79)	1.85 (0.63)[a]	$F(2, 147) = 3.07$*
Discrimination	1.43 (1.01)	1.97 (0.87)[ab]	1.34 (1.03)[b]	1.35 (0.97)[a]	$F(2, 147) = 3.62$*
Depressive Symptoms	8.21 (6.18)	7.76 (5.92)	7.79 (6.15)	10.86 (6.58)	$F(2, 147) = 2.29$
Anxious Symptoms	7.53 (5.76)	7.49 (5.21)	7.04 (5.78)	9.29 (6.94)	$F(2, 147) = 1.24$

One participant did not report their relationship or sexual agreement; however, there was no missingness on any of the other items. Post hoc Tukey's means with the same superscript letters differ significantly at $p < 0.05$

Discussion

This short report examined young sexual minority men's perceptions of whether the COVID-19 pandemic impacted their relationship quality with their romantic partner. Data were collected during the first seven months of the pandemic during which there was substantial stress and upheaval of young men's lives. We observed that nearly one-quarter of young sexual minority men reported decreased relationship quality due to the pandemic. Experiencing IPV, lower commitment, and decreased time together due to COVID-19 were each related to decreased relationship quality in bivariate and multivariable analyses. Prior research has linked times of uncertainty (e.g., natural disasters, economic insecurity) to increased IPV (Peterman et al., 2020). It is plausible that increased stress due to economic, educational, and social isolation may trigger IPV among sexual minority men (Lyons & Brewer, 2021). Additionally, the pandemic may have limited young men's ability to spend time with their partners, which can undermine investment and subsequently commitment to the relationship (Agnew et al., 1998). Thus, it is important to ensure young sexual minority men have the support and resources during and in the

Table 2 Multinomial logistic regression model examining change in relationship quality due to COVID-19, young adult men who have sex with men, USA, 2020–2021

	Decreased (vs. Increased) aOR (95% CI)	No change (vs. Increased) aOR (95% CI)	Decreased (vs. No change) aOR (95% CI)
Age	0.98 (0.77, 1.24)	0.92 (0.76, 1.11)	1.07 (0.86, 1.33)
Decreased time together	3.10 (1.22, 5.42)*	0.11 (0.03, 1.40)	3.40 (1.53, 5.97)*
Any IPV	1.32 (1.09, 1.98)*	1.68 (0.58, 4.89)	1.19 (1.06, 2.64)*
Commitment	0.59 (0.42, 0.82)**	1.13 (0.94, 1.36)	0.52 (0.38, 0.72)***
Internalized Heterosexism	1.16 (0.55, 2.44)	0.95 (0.52, 1.73)	1.22 (0.61, 2.47)
Discrimination	1.30 (0.73, 2.32)	0.95 (0.62, 1.44)	1.37 (0.80, 2.35)

***$p < 0.001$; **$p < 0.01$; *$p < 0.05$

aftermath of the COVI D-19 pandemic to support healthy relationships, including access to violence prevention programs.

We observed variability in the impact of the pandemic on the relationship quality of young sexual minority men. A substantial number of participants reported that their relationship quality did not change and increased due to the pandemic, which is consistent with prior research with adult sexual minority populations. For example, Walsh and Stephenson (2021) found sexual minority men who reported lower COVID-19 transmission and risk behaviors (e.g., less travel, remote employment) had the opportunity to spend more time with their partner. In a sample of same-sex couples, Li and Sam (2021) found that those who reported more negative daily life impacts and higher perceived vulnerability to COVID-19 reported more avoidance communication, which in turn was related to lower relationship quality. Thus, it is plausible that participants in our study who reported no change or increased relationship quality also had lower perceived vulnerability or pandemic-related stressors such that their relationships were not impacted by the pandemic. Some participants reported that they were been able to spend the same or more time with their partners during the pandemic, which may be due to remote learning and employment.

