

Potentially Traumatic Events and the Association Between Gender Minority Stress and Suicide Risk in a Gender-Diverse Sample

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Transgender and gender diverse (TGD) individuals are at an elevated risk of trauma exposure and other negative mental and physical health outcomes. The present study examined the interaction between minority stressors, reported potentially traumatic events (PTEs), and suicide risk (i.e., ideation and behavior) in a TGD sample. A convenience sample of 155 self-identified TGD individuals completed questionnaires assessing distal (e.g., gender-related discrimination) and proximal (e.g., internalized transphobia) gender identity–related stressors, lifetime PTE history, and suicide risk. The results of a mediation analysis demonstrated that proximal stressors partially mediated the association between distal stressors and suicide risk, $B = 1.12$, $t(152) = 3.72$, $p < .01$, 95% CI [0.53, 1.72], and the results of a moderated mediation analysis showed that the interaction term was not significant, and that the number of PTEs did not moderate the mediation model that examined proximal stressors as a mediator of the association between distal stressors and suicide risk, $F(3, 151) = 18.74$, $MSE = 0.75$, $R^2 = 0.27$, $B = 0.07$, $t(151) = 0.89$, $p = .371$, 95% CI [-0.08, 0.21]. These findings suggest that minority stressors may contribute to suicide risk in a TGD population above and beyond the impact of trauma exposure. Risk reduction efforts for suicide risk may be enhanced by attending to minority stressors in addition to PTEs.

Transgender and gender diverse (TGD) individuals account for approximately 0.5% of the population in the United States. Research has demonstrated a number of mental and physical health disparities for TGD individuals compared to their cisgender counterparts, with higher rates of depression, posttraumatic stress disorder (PTSD), anxiety, substance use, and HIV infection (Bockting et al., 2013). One of the potential consequences associated with these high rates of mental and physical health problems is suicide (Reisner et al., 2016). Suicide is the 17th leading cause of death in the world, accounting for almost 1,000,000 deaths per year globally (Pigeon et al., 2012; World Health Organization, 2018). The prevalence of lifetime suicide attempts is approximately 5% among the general population, but lesbian, gay, and bisexual individuals have a lifetime attempt rate of 10%–20% (Narang et al., 2018). In TGD samples, this rate has been shown to range from 30% to 81% (Narang et al., 2018). Several factors, some of which are unique to minority populations, have been implicated as potential explanations for this increased rate among TGD individuals, such

as experiencing violence, discrimination, family rejection, and internalized homophobia (e.g., Grant et al., 2011).

In addition to the high rates of attempted suicide, the TGD population is at increased risk for exposure to potentially traumatic events (PTEs). In the general population, estimates suggest that approximately 70%–90% of individuals will experience at least one traumatic event, with a lifetime PTSD prevalence of approximately 8.3% (Kilpatrick et al., 2013). In contrast, previous studies of TGD individuals have reported higher rates of trauma exposure, with some studies suggesting that up to 98% of TGD individuals have experienced at least one PTE and 17.8% have symptoms consistent with PTSD (e.g., Shipherd et al., 2011). In a sample of 97 transgender participants, Shipherd et al. (2011) reported that only two individuals endorsed not having experienced a PTE, demonstrating the elevated rates of exposure to PTEs within TGD samples. The most frequently endorsed PTE in this sample was the sudden death of a loved one, followed by experiencing or witnessing a life-threatening illness or motor vehicle accident. Although the authors did not confirm the chronological occurrence of PTEs in their sample, their results demonstrate that the cumulative impact of trauma can lead to higher rates of PTSD and depression.

Of note, the cumulative effect of trauma exposure appears to have a substantial negative impact on mental health outcomes in sexual and gender minority individuals (e.g., Mustanski et al., 2016). In a longitudinal study, Mustanski et al. (2016) found that the victimization rates of sexual and gender minority individuals tended to be higher when individuals were of

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high-school age and often decreased with age as participants were more able to select with whom they interacted frequently. However, it is important to note that instances of victimization can happen across the lifespan, and compounded traumatic events have been linked to negative mental health outcomes even after controlling for baseline diagnoses (e.g., Mustanski et al., 2016). Previous research has demonstrated a link between experiencing PTEs and increased suicidal ideation (SI) in the general population (e.g., Krysinka & Lester, 2010); this link also appears to exist within the TGD population (Rood et al., 2015).

