

Examining the Link Between Gender Minority Stress and Relationship Instability in TGD Relationships: Testing Problem-Solving Communication as a Moderator

by

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Abstract

The experiences of stigma and discrimination faced by the transgender and gender diverse (TGD) community are well-understood through minority stress theory (MST), which suggests that stigmatized groups encounter additional environmental stressors unique to their minority identities (Hendricks & Testa, 2012; Meyer, 2013; Pellicane & Ciesla, 2022). While research substantiates that higher levels of gender minority stress (GMS) are associated with increased mental health outcomes (i.e., depressive symptoms; Do et al., 2022; Choo et al., 2023; Conn et al., 2023), less is known about how minority stress is linked to relationship outcomes, despite work connecting depression to relationship functioning (e.g., Marital Discord Model of Depression; Beach et al., 1990). Utilizing a sample of 308 gender diverse adults in romantic relationships, the present study examines linkages between minority stress, depressive symptoms, and relationship instability in a moderated mediation framework with problem-solving communication as the moderator. In order to increase confidence in the results, several important covariates were included (race, ethnicity, gender, sexual orientation, age, and socioeconomic status), and alternative models were explored. Results indicated a moderate and positive direct effect from gender minority stress to relationship instability, a strong positive indirect effect from MST to depressive symptoms, and a moderate positive indirect from depressive symptoms to relationship instability. Results indicated that higher levels of problem-solving communication buffered the negative association of GMS on depressive symptoms, thus indirectly decreasing the association with relationship instability. However, problem-solving communication did not significantly moderate the direct relationship between GMS and relationship instability and the indirect effect of depressive symptoms on relationship instability, indicating the need for further investigation for effective interventions.

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List of Abbreviations

GLB	Gay, Lesbian, Bisexual
GMS	Gender Minority Stress
GMSR	Gender Minority Stress and Resilience
LGBTQ	Lesbian, Gay, Bisexual, Transgender, Queer
MST	Minority Stress Theory
PHQ	Depressive Symptoms
PSC	Problem-Solving Communication
RI	Relationship Instability
SGM	Sexual and Gender Minority
TGD	Transgender and gender diversity

Chapter 1: Introduction

Being transgender or gender diverse (TGD) can be described as one's gender expression not wholly aligning with the societal expectations of being a man or woman based on biological sex (APA, 2014, 2023; Hendricks & Testa, 2012; Torgrimson et al., 2005). Biological sex is assigned at birth and is based on biological attributes (e.g., chromosomes, hormones, and sexual organs; Torgrimson et al., 2005). In contrast, gender refers to the binary social constructs that define masculinity and femininity (APA, 2023; Hendricks & Testa, 2012). Within the United States, acceptance of TGD varies from state to state (Doyle & Molix, 2015a). Notably, at least 5.1% of adults younger than 30 identify as TGD, whereas 1.6% are between 30 and 49 (Brown, 2022), which indicates that the TGD population has become more visible over the past couple of years (Hendricks & Testa, 2012). With greater public awareness, TGD community issues have become more apparent (Hendricks & Testa, 2012). In one recent survey, at least eight in ten people acknowledged that discrimination toward TGD exists (Parker et al., 2022). Even though 64% of U.S. adults favor laws protecting against TGD discrimination, there is a fair amount of support for limiting certain rights (e.g., age limitations on transitioning, restrictions in sports, and teaching about gender diversity in schools; Parker et al., 2022). Therefore, although TGD acceptance has improved, stigma and discrimination persist toward the TGD community within the United States.

The stigma and discrimination experienced within the TGD community can be described through minority stress theory (MST), which states that stigmatized groups are exposed to environmental stressors unique to their minority status (Hendricks & Testa, 2012; Meyer, 2013; Pellicane & Ciesla, 2022). For minority groups in general, the influence of MST can be conceptualized into proximal and distal factors that impact overall well-being and relationship

instability, and these unique factors can be described as gender minority stress (GMS; Feinstein et al., 2018; Frost & LeBlanc, 2022; Gamarel et al., 2014; Hendricks & Testa, 2012; Meyer, 2013; Pellicane & Ciesla, 2022). The stressors unique to TGD individuals may stem from external forces or internal processes that cause distress. For example, external stressors are related to environmental causes and could include restricted access to gender-affirming care and other resources (Badget et al., 2009; Parker et al., 2022; Meyer, 1995). Internal stressors generally describe someone's internal well-being and may include the internalization of negative messaging, causing negative self-worth and relational stress within romantic partnerships (Herek et al., 2015; Meyer, 2013).

The experience of discrimination and the anticipation of poor treatment can significantly affect the mental health of TGD individuals and couples (Ching et al., 2022; Jardas et al., 2023; Fredriksen-Goldsen et al., 2014). Discrimination and stigma may indirectly affect physical health outcomes in adults (Fredriksen-Goldsen et al., 2014). These stressors are linked to marginalized gender identity, impacting mental health in TGD youth and adults, including issues related to healthcare, employment, and housing (Bradford et al., Fredriksen-Goldsen et al., 2014; Jardas et al., 2023). For both individuals and couples, internalized stigma has been associated with general psychological distress and depressive symptoms (Doyle & Molix, 2015b; LeBlanc & Frost, 2020). Further, TGD couples and individuals who live in states with more discriminatory policies may have worse outcomes (Doyle & Molix, 2015a, 2015b).

For TGD individuals in relationships, such distress at the individual level could also contribute to relational distress and relational instability. Relational instability is the tendency to dissolve committed relationships (Booth et al., 1983), and it can be characterized by how often couples think of relationship dissolution, how often they worry about their relationship, and how

often they have ended their relationship in the past (Sandberg et al., 2016). Depressive symptoms may mediate this relationship between minority stress and relationship instability. For example, LGBTQIA+ adolescents from different racial minority groups experienced more depressive symptoms than their peers (Ching et al., 2022). While this study was conducted on adolescents who did not belong to the TDG community, it can be deduced that due to the unique environmental stressors that impact the sexual and gender minority (SGM) community, GMS can influence mental health, which in turn strains romantic relationships in TGD relationships (Meyers et al., 2013; Phar et al., 2019; Scott et al., 2022).

Effective communication strategies—such as problem-solving communication (PSC)—may mitigate the negative association between GMS and depressive symptoms. Problem-solving communication can be characterized as attempts by both romantic partners to manage issues and seek solutions within the context of their relationship without blaming, belittling, and attacking each other for the existence of problems (Assad et al., 2007). Problem-solving communication was most effective when both partners quickly and effectively talked and managed the conflicts (Bannon et al., 2020). Some studies have shown that problem-solving communication is linked with relationship satisfaction and stability (Assad et al., 2007; Bannon et al., 2020; Meeks et al., 1998) and predictive of relationship stability in the future (Assad et al., 2007). For these reasons, problem-solving communication may buffer against the negative effects of GMS.

For this study, I analyzed gender minority stress as a predictor, depressive symptoms as a mediator, problem-solving communication as a moderator, and relationship instability as the outcome. I tested whether gender minority stress is associated directly to relationship instability and indirectly through depressive symptoms. Further, I examined whether problem-solving communication moderated the association between GMS and depressive symptoms. It is crucial

to note that some assertions made within this paper were drawn from research that focused on the broader LGBTQIA+ community (mainly LGB and not TGD samples) due to a lack of research within the field. In some cases, findings from sexual-minority samples that could extend to the TGD community were presented. However, recognizing the distinct differences within these communities is crucial, stressing the need for further research to identify and address their unique needs.