Limitations of this study include the small sample size, self-report nature of the survey, and limited generalizability. The online nature of the study may have missed young sexual minority men lacking internet access or not comfortable enrolling in a relationship-focused HIV prevention intervention. The stress of the COVID-19 pandemic may have made it more challenging for some young men with more negative experiences in their lives and their relationships to engage in research. Additionally, this is a cross-sectional study such that temporal ordering between experiencing IPV, commitment, and changes in relationship quality cannot be established. The majority of participants were aged 18 to 24, and there may be developmental differences in their relationship experiences among younger men (i.e., 15–17). Additionally, we did not collect data about cohabitation or whether participants were living with their parents/guardians, which may impact changes in relationship quality. We did not include similar items to be able to examine differences in perceptions of relationship quality among those enrolled prior to the COVID-19 pandemic and those enrolled during the COVID-19 pandemic; thus, we are only able to discern perceptions of changes in relationship quality. Our sample was predominantly white such that we were not able to examine the intersectional effects of stigma on changes in relationship quality due to COVID-19, which is an important area for future research. Finally, these data were collected during the peak of the pandemic; thus, future research is warranted to understand how the ebbs and flows of COVID-19 impact the romantic relationships of young sexual minority men.

Despite these limitations, study findings provide initial insights into the impact of the COVID-19 pandemic on the relationship quality of young sexual minority men. Nearly one-quarter of the young men in this sample reported experiencing IPV in their relationships, which is similar to the prevalence reported in other studies with young sexual minority men (Stults et al., 2015). Experiencing IPV, lower commitment, and less time spent with partners were each independently associated with reduced relationship quality due to the pandemic over and above sexual-based stigma. Study findings highlight that potential for future public health research and intervention efforts focused on addressing IPV and the potential short- and longer-term consequences of the COVID-19 pandemic of young sexual minority men in romantic relationships.

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Declarations

Conflicts of interest The authors have no relevant financial or non-financial interests to disclose.

References

Agnew, C. R., Van Lange, P. A. M., Rusbult, C. E., & Langston, C. A. (1998). Cognitive interdependence: Commitment and the mental representation of close relationships. *Journal of Personality and Social Psychology, 74*(4), 939–954. https://doi.org/10.1037//0022-3514.74.4.939

Collins, W. A., Welsh, D. P., & Furman, W. (2009). Adolescent romantic relationships. *Annual Review of Psychology, 60*, 631–652.

Drabble, L. A., & Eliason, M. J. (2021). Introduction to Special Issue: Impacts of the COVID-19 pandemic on LGBTQ+ health and well-being. *Journal of Homosexuality, 68*(4), 545–559.

Edwards, K. M., & Sylaska, K. M. (2013). The perpetration of intimate partner violence among LGBTQ college youth: The role of minority stress. *Journal of Youth and Adolescence, 42*(11), 1721–1731.

Feinstein, B. A., McConnell, E., Dyar, C., Mustanski, B., & Newcomb, M. E. (2018). Minority stress and relationship functioning among young male same-sex couples: An examination of actor–partner interdependence models. *Journal of Consulting and Clinical Psychology, 86*(5), 416–426. https://doi.org/10.1037/ccp0000296

Fish, J. N., Salerno, J., Williams, N. D., Rinderknecht, R. G., Drotning, K. J., Sayer, L., & Doan, L. (2021). Sexual minority disparities in health and well-being as a consequence of the COVID-19 pandemic differ by sexual identity. *LGBT Health*, *8*, 263–272.

Galinsky, A. M., Ward, B. W., Joestl, S. S., & Dahlhamer, J. M. (2018). Sleep duration, sleep quality, and sexual orientation: Findings from the 2013–2015 National Health Interview Survey. *Sleep Health, 4*(1), 56–62.