The “minority stress theory” proposes that unique stressors may contribute to adverse health outcomes, including suicide risk and PTSD, in marginalized groups (Meyer, 1995). The theory focuses on two specific types of stressors: distal and proximal. Distal stressors are external, objectively stressful factors that may include gender-related discrimination, rejection, victimization, and nonaffirmation (e.g., being called by the incorrect pronouns) in the TGD population. Proximal stressors are internal processes that may include internalized transphobia, negative expectations of interactions with others based upon their gender identity, and identity concealment (Testa et al., 2015). This theoretical framework also outlines two factors related to resilience, namely community connectedness and pride. These resilience factors are thought to potentially offset the impact of distal and proximal stressors on mental and physical health outcomes. Testa and colleagues (2015) adapted this theory for gender minorities from Meyer’s (1995) minority stress theory, which was developed to explain the association between social stressors experienced by gay men and negative mental and physical health outcomes. Later, Meyer (2003) expanded this theoretical model to encompass minority stress in lesbian, gay, and bisexual individuals.

Hatzenbuehler (2009) suggested a mediational framework to understand the associations among distal stressors, proximal stressors, and negative physical and mental health outcomes, positing that proximal stressors may serve as a mediator of the impact of distal stressors on outcomes when exploring how stigma create psychological distress in sexual minority individuals. Furthermore, Hatzenbuehler suggested that some moderators may exist in this mediation model, including developmental influences and stigma-related processes. When considering developmental influences that may impact an individual, Hatzenbuehler outlined the potential influence of stressors, as experiencing stressors during critical development may be linked to the emotional processing of these events.

Recently, research has examined the association between components of the minority stress theory and suicide risk in the TGD population. Testa and colleagues (2017) found that distal and proximal stressors were related to SI within a TGD sample recruited from the general population. Specifically, the researchers found that distal stressors (e.g., rejection, nonaffirmation, victimization, and discrimination) were associated with SI via feelings and experiences of proximal stressors (e.g., internalized transphobia, negative expectations, and nondisclo-

sure). Testa and colleagues’ study was one of the first to examine SI as a negative mental health outcome associated with gender minority stress. Similarly, Tucker and colleagues (2019) found that in a TGD veteran sample, both distal and proximal stressors were related to past-year and recent SI. Moreover, the association between distal stressors and SI was mediated by the experience of proximal stressors. However, this study utilized unpublished measures to assess internal and external minority stressors; thus, these results may not be generalizable to other studies conducted with TGD samples. The authors also assessed for military-specific minority stress, which further limits the generalizability of these results to other TGD individuals.

The present study was an extension of that research in that it examined the unique contribution of the number of PTEs an individual had experienced to the association between distal and proximal stressors and suicidality. First, as a replication of Testa et al.’s (2017) study, we hypothesized that proximal stressors would mediate the association between distal stressors and suicide risk. Assuming our second hypothesis was found to be significant, we hypothesized that trauma exposure would moderate the mediation model such that individuals who had experienced higher numbers of PTEs would have stronger evidence of mediation than those who endorsed lower numbers of PTEs. This final hypothesis builds upon the current literature suggesting a mediational model of minority stress (e.g., Hatzenbuehler, 2009; Testa et al., 2015) by examining trauma exposure as a potential magnifier of the impact of distal stressors on proximal stressors, as cumulative trauma exposure has been shown to increase ruminative symptoms (e.g., PTSD, depression; Mustanski et al., 2016). Furthermore, by examining the potential temporal proximity of PTEs and distal stressors (i.e., past experiences) as compared to proximal stressors and suicide risk (i.e., more current experiences) through a moderated mediation model, we aimed to better understand the associations among these variables.