Chapter 2: Literature Review

Theoretical Orientation: Gender Minority Stress and Relationship Instability

Although most people experience stressors throughout their lives, MST proposes that individuals who belong to stigmatized groups are exposed to chronic environmental stressors unique to their minority status, and this can be conceptualized as GMS (Hendricks & Testa, 2012; Meyer, 2013; Pellicane & Ciesla, 2022). Within the minority stress framework, these influences can be described as external or internal stressors (Testa et al., 2015). External stressors relate more to environmental forces, such as public policies, societal pressures, and direct experiences of discrimination, rejection, or violence related to one's identity (LeBlanc et al., 2015; Testa et al., 2015). These stressors are essential to consider because encountering social stigma and discrimination can place more stressors on the individual, adding additional strain (Meyer, 2003; Parker et al., 2022). Internal stressors generally describe an individual's immediate well-being, such as internalized beliefs, emotions, thoughts, behaviors, and relational dynamics, and may induce hyper-vigilance towards discrimination or negative messaging (Meyer, 2013; Testa et al., 2015). Internal stressors can also include fear of further victimization or discrimination, mistrust of others, internalized negative beliefs about one's identity, and the stress of concealing one's identity (Testa et al., 2015). Internalizing negative societal messaging can induce negative self-worth (Herek et al., 2015).

TGD individuals face various stressors that are unique to their minority status. In a study by Bradford et al. (2013), 41% of the transgender sample experienced some form of discrimination (i.e., mistreatment in schools, doctor's offices, unwanted sexual advances, and physical violence). Additionally, TGD individuals are at risk for adverse health outcomes, including the likelihood of being HIV positive, and up to 64% reported trying tobacco products

(Bradford et al., 2013). Strikingly, the TGD community has higher rates of suicide than other segments of the population, which may be due to the adverse effects of external and internal pressures (Hendricks & Testa, 2012; Pellicane & Ciesla, 2022, Price-Feeney et al., 2020). These adverse health outcomes may be caused by barriers to finding, being able to afford, and accessing affirming and well-informed healthcare, which can exacerbate physical health stressors (Grant et al., 2011; Parker et al., 2022). Additionally, these existing health disparities may signify that gender-minority individuals are at higher risk for health conditions (Fredriksen-Goldsen et al., 2013; Meyer, 2003).

Relationship Instability

GMS and relationship stigma may be related to relationship instability. Stable relationships are characterized by generally positive views of one's partner and low levels of hostility (Robles et al., 2014). Relationship instability refers to both the propensity to dissolve committed relationships (Booth et al., 1983) and individuals' inclinations in relationships to contemplate the frequency of thoughts about ending their relationship, the perception of it being in trouble, and the occurrence of actual relationship terminations (Sandberg et al., 2016). For transgender and gender-diverse individuals, the lack of resources caused by external and internal stressors could lead to the destabilization of relationships, especially in the face of chronic and persistent messages and experiences related to stigma and discrimination.

The stigma felt at the individual level could negatively impact romantic relationships (Frost et al., 2017). Relationship stigma relates to society's negative attitudes and beliefs toward certain types of relationships (Frost et al., 2017; LeBlanc & Frost, 2020). Research indicates that the stress and stigma targeted toward one partner could impact the overall relationship quality (Gamarel et al., 2014; LeBlanc & Frost, 2020). This effect worsens for those who experience

increased levels of relational stigma (Gamarel et al., 2022; Gamarel et al., 2010; LeBlanc & Frost, 2020). For example, Gamarel et al. (2014) found that the perceived relationship quality of cisgender males partnered with transgender women was inversely related to relationship stigma. Even though the stigma was directed toward transgender women, the perceived stress negatively impacted their cisgender partners (Gamarel et al., 2014). Another study found that cisgender males who identified as bisexual or heterosexual reported shorter relationships with transgender women and were less likely to support routine HIV testing (Skeen et al., 2021). These results indicate that heteronormative pressures may drive certain behaviors in transgender relationships (Gamarel et al., 2020; Skeen et al., 2021).

A possible explanation for these findings includes minority couples feeling fatigued from the strain of anticipated aggression towards their relationship, not participating actively in their families of origin, feeling devalued, and having inhibited communication styles (Frost et al., 2017; Gamarel et al., 2022). While fulfilling relationships are associated with better physical, social, and mental health outcomes, persistent external stressors can have the opposite effect (Karney & Bradbury, 2005, 2020; Levinger, 1976; Lewis et al., 2022; Musick & Bumpass, 2012; Sheng et al., 2021). Chronic stress from external pressures can negatively impact relationships (Bodenmann et al., 2007). Therefore, it is vital to investigate the factors that predict, the mechanisms that contribute to, and the outcomes associated with this strain on relationships among transgender and gender-diverse individuals.

The Impact of External Stressors on Relationship Instability

Although public opinion has increased regarding the TGD community (Parker et al., 2022), expressing commitment within social stigma, discrimination, and lack of support may cause additional challenges. For this reason, external stressors may play a role in straining

romantic connections for TGD couples (Frost, 2013; Frost & LeBlanc, 2022; Gamarel et al., 2022). One study on the narrative stories of gay, lesbian, and bisexual (GLB) relationships explained how familial and heterosexual cultural expectations created added stress (Frost, 2013); these results could explain the difficulties that TGD couples experience, as well. Notably, this instability increased for individuals in same-sex relationships in states with more discriminatory policies (Doyle & Molix, 2015a, 2015b). This is partly due to the daily stressors and microaggressions that transgender and gender diverse (TGD) individuals face and more significant systemic issues such as lack of legal protections and barriers to accessing healthcare. As indicated previously, TGD individuals may endure increased relationship instability due to their marginalized status and the lack of social resources typically provided in traditional heterosexual relationships. For these reasons, external factors can negatively impact an individual's perception of relationship stability.

The Impact of Internal Stressors on Relationship Instability

The internalized negative messages (Doyle & Molix, 2014) caused by societal disapproval of their union (Lehmiller & Agnew, 2006) may impact TGD relationships. It also involves the anticipated feelings of violence or rejection due to heteronormative and cis-normative relationship models (Gamarel et al., 2014; LeBlanc & Frost, 2020; LeBlanc et al., 2015). Social stigma might impair emotion regulation and cause negative affectivity (Doyle & Molix, 2015b), and societal pressures may undermine their mental health (Gamarel et al., 2014), impacting partner interaction and connection (Feinstein et al., 2018; Frost & LeBlanc, 2022; Frost et al., 2017). In a meta-analysis of 35 studies, internalizing the stigma had slightly stronger effect sizes for determining relationship quality ($r = -.18, p < .001$) than external stigma ($r = -.12, p < .001$), but both were significant (Doyle & Molix, 2015b). These findings suggest that

even though TGD couples might experience discrimination, internalizing the negative messages could cause more harm to the relationship (Doyle & Molix, 2015b). This idea is supported by another study that examined GLB relationships and found that internalized homophobia was associated with more significant relationship problems (Frost & Meyer, 2009). Even within heterosexual and same-sex relationships, committed couples who experienced tremendous internal stress reported lower levels of relationship satisfaction (Bodenmann et al., 2007; Feinstein et al., 2018; Frost & LeBlanc, 2022).

The Indirect Effect of Gender Minority Stress on Relationship Instability Through Depressive Symptoms

Gender Minority Stress and Depressive Symptoms

The experience of discrimination and the anticipation of poor treatment can significantly affect the mental health of TGD individuals. Depression within the TGD community is a multifaceted condition influenced by various interconnected factors. For example, individuals may experience stigma and discrimination, the fear of rejection, lack of social support, socioeconomic pressures, and barriers to accessing trans-inclusive health care and social services exacerbate mental health issues, which have all been associated with risk factors for developing depression (Rotondi, 2012). In one study, researchers sought to understand experiences of discrimination and symptoms of depression among transgender adults in South Korea (Choo et al., 2023). Within the sample, 63.9% reported having symptoms of depression, with at least 57.6% of the sample reporting having experienced some type of discrimination. This same study found that those experiencing both anti-transgender and other types of discrimination had higher rates of depressive symptoms compared to those who did not experience discrimination (Choo et al., 2023). Similarly, studies have found that adolescents exposed to an unsupportive

environment and anti-LGBTQ attitudes within different racial and ethnic communities experience both direct and indirect associations with depressive symptoms (Ching et al., 2022). Internalized transphobia was identified as a strong predictor of both depression and anxiety among TGD youth (Conn et al., 2023). In one meta-analysis, researchers found that both distal and proximal minority stresses are significantly associated with higher levels of depression and suicidality among TGD individuals (Pellicane & Ciesla, 2022). Distal stress ($r = 0.26$), internalized transphobia ($r = 0.24$), expectations of rejection $r = 0.28$), and concealment ($r = 0.22$) each had significant associations with depression (Pellicane & Ciesla, 2022). This research supports the notion that mental health challenges in gender minority youth and adults may stem from distinct stressors linked to their marginalized gender identity, such as healthcare, employment, and housing-related issues (Bradford et al., Fredriksen-Goldsen et al., 2014; Jardas et al., 2023).