Gamarel, K. E., Darbes, L. A., Hightow-Weidman, L., Sullivan, P., & Stephenson, R. (2019). The development and testing of a relationship skills intervention to improve HIV prevention uptake among young gay, bisexual, and other men who have sex with men and their primary partners (We Prevent): Protocol for a randomized controlled trial. *JMIR Research Protocols, 8*(1), e10370. https://doi.org/10.2196/10370

Gamarel, K. E., & Revenson, T. A. (2015). Dyadic adaptation to chronic illness: The importance of considering context in understanding couples' resilience. In K. Skerrett & K. Fergus (Eds.), *Couple resilience* (pp. 83–105). Springer. https://doi.org/10.1007/978-94-017-9909-6_5

Hatzenbuehler, M. L. (2009). How does sexual minority stigma "get under the skin"? A psychological mediation framework. *Psychological Bulletin, 135*(5), 707–730. https://doi.org/10.1037/a0016441

Katz-Wise, S. L., & Hyde, J. S. (2012). Victimization experiences of lesbian, gay, and bisexual individuals: A meta-analysis. *Journal of Sex Research, 49*(2–3), 142–167.

Khosropour, C. M., Johnson, B. A., Ricca, A. V., & Sullivan, P. S. (2013). Enhancing retention of an Internet-based cohort study of men who have sex with men (MSM) via text messaging: randomized controlled trial. *Journal of Medical Internet Research, 15*(8), e194. https://doi.org/10.2196/jmir.2756

Kroenke, K., Strine, T. W., Spitzer, R. L., Williams, J. B. W., Berry, J. T., & Mokdad, A. H. (2009). The PHQ-8 as a measure of current depression in the general population. *Journal of Affective Disorders, 114*(1–3), 163–173.

Kurdek, L. A. (1994). Conflict resolution styles in gay, lesbian, heterosexual nonparent, and heterosexual parent couples. *Journal of Marriage and the Family*, 705–722.

LeBlanc, A. J., Frost, D. M., & Wight, R. G. (2015). Minority stress and stress proliferation among same-sex and other marginalized couples. *Journal of Marriage and Family, 77*(1), 40–59.

Lee, J. (2020). Mental health effects of school closures during COVID-19. *The Lancet Child & Adolescent Health, 4*(6), 421. https://doi.org/10.1016/S2352-4642(20)30109-7

Lyons, M., & Brewer, G. (2021). Experiences of intimate partner violence during lockdown and the COVID-19 pandemic. *Journal of Family Violence*. https://doi.org/10.1007/s10896-021-00260-x

Meyer, I. H. (2003). Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: Conceptual issues and research evidence. *Psychological Bulletin, 129*(5), 674–697. https://doi.org/10.1037/0033-2909.129.5.674

Nguyen, T. Q., Bandeen-Roche, K., Bass, J. K., German, D., Nguyen, N. T. T., & Knowlton, A. R. (2016). A tool for sexual minority mental health research: The Patient Health Questionnaire (PHQ-9) as a depressive symptom severity measure for sexual minority women in Viet Nam. *Journal of Gay & Lesbian Mental Health, 20*(2), 173–191.

Operario, D., King, E. J., & Gamarel, K. E. (2020). Prioritizing community partners and community HIV workers in the COVID-19 pandemic. *AIDS and Behavior, 24*(10), 2748–2750.

Oren, L. (2021). Minority stress in same-gender male romantic relationships: When does it impact relationship commitment? *Psychology & Sexuality*. https://doi.org/10.1080/19419899.2021.1969994

Peterman, A., Potts, A., O'Donnell, M., Thompson, K., Shah, N., Oertelt-Prigione, S., & Van Gelder, N. (2020). Pandemics and violence against women and children. *CGD Working Paper 528, 528*. Retrieved from https://www.cgdev.org/publication/pandemics-and-violence-against-women-and-children

Puckett, J. A., Newcomb, M. E., Ryan, D. T., Swann, G., Garofalo, R., & Mustanski, B. (2017). Internalized homophobia and perceived stigma: A validation study of stigma measures in a sample of young men who have sex with men. *Sexuality Research and Social Policy, 14*(1), 1–16.