Method

Participants

In total, 655 individuals initially contacted by a Qualtrics (Provo, UT) survey panel signed up to participate in the online study, with 314 individuals declining to provide informed consent. A further 60 individuals were excluded due to self-identification as cisgender, 11 were excluded for problematic or offensive responses related to current gender identity questions, 47 individuals were removed for failure to meet the Qualtrics quality checks, and a final 24 individuals were excluded for failing a brief measure of effort, resulting in a sample of 199 TGD individuals. An additional 44 individuals were excluded from the present analyses due to nonresponse on items related to suicide. We did not find major differences between the full sample and the sample that included only participants who responded to the suicide-related items. The final sample comprised 155

TGD individuals, with a mean participant age of 29 years ($SD = 12.1$). In total, 117 individuals (75.5%) reported being designated as female on their birth certificate. A total of 20 unique gender identities were endorsed, which did not allow for comparisons of group differences. Additional demographic information about the sample can be found in Table 1.

All participants reported experiencing at least one PTE as identified by the Life Events Checklist (LEC) for the fifth edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-5)*; i.e., the LEC-5; Weathers et al., 2013). Participants endorsed an average of 19.81 ($SD = 4.69$) types of PTEs, and approximately 99% of the sample reported experiencing more than one type of PTE. The most frequently endorsed directly experienced (i.e., “happened to me”) PTE was “other unwanted or uncomfortable sexual experience” ($n = 95, 65.3%$), followed by physical assault ($n = 82, 52.9%$), and transportation accident ($n = 70, 45.2%$). The frequencies of all directly (i.e., “happened to me”) and indirectly (i.e., “witnessed it”) experienced PTEs can be found in Table 2. The mean participant score on the Suicide Behaviors Questionnaire–Revised (SBQ-R; Osman et al., 2001) score was 9.17 ($SD = 3.69$), with the majority of individuals (70.9%) scoring above the recommended cutoff score of 7 or above for general adult populations.

Procedure

Before data collection, the study was reviewed and deemed Institutional Review Board (IRB)–exempt by the University of Tulsa IRB. The survey was distributed via an anonymous online survey panel conducted via Qualtrics. Qualtrics survey panels utilize digital fingerprint technology to ensure the identity of the participant to bolster the validity of the data. Additionally, several quality checks were instituted both by Qualtrics and the research team. For example, items related to attention, such as “select very unlikely,” were embedded within the survey, and individuals who responded inaccurately were removed from the final sample, as suggested by Huang et al. (2015). Qualtrics automatically removes and replaces responses from straight-line responders (e.g., individuals who select the same response across items) and those who take less than one third of the average time to complete the survey. Individuals who were determined to meet the study criteria were contacted to participate in a survey related to their gender identity, with no additional information provided regarding the purpose of the survey. Participants reviewed the informed consent, and if they met the criteria for participation (i.e., identified as a different gender identity from the biological sex assigned at birth), they were asked to complete a 30-min survey that included questions related to trauma and minority stress. Participants were encouraged to respond to all items and received reminders to complete items with no response; however, individuals were not forced to respond to all questions, resulting in minimal missing data. Participants were provided with compensation for their participation directly from Qualtrics, which allowed for total anonymity. Upon completion, participants were also provided with a

Table 1
Sample Characteristics

Variable	<i>M</i>	<i>SD</i>
Age (years)	29.9	12.1
	<i>n</i>	%
Gender identity		
Agender	12	7.7
Androgynous	5	3.2
Bigender	13	8.4
Crossdresser	6	3.9
Drag performer king/queen	2	1.3
Female	3	1.9
Genderqueer	12	7.7
Gender fluid	26	16.8
Gender nonconforming	6	3.9
Intersex	1	0.6
Male	2	1.3
Multigender	1	0.6
Nonbinary	39	25.2
Transgender	7	4.5
Transsexual	2	1.3
Transgender man (female to male)	1	0.6
Transgender woman (male to female)	10	6.5
Transvestite	1	0.6
Two-spirit	4	2.6
Gender not listed	2	
Sexual orientation identity		
Heterosexual	10	6.5
Gay	5	3.2
Lesbian	9	5.8
Bisexual	27	17.4
Asexual	20	12.9
Pansexual	39	25.2
Queer	27	17.4
Fluid	8	5.2
“I do not identify as heterosexual, but I do not see my identity listed.”	8	5.2
Missing	2	1.3
Race/ethnicity		
Caucasian or White	.96	61.9
African American or Black	8	5.2
Asian	7	4.5
Alaskan/Native American	2	1.3
Latinx/Hispanic	11	7.1
Biracial	17	11
Multiracial	5	3.2
Unknown	2	1.3
Educational attainment		
Less than high school diploma	12	7.7
High school diploma or GED	28	18.1
Some college	40	25.8
Two year/technical college degree	16	10.3