Depressive Symptoms and Relationship Instability

The relationship between depressive symptoms and relationship instability may be illuminated by the larger relationship literature, although much of this research is conducted within heterosexual couples. For instance, Whisman and Uebelacker (2009) found a bidirectional and longitudinal association between depressive symptoms and marital discord, suggesting that depressive symptoms could reduce emotional availability and communication, resulting in more relational conflict. This is in line with the Marital Discord Model of Depression in that relational health and psychological health are bidirectional and intertwined (Beach et al., 1990). In lower-income couples, external societal stressors may also make resolving relationship problems less effective (Neff & Karney, 2017). Moreover, several studies have underscored that stigma leads to more significant symptomology (LeBlanc & Frost, 2020; Valente et al., 2022), potentially

resulting in low self-esteem, shame, and a diminished sense of self-worth (Frost et al., 2017; Frost & Meyer, 2009). These emotional responses can contribute to communication breakdowns, negative partner interactions, trust issues, and a loss of intimacy (Bodenmann et al., 2007; Frost & LeBlanc, 2022; Gamarel et al., 2014; Karney & Bradbury, 2005). For TGD minorities, poor mental health correlates with decreased social support (Valente et al., 2022) and higher rates of suicide (Hendricks & Testa, 2012). Relationship stigma can harm both partners' connection quality, intimacy, and mental health (Feinstein et al., 2018; Frost & LeBlanc, 2022; Gamarel et al., 2014). Therefore, depressive symptoms is an important mechanism in the relationship between minority stress and relationship stability (Gamarel et al., 2014; Gamarel et al., 2019; LeBlanc & Frost, 2020).

Problem-Solving Communication as a Moderator

It may not all be bleak for TGD couples, as some might weather stress better than others, and this may largely depend on the relationship quality and more importantly, communication processes. One type of communication that has important bearing on stress management processes between partners is problem-solving communication (Schofield et al., 2017). Problem-solving communication can be defined as attempts for both romantic partners to resolve problems and disagreements without belittling, blaming, and attacking each other for the existence of the issues or other stressors in the relationship (Assad et al., 2007). Problem-solving communication is also influenced by how quickly and effectively partners manage conflicts (Bannon et al., 2020). Many studies show that problem-solving communication is linked with relationship satisfaction and stability (e.g., Assad et al., 2007; Bannon et al., 2020; Meeks et al., 1998). Summarized below is the literature that suggests that PSC could buffer three pathways

explored in this study: (1) the GMS-depressive symptoms pathway, (2) the depressive symptoms-relationship instability pathway, and (3) the GMS-relationship instability pathway.

The Moderating Effect of Problem-Solving Communication on Gender Minority Stress and Relationship Instability

Problem-solving communication may moderate the relationship between gender minority stress and relationship instability for TGD individuals. Bodenmann (1997) discovered that couples who participated in an intervention program designed to teach problem-solving, communication, and coping strategies for managing stress effectively had significantly lower divorce rates than those who did not participate in the program. This intervention focused on enhancing these skills among heterosexual and cisgender couples, demonstrating its effectiveness in improving relationship stability and reducing the likelihood of divorce (Bodenmann, 1997). In another study conducted by Bodenmann et al. 2009, the data supported the effectiveness of enhancing both communication and dyadic coping skills in improving marital outcomes. Suggesting that in addition to communication-focused strategies, improved coping skills were an added benefit to treatment (Bodenmann et al., 2009). Similarly, another longitudinal research intervention sought to understand the efficacy of their interventions. It initially focused on educating heterosexual and cisgender couples about the importance of marital stability and satisfaction while teaching them how to utilize the communication skills taught during the training (Hahlweg & Richter, 2010). Despite most of the sample being unable to remember the specific skills taught within the training after 11 years, couples who initially participated in the intervention program had significantly lower divorce and separation rates than those who did not participate (Hahlweg & Richter, 2010). Due to the effectiveness of teaching improved communication styles to heterosexual and cisgender couples, it can be assumed that

improving effective problem-solving communication might buffer against the adverse effects of GMS on relationship instability experienced by the TGD community.

The Moderating Effect of Problem-Solving Communication on Gender Minority Stress and Depressive Symptoms

Problem-solving communication may moderate the relationship between GMS and depressive symptoms. In one study involving cisgender undergraduate students, researchers found a significant positive correlation between stress and depression, indicating that higher stress levels were associated with higher depression scores (Wang et al., 2014). In this same study, not only was social support negatively correlated with depression, but it also significantly moderated the relationship between stress and depression (Wang et al., 2014), which means that depression was significantly less in individuals with high levels of social support compared to those with low levels of social support. In another study focusing on cisgender parent-child communication strategies, positive communication with parents helped to maintain the attachment bond, provided emotional support, and equipped adolescents with problem-solving skills, which collectively reduced the risk of depressive symptoms (Zhang et al., 2021). In some cases, providing problem-solving interventions was proven useful when treating some adolescents and young adults with depression at the individual level (Wang et al., 2020). Regarding the SGM community, Craig et al. (2021) found that adolescents and young adults who participated in an affirmative cognitive-behavioral group intervention tailored to reduce psychosocial distress and improve coping showed significant reductions in depressive symptoms ($b = -5.59, p = .001$) when compared to the waitlisted control group. Therefore, because social support, positive communication, and problem-solving interventions have proven effective when

improving depressive symptoms, problem-solving communication may buffer against the adverse effects of GMS on depressive symptoms.

The Moderating Effect of Problem-Solving Communication on Depressive Symptoms and Relationship Instability

A vital component that drives problem-solving communication seems to be the relationship's optimism or the ability to control a stressful situation (Assad et al., 2007; Scheier et al., 1986). Therefore, a lack of optimism caused by depression due to external stressors may inhibit productive conversation styles, leading to relationship instability. For this reason, problem-solving communication may buffer against the negative effects of depressive symptoms on relationship instability. In two studies conducted on heterosexual couples, researchers found that problem-solving communication was positively correlated (Assad et al., 2007; Bannon et al., 2020) and could predict future relationship quality (Assad et al., 2007). There were no indications that gender moderated an association between relationship quality and problem-solving communication (Assad et al., 2007), meaning that higher rates of problem-solving communication may correlate with relationship quality, regardless of gender identity. Trombello et al. (2011) found that interventions aimed at improving marital communication and enhancing positive affect during interactions may be beneficial in reducing the impact of depressive symptoms on future stressors, particularly for cisgender men. For cisgender women, strategies to improve overall marital satisfaction may be more effective (Trombello et al., 2011). To remedy the adverse effects of minority stress, helping minority couples to achieve more effective communication to overcome their unique struggles may help to prevent relationship instability (Gottman et al., 2001), in addition to helping them manage the external stressors unique to their situation (Pachankis, 2007). Due to depressive symptoms being linked to higher rates of

relationship instability, problem-solving communication may buffer against the adverse effects of depression on relationship stability.

The Current Study

Utilizing a sample of 308 gender diverse adults, the present study aims to assess the connections between gender minority stress and relationship instability, through depressive symptoms in a moderated mediation framework, and include important covariates—including race, ethnicity, gender, sexual orientation, age, and socioeconomic status—and test against two other plausible models. First, the present study examines both the stress generation hypothesis (Hammen, 1991), which suggests that depressive symptoms may generate or increase the perception of stressful life events, and the stress exposure model (e.g., Brown & Harris, 1978), which suggests that stress and stressful events can increase the likelihood of depressive symptoms. Therefore, I will test a model in which depressive symptoms will be modeled to predict relationship instability via gender minority stress (depressive symptoms → gender minority stress → relationship instability) rather than the hypothesized model (gender minority stress → depressive symptoms → relationship instability). Second, I will examine whether the stability of the relationship may contribute to the development of depressive symptoms and ultimately greater gender minority stress (relationship instability → depressive symptoms → gender minority stress).