Qiao, S., Li, Z., Weissman, S., Li, X., Olatosi, B., Davis, C., & Mansaray, A. B. (2021). Disparity in HIV service interruption in the outbreak of COVID-19 in South Carolina. *AIDS and Behavior, 25*(1), 49–57.

Rostosky, S. S., & Riggle, E. D. B. (2017). Same-sex relationships and minority stress. *Current Opinion in Psychology, 13*, 29–38.

Salerno, J. P., Devadas, J., Pease, M., Nketia, B., & Fish, J. N. (2020). Sexual and gender minority stress amid the COVID-19 pandemic: Implications for LGBTQ young persons' mental health and well-being. *Public Health Reports, 135*(6), 721–727.

Santos, G.-M., Ackerman, B., Rao, A., Wallach, S., Ayala, G., Lamontage, E., & Silenzio, V. (2021). Economic, mental health, HIV prevention and HIV treatment impacts of COVID-19 and the COVID-19 response on a global sample of cisgender gay men and other men who have sex with men. *AIDS and Behavior, 25*(2), 311–321.

Sattler, F. A., & Zeyen, J. (2021). Intersecting identities, minority stress, and mental health problems in different sexual and ethnic groups. *Stigma and Health, 6*, 457–466.

Seiffge-Krenke, I. (2003). Testing theories of romantic development from adolescence to young adulthood: Evidence of a developmental sequence. *International Journal of Behavioral Development, 27*(6), 519–531.

Song, C., Buysse, A., Zhang, W., Lu, C., Zhao, M., & Dewaele, A. (2020). Coping with minority stress in romantic relationships among lesbian, gay and bisexual people. *Current Psychology*. https://doi.org/10.1007/s12144-020-01188-z

Spitzer, R. L., Kroenke, K., Williams, J. B. W., & Löwe, B. (2006). A brief measure for assessing generalized anxiety disorder: The GAD-7. *Archives of Internal Medicine, 166*(10), 1092–1097.

Stephenson, R., & Finneran, C. (2013). The IPV-GBM scale: A new scale to measure intimate partner violence among gay and bisexual men. *PLoS ONE, 8*(6), 62592. https://doi.org/10.1371/journal.pone.0062592

Stults, C. B., Javdani, S., Greenbaum, C. A., Barton, S. C., Kapadia, F., & Halkitis, P. N. (2015). Intimate partner violence perpetration and victimization among YMSM: The P18 cohort study. *Psychology of*

Sexual Orientation and Gender Diversity, 2(2), 152–158. https://doi.org/10.1037/sgd0000104

Walsh, A. R., & Stephenson, R. (2021). Positive and negative impacts of the COVID-19 pandemic on relationship satisfaction in male couples. *American Journal of Men's Health, 15*(3). https://doi.org/10.1177/15579883211022180.

Wang, Y., Feng, Y., Han, M., Duan, Z., Wilson, A., Fish, J., & Chen, R. (2021). Methods of attempted suicide and risk factors in LGBTQ+ youth. *Child Abuse & Neglect, 122*, 105352.

Waterfield, K. C., Shah, G. H., Etheredge, G. D., & Ikhile, O. (2021). Consequences of COVID-19 crisis for persons with HIV: The impact of social determinants of health. *BMC Public Health, 21*, 299. https://doi.org/10.1186/s12889-021-10296-9

Wiatrek, S., Zlotorzynska, M., Rai, R., Sullivan, P., & Sanchez, T. (2021). The annual American Men's Internet Survey of Behaviors of Men Who Have Sex With Men in the United States: Key Indicators Report 2018. *JMIR Public Health and Surveillance, 7*(3), e21812. https://doi.org/10.2196/21812

Williams, D. R., Yu, Y., Jackson, J. S., & Anderson, N. B. (1997). Racial differences in physical and mental health: Socio-economic status, stress and discrimination. *Journal of Health Psychology, 2*(3), 335–351.