(Continued)

Table 1
(Continued)

Variable	<i>M</i>	<i>SD</i>
Four-year college degree	30	19.4
Some graduate/professional school	9	5.8
Graduate or professional degree	19	12.3
Missing	1	0.6
Vocational status		
Student	24	15.5
Disability	12	7.7
Unemployment	25	16.1
Unemployed student	1	0.6
Unemployment and disability	1	0.60
Retired	3	1.9
Retired disability	1	0.6
Full-time employment	47	30.3
Part-time employment	34	21.9
Part-time employment and a student	3	1.9
Part-time employment and disability	2	1.3
Student and disability	1	0.6
Missing	1	0.6
Current geographical location		
Urban	61	39.4
Suburban	66	42.6
Rural	25	16.1
Other	2	1.3
Missing	1	0.6

one-page list of resources to contact if they became distressed or upset when completing the survey.

Measures

Demographic Characteristics

The survey included demographic questions related to biological sex assigned at birth, current gender identity, sexual orientation, race, location of residence, age, educational attainment, and current employment status.

Lifetime Trauma Exposure

The LEC-5 (Weathers et al., 2013) was administered to assess participants' lifetime traumatic event exposure. This measure includes 16 types of traumatic events, such as physical assault, sexual assault, natural disasters, and combat exposure, and asks individuals to indicate if they have experienced, witnessed, learned about, or been exposed to these events as part of their work. Additionally, individuals have the option to select "other" and write in a type of PTE that does not fit into the provided categories. Participants were able to select multiple options per PTE (i.e., selecting both "happened to me" and "witnessed it"), and for each selected PTE, they were asked how many times the event had occurred, which they indicated in a numeric free-response format. In the present study, the to-

tal number of PTEs a participant experienced was calculated by summing all event types endorsed with either "happened to me" or "witnessed it."

Gender-Minority Stress and Resilience

The Gender Minority Stress and Resilience Measure (GMSR; Testa et al., 2015) is a 58-item scale designed to assess nine constructs: gender-related discrimination, gender-related rejection, gender-related victimization, nonaffirmation of gender identity, internalized transphobia, negative expectations for future events, concealment, community connectedness, and pride. Construct-specific scales are combined to contribute to three distinct subscales: Distal Stressors (i.e., gender-related discrimination, gender-related rejection, gender-related victimization, and nonaffirmation), Proximal Stressors (i.e., internalized transphobia, negative expectations for future events, and concealment), and Community Resilience (pride and community connectedness). Items related to experiences of discrimination, rejection, and victimization are scored as 0 for no experience and 1 for any previous experience of the stressor in question. All other items are scored on a Likert scale ranging from 0 (*strongly disagree*) to 4 (*strongly agree*). A total score for each construct related to proximal stressors was calculated by summing all items related to that construct, with higher scores indicating higher levels of endorsement. In the present study, the total Proximal Stressors subscale score demonstrated excellent internal consistency, Cronbach's $\alpha = .91$, and the total Distal Stressors subscale score demonstrated good internal consistency, Cronbach's $\alpha = .85$. Due to the potential for multicollinearity between the Proximal Stressor and Distal Stressor subscales, a standardized z score was computed to produce a composite score for proximal and distal stressors, respectively. This standardization is in line with suggestions from Hunter and Hamilton (2002) to reduce multicollinearity.