In this study, I aim to investigate the intersections of gender minority stress, relationship instability, depressive symptoms, and problem-solving communication. By focusing on these areas, the goal is to gain a deeper understanding of the unique challenges faced by gender minorities in terms of their mental and relational health. This research will specifically examine whether problem-solving communication can mitigate the association of gender minority stress

on depressive symptoms, as suggested by previous studies (Schofield et al., 2017; Testa et al., 2015). The findings from this study will be valuable for mental health professionals, as well as marriage and couple therapists, working with transgender, gender nonconforming, and gender minority populations. The insights gained can enhance health promotion strategies, relationship education programs, and interventions to improve mental health and relationship outcomes for individuals within these communities. The following hypotheses and research questions are framed within the context of the proposed model (Figure 1):

Hypothesis 1: Higher gender minority stress will be associated with higher rates of relationship instability.

Research Question 1: Will problem-solving communication buffer the direct effect of gender minority stress and relationship instability?

Hypothesis 2: Higher amounts of gender minority stress will be associated with higher amounts of depressive symptoms.

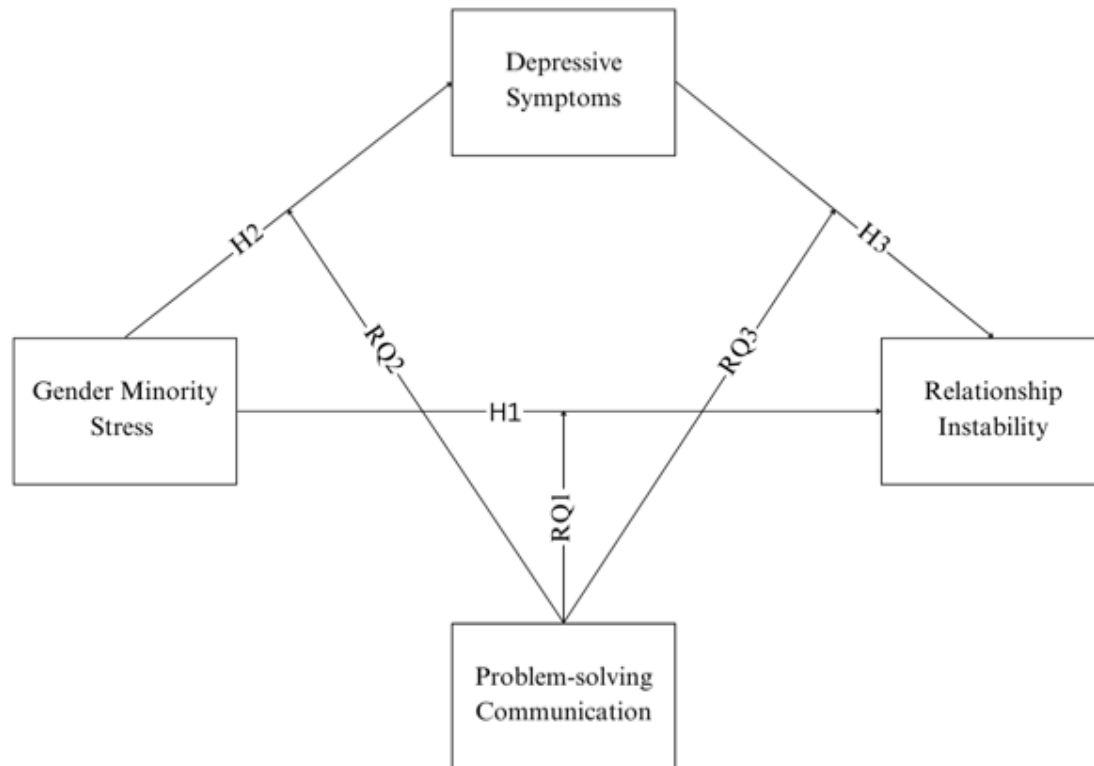
Research Question 2: Will problem-solving communication buffer against the association between gender minority stress and depressive symptoms?

Hypothesis 3: Higher amounts of depressive symptoms will be associated with higher amounts of relationship instability.

Research Question 3: Will problem-solving communication buffer against the association between depressive symptoms and relationship instability?

Figure 1

Proposed Model



Chapter 3: Methods

Participants

Procedures

Participants were selected through Qualtrics Panels (Qualtrics, Provo, Utah), utilizing a pool established by prior sampling and recruitment initiatives. Research indicates that the internal consistency and effect sizes obtained from online panels are on par with those from more conventional data collection methods (Walter et al., 2019). Participants who consented to join the study received a unique hyperlink and detailed survey completion instructions. Informed consent was obtained from all participants, who were also provided with a link to download a copy of the consent form. Participants could choose compensation, including cash, gift cards, vouchers, sweepstakes entries, or airline miles. The compensation strictly followed the guidelines set by Qualtrics Panels, varying based on factors such as the participant's profile, the difficulty of participant acquisition, and the survey length. It is important to note that the researchers did not have access to the specific compensation choices made by the participants.

Inclusion Criteria

For this study, participants were required to meet specific inclusion criteria: they had to identify as transgender, gender nonconforming, or as having a gender identity that did not match their sex assigned at birth. Additionally, participants needed to cohabitate with at least one romantic or intimate partner or spouse, be 19 or older, and reside in the United States. The survey had to be completed in English. Of the initial 345 participants who began the survey, 37 were excluded due to incomplete data, resulting in an exclusion rate of 10.7%. This left a final sample of 308 participants.

Demographics

The demographic data for the analytic sample used in this study represents individuals with diverse gender identities, including but not limited to 33.8% transgender, 25.3% non-binary, 7.50% man, and 4.50% woman, with additional information on gender diversity, relationship status, and education level detailed in Table 1. The sample was comprised of 89.6% white, 5.50% African American or Black, 4.20% Alaska Native, Indigenous Peoples of America, or Native American, 1.60% Asian, 1.20% Native Hawaiian or Pacific Islander, and 1.20% Hispanic, Latino/Latina/Latinx, or of Spanish origin. Participants also identified as heterosexual (7.14%), (37.7%), gay (26.6%), lesbian (12.7%), pansexual (36%), queer (51%), and asexual (8.40%). Additionally, participants belonged to diverse income levels, ranging from 1.30% with no income to various brackets up to 13.3% earning \$100,000 and above.

Measurement

Predictor

Gender Minority Stress was gaged utilizing the adapted GMS measure from Testa et al. (2014). For this study, only seven of the original nine subscales were utilized (*community connectedness* and *pride* were excluded). The remaining measures consisted of a total of 48 items, including subscales on *gender-related discrimination* (6 items), *gender-related rejection* (7 items), and *gender-related victimization* (7 items). Participants responded to these items with a "yes" or "no." If they answered "yes," they were further asked to specify the timing of their experiences: "Yes, before the age of 18," "Yes, after the age of 18," or "Yes, in the past year." The scales were coded based on frequency. The measure also included *non-affirmation of gender identity* (6 items), *internalized transphobia* (8 items), *negative expectations for future events* (9 items), and *nondisclosure* (5 items). These subscales were based on a 5-point Likert scale. Scores from each subscale were added together to get subscale scores. Then, all the

subscale scores were added to make a total score, following the methodology outlined by Rimmer et al., 2023. Higher scores indicated more gender minority stress. In the original study, reliability scores for the subscales ranged from $\alpha = .61$ to $\alpha = .93$ (Testa et al., 2015). The summed score will be conceptualized as the predictor variable. The Cronbach alpha reliability coefficient for the full scale in this sample was $\alpha = .819$.

Mediator

Depressive symptoms were assessed using the PHQ-9, a depression severity inventory consisting of nine Likert-scale items that evaluated the frequency of depression symptoms over the past two weeks (0 = not at all, 3 = nearly every day; Kroenke et al., 2001). Sample questions included "Having little interest or pleasure in doing things" and "Feeling down, depressed, or hopeless." The original measure demonstrated high reliability, with Cronbach's alpha values of $\alpha = 0.89$ and $\alpha = 0.86$ (Kroenke et al., 2001). The total score, ranging from 0 to 27, indicated the severity of depressive symptoms, with higher scores reflecting more severe or frequent symptoms. In this study, the summed score was conceptualized as the mediator variable, with Cronbach's alpha reliability coefficient for the sample being $\alpha = 0.912$.

Outcome

Relationship instability was measured utilizing a subscale adapted from RELATE (Sandberg et al., 2016). The subscale consisted of 3 items asking respondents how often they thought their relationship was in trouble, how often they thought about ending it, and how often they had broken up and gotten back together. Sample items included, "Have the thoughts of getting a divorce or breaking up crossed your mind?" Or "Have you or your partner seriously suggested the idea of divorce or breaking up? Responses ranged from "never" (1) to "very often" (5). Items will be reversed so that higher scores indicated higher relationship stability (Sandberg

et al., 2016). The reliability for the original validation study of this measure was $\alpha = 0.86$ (Sandberg et al., 2016). The summed score will be conceptualized as the outcome variable. The Cronbach alpha reliability coefficient for the full scale for this sample was $\alpha = .817$.

Moderator

PSC was measured utilizing an adapted measure of the problem-solving scale (Schofield et al., 2017). The eight items were completed using a Likert scale from 1 (never) to 7 (always). The introduction of the scale read, “Now think about what usually happens when you and your partner have a problem to solve. Think about what he/she does. When the two of you have a problem to solve, how often does your partner...” (Schofield et al., 2017). Sample items included, “listen to your ideas about how to solve a problem,” “have good ideas about how to solve the problem,” and “show a real interest in helping to solve the problem.” The Cronbach’s alpha for the original validation study of this measure was $\alpha = 0.87$ (Schofield et al., 2017), and higher scores indicated more cooperative problem-solving behaviors. The summed score of the PSC will be conceptualized as the moderating variable. The Cronbach alpha reliability coefficient for this sample was $\alpha = .670$.

Control Variables

Depressive symptoms in TGD individuals, as well as relationship instability, may be influenced by various forms of marginalization (Jefferson et al., 2013) and relationship stressors (Bodenmann et al., 2007). As such, factors like race, relationship length, economic pressure, and age (See Table 1) are integrated into the analysis to help address these impacts. Furthermore, given the noted correlation between a family history of depression and its prevalence in trans individuals (Budge et al., 2013), this study also adjusts for family depression history. Economic

pressure was assessed through self-reported financial stability, including the ability to afford housing, clothing, food, and medical care.

Analytic Strategy

This study analyzed data using SPSS version 25 (IBM, SPSS, Chicago, IL). The preliminary analysis started by checking assumptions of normality through histograms and descriptive statistics to scrutinize data distribution. Following this, multicollinearity was examined using bivariate correlations among the principal study variables. Homoscedasticity was investigated through scatterplots, and the Durbin-Watson test was employed to detect residual dependencies. Finally, homoscedasticity and linearity were explored using scatterplots and Pearson's correlation coefficients. These analyses examined relationships between predictor and outcome variables, predictor and mediator variables, and mediator and outcome variables to assess the appropriateness of model assumptions. The alternative models were tested in Mplus 8.0 (Muthén & Muthén, 2012) using appropriate procedures in regard to non-nested model comparison (Akaike Information Criterion [AIC] and Bayesian Information Criterion [BIC]), where smaller values of the AIC and BIC indicate less discrepancy between the hypothesized model and the true model (West et al., 2012).

For this model, a conditional process model of gender minority stress, depressive symptoms, relationship instability, and problem-solving communication was utilized using the Hayes PROCESS macro version 4.1 (template 59; Hayes, 2022). The conditional process model included one predictor (gender minority stress and resilience), one outcome variable (relationship instability), one mediator (depressive symptoms), and one moderator (problem-solving communication); all these variables were treated as continuous. Exogenous variables were mean-centered. Initially, depressive symptoms were tested as a mediator of the connection between

gender minority stress and resilience and relationship instability to address hypothesis 1 (gender minority stress and resilience would be associated with relationship instability), hypothesis 2 (depressive symptoms would be associated with relationship instability), and hypothesis 3 (gender minority stress and resilience would be associated with depressive symptoms). Secondly, problem-solving communication will be utilized as a moderator to test research question 1 (will problem-solving communication buffer the association between gender minority stress and relationship instability?), research question 2 (will problem-solving communication buffer against the association between gender minority stress and depressive symptoms?) and research question 3 (will problem-solving communication buffer against the association between depressive symptoms and relationship instability?). Bootstrapping (with 5,000 resamples) created 95% confidence intervals for these analyses; a confidence interval that did not cross zero indicated a significant relationship. An index of moderated mediation was used to test the significance of the moderated mediation in addition to the conditional indirect effects (Hayes, 2022).

Table 1*Demographic Information for the Sample (N=308)*

Variable	N	%
Age (Range 19-74)		
19-29	95	30.8
30-39	115	37.3
40-49	69	22.3
50-59	16	5.10
60-74	13	4.10
Race/Ethnicity		
African American or Black	17	5.50
Alaska Native, Indigenous Peoples of America, or Native American	13	4.20
Asian	5	1.60
Native Hawaiian or Pacific Islander	4	1.30
Hispanic, Latino/Latina/Latinx, or of Spanish Origin	4	1.20
White	276	89.6
Gender Identity		
Agender	24	7.80
Androgyne	15	4.90
Bigender	19	6.20
Gender Queer	38	12.3
Gender Fluid	40	13.0
Gender Non-Conforming	42	13.6
Gender Expansive	11	3.60
Man	23	7.50
Non-Binary	78	25.3
Transgender	104	33.8
Trans Man	27	8.80
Trans Masculine	38	12.3
Trans Feminine	7	2.30
Trans Woman	28	9.10
Two-Spirit	11	3.60
Woman	14	4.50
Sexual Identity		
Asexual	26	8.40
Bisexual	115	37.3
Demisexual	26	8.40
Gay	82	26.6
Heterosexual	22	7.14
Lesbian	39	12.7

Pansexual	36	11.7
Queer	51	16.6
Relationship Status (All Participants Are Living with Partners)		
Dating	101	32.8
Engaged	57	18.5
Married	152	49.4
Monogamous Relationship	164	47.5
Consensual Nonmonogamous	160	51.9
Previously Divorced	53	17.2
Never Divorced	255	82.8
Income		
None	4	1.30
Under \$20,000	21	6.80
\$20,000 - \$39,999	57	18.5
\$40,000 - \$59,999	53	17.2
\$60,000 - \$79,999	87	28.2
\$80,000 - \$99,999	45	14.6
\$100,000 and above	41	13.3
Education		
Primary School to 8 th Grade	1	0.30
Some high school, no diploma	10	3.20
High school graduate, diploma or equivalent	53	17.2
Some college credit, no degree	68	22.1
Trade/technical/vocational training	20	6.50
Associate's Degree	53	17.2
Bachelor's degree	70	22.7
Master's Degree	27	8.80
Professional Degree	4	1.30
Doctorate Degree	2	0.60

Chapter 4: Results

Regression Assumptions

GMS ($M = 72.9$, $Mdn = 76$, skewness = $-.277$) showed a slightly negative skew, whereas depressive symptoms ($M = 11.6$, $Mdn = 12$, skewness = $.109$) displayed a slight positive skew. Upon visual inspection, both were mesokurtic, with a concentration of data around the mean and relatively thin tails, which indicated that GMS and depressive symptoms met the criteria for a normal distribution. A logarithmic transformation was applied to PSC ($M = 1.57$, $Mdn = 1.53$, skewness = $.437$) and relationship instability ($M = .701$, $Mdn = .699$, skewness = $.199$), which helped to normalize the data distributions to within acceptable parameters. Both exhibited a visually positive skew and were leptokurtic. GMS and relationship instability had a Durbin-Watson statistic of 1.689, indicating minimal autocorrelation, although mild heteroscedasticity was noted. GMS and depressive symptoms had high homoscedastic residuals (Durbin-Watson = 0.448). Additionally, depressive symptoms and relationship instability had a Durbin-Watson of 1.761, suggesting low autocorrelation and homoscedastic residuals across depressive symptom values. Upon reviewing the scatterplots, histograms, and data, it is evident that each variable satisfies the assumptions of homoscedasticity, normality, and linearity for further regression analysis.