Suicidality

The SBQ-R (Osman et al., 2001) is a four-item, self-report measure that is used to assess SI, suicide behaviors, suicide communication, and the likelihood of future suicide attempts. The items are summed to yield a total score, which allows individuals to be identified as potentially high-risk for suicide. Total scores on this measure can range from 3 to 18, with higher scores indicative of a higher risk of suicide. The total SBQ-R score was utilized for the present analyses. In the general adult population, Osman and colleagues (2001) recommend a cutoff score of 7 or above to indicate a high suicide risk, per a large-scale validation study of the SBQ-R that utilized clinical and nonclinical samples. In the present study, the SBQ-R demonstrated good internal consistency, Cronbach's $\alpha = .84$.

Data Analysis

Descriptive analyses were conducted to determine the sample characteristics, such as age, gender identity, number of traumatic experiences, and mean suicide risk. Due to the

Table 2
Endorsed Potentially Traumatic Events

Variable	Happened to me				Witnessed it			
	<i>n</i>	%	<i>M</i>	<i>SD</i>	<i>n</i>	%	<i>M</i>	<i>SD</i>
Natural disaster	17	10.9	1.93	1.67	29	18.7	3.86	14.01
Fire or explosion	17	10.9	1.07	1.46	19	12.3	1.72	1.65
Transportation accident	70	45.2	1.94	1.72	40	25.8	2.18	2.17
Serious accident at work, home, or during recreational activity	26	16.8	1.54	1.38	26	16.8	3.24	5.92
Exposure to toxic substances	11	7.1	1.39	1.58	3	1.9	1.75	2.67
Physical assault	82	52.9	6.19	9.95	45	29	6.12	14.87
Assault with a weapon	20	12.9	0.69	0.80	21	13.5	1.68	1.97
Sexual assault	61	39.4	4.29	8.97	12	7.7	0.70	1.30
Other unwanted or uncomfortable sexual experience	95	61.3	8.01	21.83	31	20	4.94	15.66
Combat or war zone exposure	3	1.9	0.27	0.59	2	1.3	0.73	1.62
Captivity	4	2.6	0.27	0.47	3	1.9	0.18	0.41
Life-threatening illness or injury	25	16.1	0.68	0.84	47	30.3	2.45	6.70
Severe human suffering	15	9.7	3.87	17.88	27	17.4	12	35.67
Sudden violent death	6	3.9	0.45	1.22	21	13.5	1.12	1.67
Sudden accidental death	7	4.5	0.48	0.99	17	10.9	1	1.92
Serious injury, harm, or death you caused someone else	11	7.1	2.43	2.85	9	5.8	1.15	1.91

potential for multicollinearity between proximal stressors and distal stressors, standardized *z* scores were computed to produce composite scores for proximal and distal stressors, as recommended by Hunter and Hamilton (2002). To test the first hypothesis, a bootstrapped mediation model was conducted utilizing the PROCESS (Version 3.5) macro (Hayes, 2017) in SPSS (Version 25; IBM, 2017) Model 4, with proximal stressors serving as the mediator of the association between distal stressors and suicide risk. Finally, to test the second hypothesis, a bootstrapped moderated mediation was conducted utilizing the PROCESS macro Model 7 to examine the effect of PTEs as a moderator of the mediation model from the first hypothesis.

Results

To examine whether proximal stressors mediated the association between distal stressors and suicide risk, we conducted a mediation analysis. The results indicated the presence of partial mediation. In the first step, distal stressors were found to be significantly associated with suicide risk, $F(1, 153) = 35.85$, $MSE = 11.14$, $R^2 = .24$, $B = 1.59$, $t(153) = 5.99$, $p < .001$, 95% CI [1.07, 2.11]. In the second step, experiences of distal stressors were significantly related to proximal stressors, $F(1, 153) = 55.39$, $MSE = 0.75$, $R^2 = .27$, $B = 0.51$, $t(153) = 7.44$, $p < .001$, 95% CI [0.38, 0.65]. In the final step, proximal stressors were found to be related to suicide risk, $F(2, 152) = 23.35$, $MSE = 10.59$, $R^2 = .24$, $B = 0.91$, $t(152) = 2.99$, $p = .003$, 95% CI [0.31, 1.51]. When proximal stressors were included in the examination of the impact of experiences of distal stressors on suicide risk, the direct association between distal stressors and suicide risk was still significant, $B = 1.12$, $t(152) = 3.72$,