Correlation Analysis

Each variable was assumed to be continuous, so a Pearson correlation was utilized to test for bivariate correlations. The analysis revealed several significant correlations among the main study variables. Higher GMS was moderately associated with higher relationship instability, with $r(308) = 0.35$, $p = 0.01$. Higher GMS showed a strong association with higher depressive symptoms scores, $r(308) = 0.58$, $p < 0.01$. Higher depressive symptoms was moderately

correlated with higher relationship instability, as indicated by $r(308) = 0.39, p = 0.01$.

Additionally, higher GMS was moderately associated with higher economic pressure, $r(308) = 0.26, p = 0.01$. Higher levels of GMS were also correlated with shorter relationship lengths, $r(308) = -0.17, p = 0.01$, and higher depressive symptoms was related to shorter relationship lengths, $r(308) = -0.33, p = 0.01$. Finally, higher rates of PSC were associated with greater relationship length, $r(308) = 0.23, p = 0.01$. These findings suggest notable associations between the variables. Further information regarding bivariate correlations is found in Table 2.

Alternative Model Testing

The hypothesized model was compared to two theoretically plausible models. First, an alternative model comparison was conducted in which depressive symptoms was modeled to predict relationship instability via GMS rather than the hypothesized model. The model was estimated and the Akaike and Bayesian information criteria values were smaller for the hypothesized model (AIC = 3281.54, BIC = 3307.52 vs. AIC = 4051.93, BIC = 4078.04), which indicates that the hypothesized model was a better fit to the data. Second, an alternative model comparison was conducted in which relationship instability was modeled to predict GMS via depressive symptoms. The model was estimated and the Akaike and Bayesian information criteria values were smaller for the hypothesized model (AIC = 3281.544, BIC = 3307.517 vs. AIC = 4715.55, BIC = 4741.66), which again indicates that the hypothesized model was a better fit to the data.

Full Model Estimation

A moderation mediation analysis was run utilizing the PROCESS macro in SPSS (template 59; Hayes, 2022) to estimate GMS's direct and indirect effects on relationship instability through depressive symptoms as moderated by PSC (Hayes, 2022; Model 59). The

significance of the direct and indirect effects was evaluated using 5000 bootstrap samples to create bias-corrected confidence intervals (CIs; 95%). PSC and GMS were mean centered before analysis. An index of moderated mediation was obtained in addition to the conditional indirect effects. The final model explained approximately 48.5% of the variance in depressive symptoms and 22.3% of the variance in relationship instability.

Direct Pathways

The data supported the first hypothesis, in that higher GMS was associated with greater relationship instability ($\beta = .001, p = .006, 95\% \text{ CL } [.0004, .0023]$), establishing a direct pathway between the predictor and outcome variable. The data also supported the second hypothesis, in that GMS was strongly associated with more depressive symptoms $r(308) = .696, p < .001$. In line with the third hypothesis, greater depressive symptoms were associated with greater relationship instability ($\beta = .006, p = .001, 95\% \text{ CL } [.003, .010]$). In terms of covariates, longer relationship length ($\beta = -.116, p = .045$) and older age ($\beta = -.078, p = .048$) were associated with lower depressive symptoms, whereas higher economic pressure was also associated with higher depressive symptoms ($\beta = 2.278, p < .001$) and greater relationship instability ($\beta = .035, p = .009$). See Figure 2.

Indirect Pathways

There was a statically significant indirect effect from GMS to relationship instability: GMS $\rightarrow$ depressive symptoms $\rightarrow$ relationship instability ($\beta = .143, p = .000, 95\% \text{ CL } [.117, .170]$). This result can be interpreted as follows: a 1-standard-deviation increase in GMS is associated with a .143-standard-deviation increase in relationship instability via the prior effect of GMS on depressive symptoms.

Moderation

In response to the research question, the results revealed a significant interaction between the moderator and the first pathway ($\beta = -.344, p = .011, 95\% \text{ CL } [-.610, -.078]$). The interaction indicated that higher levels of problem-solving communication were associated with less gender minority stress on depressive symptoms. Specifically, the effect of GMS on depressive symptoms was weaker at higher and all levels of PSC (see Table 5 and Figure 3).

Moderated Mediation

The overall moderated mediation model was supported with the index of moderated mediation (index = $-.0022, se = .0011, 95\% \text{ CI } [\text{LLCI} = -.0047, \text{UCLI} = -.0003]$). As zero is not within the CI, this indicated a significant moderating effect of PSC on GMS on the indirect effect via depressive symptoms. The conditional indirect effect was smallest when PSC was high (1 standard deviation above the mean; effect = $.0007, SE = .0003, 95\% \text{ CI } [.0003, .0013]$) and larger when PSC was low (1 standard deviation below the mean; effect = $.0011, SE = .0004, 95\% \text{ CI } [.0004, .0019]$). This indicated that PSC moderated the strength of the indirect effect of GMS on relationship instability through depressive symptoms. Thus, higher levels of PSC weakened the indirect effect of GMS on relationship instability by lessening the association with depressive symptoms.

Table 2*Main Study Variables Means and Standard Deviations (N=308)*

Variable	Range	Minimum	Maximum	Mean	SD	Median	Skewness
Gender Minority Stress	145.00	3.00	148.00	72.94	24.70	76.00	-.28
Depressive Symptoms	27.00	.00	27.00	11.16	7.23	12.00	.11
Relationship Instability	.60	.48	1.08	.70	.19	.70	.20
PSC	.35	1.40	1.75	1.57	.09	1.53	.44
Economic Pressure	3.33	1.40	4.33	2.21	.84	2.17	.61
Relationship Length	.60	1.00	45.33	6.24	7.25	4.21	3.18
Age (years)	55.00	.17	74.00	35.68	10.78	35	.95
FH_PHQ	1.00	19.00	1.00	.34	.47	.00	.69
Race	1.00	.00	1.00	.69	.47	1.00	-.80

Note. PSC = Problem-solving communication. FH_PHQ = family history of depression.

Table 3*Correlations for Study Variables (N = 308 Participants)*

Variables	1	2	3	4	5	6	7	8	9
1. Gender Minority Stress	--		.						
2. Depression Symptoms	.58**	--							
3. Relationship Instability	.35**	.39**	--						
4. PSC	-.11	-.06	-.03	--					
5. Economic Pressure	.26**	.43**	.30**	.28**	--				
6. Relationship Length	-.17**	-.33**	-.03	.23**	-.17**	--			
7. Age (In Years)	-.20**	-.34**	-.07	-.12*	-.28**	.62**	--		
8. FH_PHQ	.23	.24**	.19**	.08	.27**	-.18**	-.29**	--	
9. Race	.01	.14*	.10	.03	.20**	-.07	-.053	.026	--

Note. PSC = Problem-solving communication. FH_PHQ = family history of depression. * $p < .05$. ** $p < .01$ (two-tailed)

Table 4

Full model: Direct and Indirect Effects from Gender Minority Stress to Relationship Instability through Depressive Symptoms Moderated by Problem-Solving Communication (N = 308)

Predictors & Covariates	Model 1 (PHQ)					Model 2 (RI)				
	β	SE	p	LLCI	ULCI	β	SE	p	LLCI	ULCI
GMS	.143	.013	.000	.117	.170	.001	.000	.006	.000	.002
PHQ	n/a				n/a	.006	.002	.001	.003	.010
PSC	-6.42	3.771	.090	-13.844	.997	n/a				n/a
Int_1 (GMSxPSC)	-.344	.135	.011	-.610	-.078	n/a				n/a
RL	-.116	.058	.045	-.230	-.003	.002	.002	.244	-.001	.005
Age (In Years)	-.076	.039	.048	-.155	-.001	.001	.001	.278	-.001	.004
EP	2.278	.415	.000	1.461	3.094	.035	.013	.009	.009	.061
FH_PHQ	.273	.685	.690	-1.074	1.620	.034	.022	.123	-.009	.077
Race	.727	.682	.287	-.615	2.068	.018	.021	.404	-.024	.060

Note. GMS = gender minority stress. PHQ = depressive symptoms. PSC = Problem-solving communication. RL = relationship length. EP = economic pressure. FH_PHQ = family history of depression. LLCI = lower limit of the 95% confidence interval. ULCI = upper limit of the 95% confidence interval. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$.