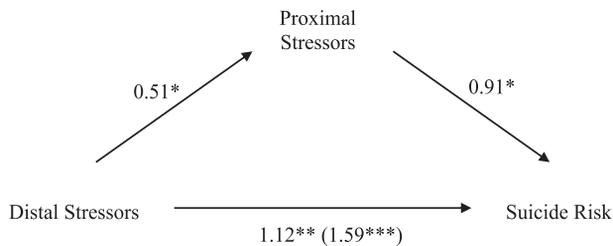
$p < .001$, 95% CI [0.53, 1.72], indicating that partial mediation occurred. The indirect effect coefficient was found to be significant, $B = 0.47$, $SE = 0.17$, 95% CI [0.17, 0.82]. A full overview of the model can be found in Figure 1.

To test the second hypothesis, which posited trauma exposure would moderate the mediation model such that individuals who had experienced higher numbers of PTEs would have stronger evidence of mediation than those who endorsed lower numbers of PTEs, we conducted moderated mediation analysis. The results of this model indicated that moderated mediation did not occur. The interaction term was not significantly related to proximal stressors, $F(3, 151) = 18.74$, $MSE = 0.75$, $R^2 = 0.27$, $B = 0.07$, $t(151) = 0.89$, $p = .371$, 95% CI [-0.08, 0.21]. At low levels of PTE exposure, the beta coefficient for the indirect effect of the mediation model was 0.41, $SE = 0.16$, 95% CI [0.14, 0.75]; at average PTE levels, the coefficient for the indirect effect of the mediation model was 0.47, $SE = 0.17$, 95% CI [0.18, 0.83]; and at high levels of PTE exposure, the coefficient for the indirect effect of the mediation was 0.53, $SE = 0.21$, 95% CI [0.17, 0.99]. The index of moderated mediation did not suggest that moderated mediation had occurred, with an index of 0.06, $SE = 0.08$, 95% CI [-0.09, 0.23]. Thus, our final hypothesis was not supported.

Discussion

Consistent with prior studies, our first hypothesis, that proximal stressors would mediate the association between distal stressors and suicide risk among TGD individuals, was confirmed (e.g., Hendricks & Testa, 2012; Jäggi et al., 2018; Testa et al., 2017; Tucker et al., 2019). Based on these findings, we

Figure 1
Mediation Analysis



Note. The standardized regression coefficient values are given. Path *c* is listed in parentheses. * $p < .05$. ** $p < .01$. *** $p < .001$.

sought to build upon the model proposed by Hatzenbuehler (2009) by examining a potential developmental influence (e.g., PTE exposure) on the association between distal stressors and proximal stressors within this mediational framework. Our second hypothesis, that the number of PTEs to which an individual had been exposed would moderate the mediation effect of distal stressors to proximal stressors within the larger context of suicide risk from our first hypothesis, was not supported. This finding does not support the proposed model of developmental influences on the theoretical framework set forth by Hatzenbuehler (2009). It may be that other developmental influences are implicated in this association and should be explored in future studies.

Furthermore, our null findings regarding our second hypothesis contrast with findings reported by Mustanski et al. (2016), who observed an overall negative cumulative effect of trauma exposure on suicide risk within TGD individuals. However, the sample in Mustanski and colleagues' (2016) study was younger than the present sample. It is possible that more time had elapsed since participants' most recent PTE in the present sample compared to participants surveyed by Mustanski and colleagues (2016). In addition, participants in the present older sample may have had more time to develop resilience factors to buffer the impact of cumulative traumatic experiences on suicide risk. However, of note, a recent study by Cogan and colleagues (2020) found that the community resilience factors in the gender minority stress theory did not moderate the association between gender minority stressors and suicide risk in a TGD sample. It is possible that other resilience factors exist outside of the gender minority stress framework and should be explored by future researchers.

There are several other potential explanations for this finding, including that most participants in the present sample reported experiencing at least one type of PTE, with the majority endorsing multiple types of trauma exposure. This may have limited our ability to find differences between levels of PTE exposure despite our examination of the moderating effect of the average number of PTEs experienced at 1 standard deviation above and below the mean. Additionally, it is quite possible there was overlap in the reporting of PTEs and some distal stressors (e.g., gender-based victimization), which may have influ-

enced our findings and our ability to parse out the unique contribution of PTEs within this framework. When possible, future researchers should consider how to address these overlaps and more thoroughly assess these variables. Furthermore, it is possible that PTEs are just one piece of the puzzle when considering significant clinical factors to address when working with TGD clients. Indeed, Shipherd and colleagues (2019) developed a trauma and minority stress exposure model for TGD individuals. This model includes *DSM-5* PTSD Criterion A stressors as part of the equation but also includes gender minority stressors, discrimination, and microaggressions. In our moderated mediation model, we only included two pieces of the trauma and minority-stress exposure model, which may partially explain our null findings.

In addition, it is possible that because minority stressors tend to be chronic, persisting over the course of the individual's life (Rieger & Savin-Williams, 2012), they may have a larger psychological impact than other types of stressors, such as traumatic events. Some researchers have argued that experiencing non-life-threatening events, such as prejudice or discrimination, that are associated with an individual's minority identification can precipitate PTSD, as they are a threat to both one's security and well-being (Alessi et al., 2013; Bryant-Davis & Ocampo, 2005; Helms et al., 2010; Loo et al., 2001). Some researchers have suggested that minority stressors are a "cognitive/affective assault" on an individual's identification and therefore "strike the core of one's selfhood" (Bryant-Davis & Ocampo, 2005, p. 480).

These findings should be considered in light of some potential limitations. We utilized a two-step approach to measure gender identity, which is consistent with prior research within this population. However, this approach does not fully capture the complex nature of gender identity, and, as such, some individuals who identify on the TGD spectrum may not have been included in our final sample. To remedy this, we broadly included all individuals who identified any gender identity that differed from their sex assigned at birth, even if the gender identity was less frequently reported (e.g., drag queen), as we believed it was important to respect any gender identity labeled by a participant. All TGD individuals were grouped together despite several different gender identities endorsed. There is some evidence to suggest that individuals with specific gender identities are at an elevated risk of experiencing violence (e.g., Kenagy, 2005), which may be an area of interest to explore in a larger sample. Where possible, future studies should examine group differences within this framework based on gender identity. Furthermore, our study did not include race, ethnicity, or sex assigned at birth within the analyses. Prior studies have found that these variables may be implicated in suicide risk; as such, future studies should seek to explore these variables as they contribute to the associations between gender minority stress, number of traumatic experiences, and suicide risk in TGD samples.

To assess gender minority theory stressors, we utilized the GMSR, which is based upon the minority stress theory

developed considering the experiences of gay cisgender men. As such, this measure may be limited in capturing the full effect of unique stressors. The data were cross-sectional, which inhibits true causality, as there would need to be temporal separation. With more advanced statistical analyses, there has been a push to consider the role of atemporal mediation models to explain associations between variables outside of the context of time (e.g., Winer et al., 2016). Based on this, our models can be considered to be demonstrations of associations atemporally. Where possible, future studies should collect longitudinal data to explore these associations over time. Suicide risk has long been recognized as a complex phenomenon governed by interactions between various factors, including genetics and mental illness (Joiner, 2005). An additional limitation to consider is the method by which we interpreted PTEs. Due to the survey nature of our study, we were unable to specify if individuals indicated both direct (i.e., “happened to me”) and indirect (i.e., “witnessed”) exposure to a specific PTE. As such, it is possible that the PTE total included double-counting of traumatic events. Future studies may consider clinician-administered measures to ensure no double-counting of PTE exposure. Improving the field’s understanding of the specific factors that contribute to risk is essential when approaching both prevention and treatment efforts; due to the high rates of suicidal behavior in this population (Narang et al., 2018), this is especially important to understand in TGD individuals. The present findings demonstrate the importance of assessing gender minority stressors in addition to trauma exposure in TGD individuals when considering suicide risk factors.

Open Practices Statement

The study reported in this article was not formally preregistered. Neither the data nor the materials have been made available on a permanent third-party archive; requests for the data or materials should be sent via email to the lead author at cmc486@utulsa.edu.

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