Table 5

Conditional Effect from Gender Minority Stress to Depressive Symptoms at values of Problem-Solving Communication (N = 308 Participants)

PSC	Effect	SE	<i>t</i>	<i>p</i>	LLCI	ULCI
-.170	.202	.029	6.981	<.001	.145	.259
-.154	.196	.027	7.283	<.001	.143	.249
-.137	.190	.025	7.619	<.001	.141	.240
-.120	.185	.023	7.993	<.001	.139	.230
-.103	.179	.021	8.404	<.001	.137	.221
-.087	.173	.020	8.851	<.001	.135	.212
-.070	.167	.018	9.322	<.001	.132	.203
-.053	.162	.017	9.796	<.001	.129	.194
-.037	.156	.015	10.228	<.001	.126	.186
-.020	.150	.014	10.551	<.001	.122	.178
-.003	.144	.014	10.680	<.001	.118	.171
.013	.139	.013	10.534	<.001	.113	.165
.030	.133	.013	10.081	<.001	.107	.159
.047	.127	.014	9.361	<.001	.101	.154
.063	.122	.014	8.474	<.001	.093	.150
.080	.116	.015	7.526	<.001	.086	.146
.097	.110	.017	6.602	<.001	.077	.143
.113	.104	.018	5.750	<.001	.069	.140
.130	.099	.020	4.988	<.001	.060	.137
.147	.093	.021	4.318	<.001	.051	.135
.163	.087	.023	3.735	<.001	.041	.133
.180	.081	.025	3.227	.001	.032	.131

Note. LLCI = lower limit of the 95% confidence interval. ULCI = upper limit of the 95%

confidence interval. PSC = Problem-Solving communication. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$.

Table 6

Indirect Effects of Gender Minority Stress on Relationship Instability through Depressive Symptoms at Different Levels of Problem-Solving Communication (N = 308 Participants)

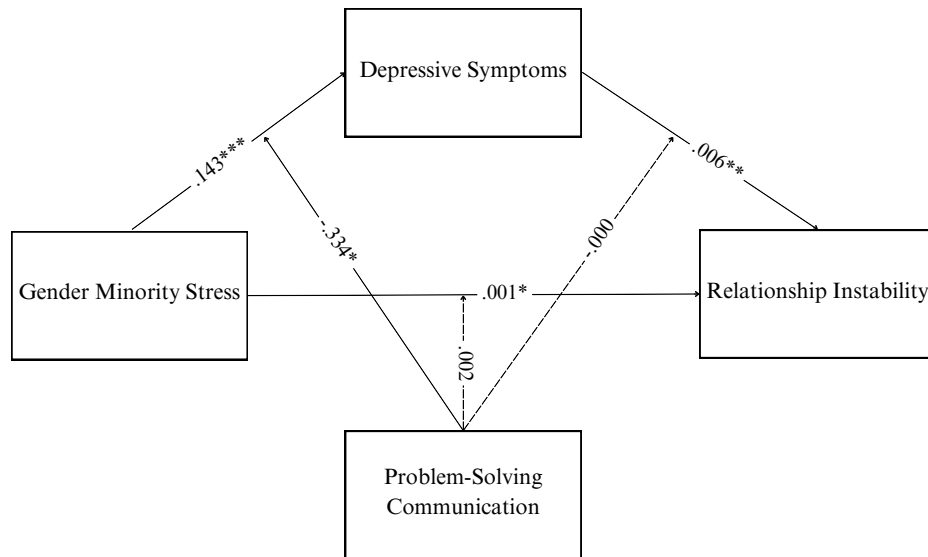
PSC	Effect	se	LLCI	ULCI
-.0933	.0011	.0004	.0004	.0019
.0000	.0009	.0003	.0003	.0015
.0933	.0007	.0003	.0002	.0013

Note. LLCI = lower limit of the 95% confidence interval. ULCI = upper limit of the 95%

confidence interval. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$.

Figure 2

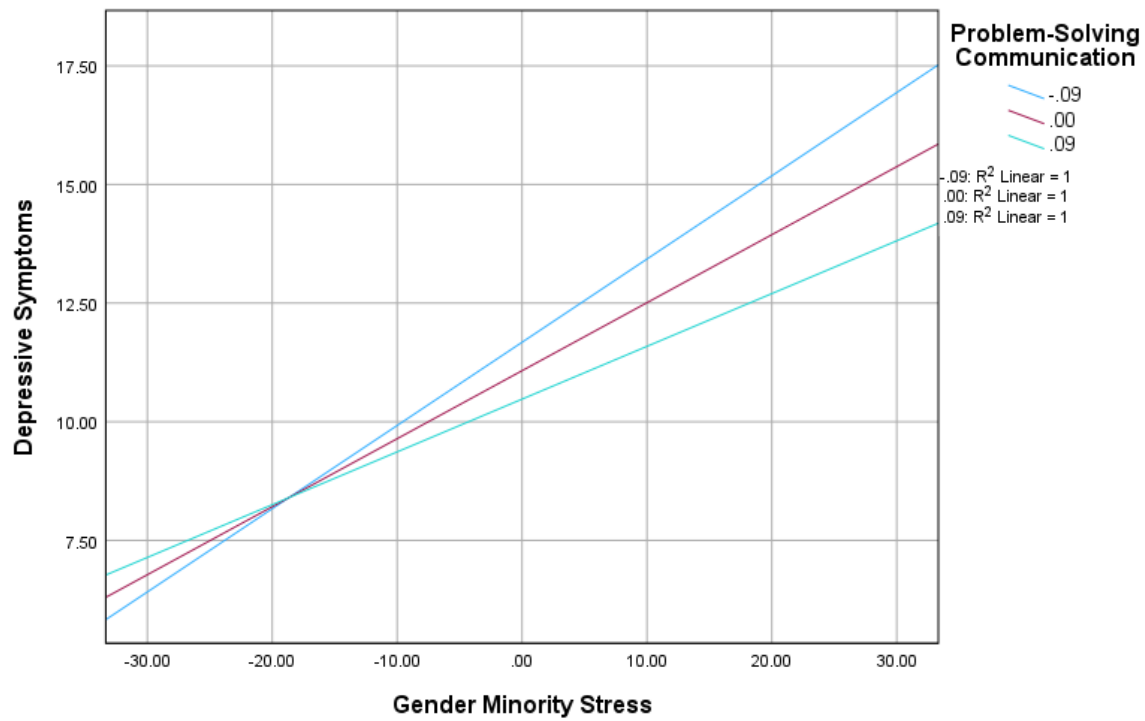
Conditional Process Model of Gender Minority Stress, Depressive Symptoms, Problem-Solving Communication, and Relationship Instability



Note. Covariates are regressed on depressive symptoms and relationship instability and included age, economic pressure, race/ethnicity, and family history of depression. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$.

Figure 3

The Effect of Gender Minority Stress on Depressive Symptoms Moderated by Problem-Solving Communication



Note. Problem-Solving communication and relationship instability had log transforms.

Chapter 5: Discussion

In this study, the associations between gender minority stress and relationship instability via depressive symptoms were examined. Problem-solving communication was also examined as a potential moderator of the path between gender minority stress and depressive symptoms. This investigation revealed several significant results. First, as hypothesized, significant associations were found between gender minority stress, depressive symptoms, and relationship instability. Second, problem-solving communication attenuated the link between gender minority stress and relationship instability, specifically via the gender minority stress—depressive symptoms pathway. These findings both support and extend Hendricks and Testa (2012)’s minority stress framework by implicating the inclusion of relationship factors—relational processes and relational outcomes—in the MST framework.

The most notable finding was that problem-solving communication buffered the association between gender minority stress and depressive symptoms, as well as the link between GMS and relationship instability through its effect on depressive symptoms. First, the association between gender minority stress and depressive symptoms was weaker at *all* levels of problem-solving communication. This finding suggests that any engagement—neither poor nor exceptional—in problem-solving communication by TGD couples attenuated the effect of gender minority stress on depressive symptoms. This is in line with past work on positive types of support and communication buffering the link between stress and depression (Schofield et al., 2017; Wang et al., 2014; Zhang et al., 2021), but extends the literature base to gender minority stress in a sample of gender diverse adults. Recent work has found that being partnered and in a more satisfying relationship can buffer the effect of minority stress on depressive symptoms (Pepping et al., 2024), however the finding from the present study goes beyond relationship

quality and extends to relationship processes. Second, this same relationship process also buffered the link between gender minority stress and relationship instability through the effect on depressive symptoms, which also supports past work (Assad et al., 2007; Bannon et al., 2020; Trombello et al., 2011) but highlights the role of interpersonal processes on relational outcomes. It is important to note that the present sample did not report high levels of relationship instability, which could potentially indicate higher relationship quality, or conversely, that partners may not have many relational difficulties as the average length was around six years. Perhaps this reflects why any level of problem-solving communication buffered the effect of minority stress. Future work should examine these associations in more turbulent relationships and across time to determine if relationship processes still buffer gender minority stress on outcomes. Regardless, these results suggest that within the socioecological framework (from individual to societal factors), romantic relationships may play a vital role in attenuating how gender minority stress is linked with both mental and relationship outcomes.

These findings are significant for two main reasons, specifically around the type of stress as well as the type of communication examined in this study. First, whereas past work suggests that couple relationship processes can have an impact on more common and everyday stressors (Bodenmann, 1997, Bodenmann et al., 2009)—suggesting that some stressors may be more malleable and modifiable—the current findings are somewhat surprising, given the nature of gender minority stress as an immutable and ever-present experience in the current political and social zeitgeist. Second, typically in the face of an extreme stressor, emotional support and affective communication may be more important than finding solutions or problem-solving communication because the stressor itself cannot be modified. To this end, Mossakowski and Zhang (2014) found that emotional support buffered against psychological distress, although this

was in the context of racial discrimination among Asian Americans. However, the present finding is supported by other work that found problem-solving communication buffered the effect of economic pressure, another larger sociopolitical force (Novak et al., 2017). Within the context of TGD individuals, Pepping and colleagues (2024) specifically found that romantic relationships buffered only against victimization and rejection—which are interpersonal in nature—and are perhaps different than more systemic forms of discrimination. The current study lumped all forms of gender minority stress together, which perhaps may have been why a buffering effect was found. Future research should investigate whether relational processes and types of communication (affective or problem-solving) may buffer some or all types of gender minority stress. Thus, perhaps partners in the present sample instead focused on finding solutions to specific interpersonal forms of gender minority stress rather than those larger structural forms of discrimination. Or conversely, perhaps partners explored and discussed how problematic or difficult the social norms are around gender identity. Therefore, rather than an internal focus on how a partner can adapt or change to gender minority stress, partners of the individuals in this study helped the other see that outside structures and forces are the issue. This might therefore conflate problem solving communication with emotional support and validation. Perhaps these reasons could be why problem-solving communication did not mitigate the associations between GMS and relationship instability or between depressive symptoms and relationship instability. More research is needed to understand these phenomena.

There were several significant findings regarding the covariates. First, the results showed that longer relationships and older ages were associated with lower depressive symptoms. These findings support past theoretical and empirical work on aging in relationships and psychological well-being (Carstenson, 1996; Li & Fung, 2011). Finally, higher economic pressure was

associated with greater depressive symptoms and more relationship instability, in line with past work on economic pressure and psychological distress (Gudmunson et al., 2007) and the impact of economic pressure on relational outcomes (Conger et al., 1999). Taken together, these findings emphasize the importance of considering various factors that cause strain on TGD romantic and committed relationships.

Implications for Theory and Intervention

While we did find associations that supported previous work both within MST (gender minority stress and depressive symptoms; e.g., Pellicane & Ciesla, 2022) and outside of it within relational science (depressive symptoms and relationship instability; Beach et al., 1990; Whisman & Uebelacker, 2009)—these results highlight that relational factors could and should be incorporated in the GMS framework. Currently, the GMS framework includes distal, proximal, and resilience factors but does not identify or distinguish the effect of one's personal relationships within the associations. The present study implicates that relationship science can add to the GMS framework, as relationship outcomes could be another critical distal factor, and relationship processes may be important resilience factors. Further theoretical and empirical work is needed, however.

The findings from this study also have important implications for preventing and addressing depressive symptoms and relationship instability among TGD individuals in committed relationships. Prior research has shown that TGD individuals in such relationships are at increased risk of instability due to relational stigma (Gamarel et al., 2014). This study highlights the importance of routine depression and mental health screenings for TGD individuals, particularly to assess whether any present symptoms are affecting the stability of their romantic relationships. Regular mental health evaluations can help identify and address

issues early, potentially mitigating the adverse effects of relational stigma and supporting the well-being of TGD individuals and their partners. In addition to mental health screenings, it is crucial to assess the extent and severity of gender minority stress and its impact on significant relationships or mental health. By identifying these stressors, targeted treatment modalities can be developed or utilized to stabilize relationships and improve mental health. This comprehensive approach can help mitigate the negative effects of gender minority stress and enhance the overall well-being of TGD individuals and their partners.

The findings also indicate that promoting problem-solving strategies can buffer against depressive symptoms in individuals experiencing gender minority stress within the context of couple relationships. Effective communication within relationships, particularly around problem-solving, may be one strategy to help protect against depression. By encouraging TGD individuals and their partners to discuss gender minority stress, show genuine interest in each other's issues, improve listening skills, and develop practical solutions, the likelihood of depressive symptoms might be reduced. These results also highlight the stressors faced by gender minorities, aiding in educating the public about gender minority experiences in romantic relationships.

Limitations and Future Directions

The results of this study must be considered despite some limitations. One limitation was that the sample was predominantly white, middle-class, and educated. The lack of diversity may limit the generalizability of the data to broader, diverse populations. Future research could include a more racially diverse sample to investigate how intersecting identities can influence overall mental health and relational stability. Second, the study's reliance on self-reported and cross-sectional data limits the ability to confirm causality. Therefore, observational and longitudinal studies are needed to examine the temporal associations between gender minority

stress, depressive symptoms, and relationship instability. Third, before intervention studies aim to improve problem-solving communication, qualitative studies are first needed that examine *how* problem-solving communication occurs between TGD partners facing gender minority stress. Finally, while problem-solving communication was tested to see if it attenuated the relationship between gender minority stress and depression, other potential protective factors might not have been adequately explored. For instance, in a study conducted on heterosexual and cisgender couples, Gottman et al. (1998) highlighted the importance of positive affect, acceptance of influence, and physiological soothing in predicting relationship stability and happiness. A more recent study also found that emotion-focused therapy was more effective for treating moderate marital distress compared to isolated behavioral marital therapy (Wood et al., 2005). Therefore, focusing on measures that indicate how couples interact regarding soothing, positive affect, acceptance of influence, and helping to have more positive interactions could provide other treatment interventions and inform care for TGD individuals and their significant relationships.

Conclusion

In conclusion, this study demonstrates that gender minority stress may undermine relationship instability mainly through depressive symptoms, but problem-solving communication may weaken that association. In the context of gender minority stress, TGD couples use of problem-solving communication may help reduce symptoms of depressive symptoms, thereby improving the stability of relationships. Therefore, both intervention and assessment efforts should consider gender minority stress and depressive symptoms as essential factors in the context of relationship stability and consider enhancing TGD couples' problem-solving communication to achieve less relational instability. Future work is needed to assess

different strategies for mitigating the adverse effects of GMS on mental health and relationship stability for TGD couples within the MST framework.

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