



# External Minority Stress, Gender Dysphoria, and Capability for Suicide Among Transgender Adults: A Daily Diary Study

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## Abstract

This study analyzed whether external gender-related minority stress (i.e., discrimination, rejection, and violence) and gender dysphoria contribute to same-day and next-day acquired capability for suicide (ACS) in a sample of transgender adults residing in the southeastern United States. A sample of transgender participants ( $n = 38$ , 84.2% White, average age = 28.6 years) residing in the southeastern United States completed daily surveys on discrimination, rejection, violence, gender dysphoria, and ACS over 30 days ( $n = 836$  of the 1,140 surveys sent out were completed). External minority stress (i.e., rejection, discrimination, and violence) was very common in this sample. External minority stress experiences were reported on 16% of the completed daily surveys, and 68% of the sample reported experiencing

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such stress at least once over the 30-day study period. Similarly, gender dysphoria occurred on 37.2% of the completed days and was experienced on at least 1 day by 78.9% of the participants over the 30-day survey period. Multilevel modeling showed daily experiences of discrimination and rejection, but not gender dysphoria, were positively associated with same-day ACS. Violence trended toward significance in correlating with same-day capability for suicide. Neither external minority stress nor gender dysphoria were associated with next-day ACS while controlling for acquired capability reported on the previous day. These preliminary data support proximal associations of external gender minority stress with same-day, but not next-day, ACS. Findings from this study advance understanding of how anti-transgender discrimination and violence contribute to increased capability for suicide in a population at increased risk for suicide.

### **Keywords**

gender minority, acquired capability, suicide, daily diary, short-term risk factors

Suicide attempt rates among the transgender population are substantially higher than the general population (Adams & Vincent, 2019). A large body of literature highlights numerous risk and protective factors for suicidal ideation and behavior within this population (Haas et al., 2010; Wolford-Clevenger et al., 2018). Reviews of these factors have highlighted both general risk and protective factors (e.g., social connection, psychiatric comorbidity) and factors unique to the transgender community (e.g., anti-transgender violence and anti-transgender discrimination, also referred to as gender minority stressors) (McNeil et al., 2017; Wolford-Clevenger et al., 2018). While gender-related minority stress has been linked to increased risk for suicidal ideation and behaviors, less is known about whether these factors facilitate the transition from suicidal ideation to action. Despite a need to test the integration of the gender minority stress model and ideation-to-action theories of suicide (Clark et al., 2022; Testa et al., 2017; Wolford-Clevenger et al., 2018), studies testing the associations among these theories' constructs are scarce. For example, in their review, Wolford-Clevenger et al. (2018) found that only two studies of transgender individuals examined ideation-to-action factors, including the role of the acquired capability for suicide (ACS).

Ideation-to-action theories document important features of the transition from thinking about suicide to making a lethal or near-lethal suicide attempt,

and may be beneficial to test alongside gender-related minority stress theory (Klonsky & May, 2015). One such ideation-to-action framework, the interpersonal-psychological theory of suicide (IPTS), is widely studied and applied to the conceptualization of suicide attempts and deaths. A unique component of the IPTS is the ACS construct (Joiner, 2005). Capability for suicide refers to the reduction in fear of death necessary to attempt to kill oneself (Smith & Cukrowicz, 2010). The IPTS suggests that chronic exposure to painful and fearsome events (e.g., abuse, non-suicidal self-injury) can acclimate an individual to the fear and pain involved in death and, thus, produce increased capability for suicide (Joiner, 2005; Van Orden et al., 2010). A more recent ideation-to-action framework, the three-step theory (3ST), reconceptualized the construct of capability for suicide to include three components (i.e., dispositional, acquired, and practical) (Klonsky & May, 2015). However, the original conceptualization of capability as *acquired* has received greater empirical attention, with a meta-analysis supporting its association with suicide risk (Chu et al., 2017). One study of transgender youth demonstrated painful and provocative events to be associated with ACS (Grossman et al., 2016). A qualitative study of sexual and gender minority individuals who made a near-fatal suicide attempt highlighted identity invalidation, structural stigma, and peer normalization of suicide as factors contributing to their capability for suicide (Clark et al., 2022). However, no studies have examined potential contributors to the capability for suicide among transgender adults.

It is crucial to investigate capability for suicide within the transgender population, as this community faces an enormous amount of painful and fearsome events (Hendricks & Testa, 2012; Meyer, 2003). For example, national crime data demonstrate that transgender individuals are over four times more likely to experience violence victimization compared to their cisgender peers (Flores et al., 2021). The gender minority stress framework (Hendricks & Testa, 2012) proposes that exposure to both external and internal gender minority stress leads to adverse health outcomes (e.g., substance use, suicide). External minority stress includes rejection, discrimination, and violence—experiences which involve fear and pain and thus may increase the capability for suicide. A small body of literature supports the notion that minority stress is associated with increased suicide risk among racial minority individuals (e.g., Black Americans [Brooks, 2019] and transgender people [Clements-Nolle et al., 2006; Hendricks & Testa, 2012; Wolford-Clevenger et al., 2018]). However, no studies have examined the association between external gender minority stress and capability for suicide.

Gender dysphoria, another construct that is highly intertwined with gender minority stress (Cooper et al., 2020; Lindley & Galupo, 2020), may also

increase capability for suicide. Gender dysphoria is broadly defined as distress associated with the incongruences of one's gender (e.g., one's internal sense of being a man/masculine, woman/feminine, neither, or both) with their sex assigned at birth and/or primary and/or secondary sex characteristics (Byne et al., 2018; Cooper et al., 2020). A systematic review of the lived experiences of transgender people revealed that gender dysphoria includes distress due to misgendering and societal expectations, social isolation, fear of transphobia, and internalized transphobia (e.g., disgust with body) (Cooper et al., 2020). In addition to this synthesis, factor analytic work highlights that gender dysphoria is likely another form of proximal minority stress (e.g., internalized transphobia) that can be increased by chronic external minority stress exposure (Lindley & Galupo, 2020). Gender dysphoria is associated with increased risk for suicidal ideation and attempts, with one in three adults with gender dysphoria engaging in suicidal ideation, suicide attempts, and suicidal or non-suicidal self-harm (Zucker et al., 2016). However, the potential role of capability for suicide is not well understood within these relationships.

Gender dysphoria is a proximal stressor that may be associated with increased capability for suicide in two ways. Evidence suggests that gender dysphoria may signify one's chronic exposure to distal stress (e.g., violence, rejection) (Lindley & Galupo, 2020), and such stigma may then habituate individuals to pain and fear required to attempt suicide (Brooks, 2019; Clark et al., 2022). Additionally, gender dysphoria may invoke negative feelings or attitudes toward one's body (i.e., low body investment), which may facilitate fearlessness about death or pain tolerance through a disconnect with one's body or life, and thus increasing the risk for a suicide attempt (Brausch et al., 2021). Indeed, qualitative interviews with transgender youth have revealed that gender dysphoria involves a psychological and physical disconnect from one's body, to which individuals may respond by engaging in non-suicidal or suicidal self-injury (Hunt et al., 2020). Gender dysphoria and related disconnection from one's body may act as a volitional influence on fearlessness of death and pain tolerance, consistent with ideation-to-action frameworks of suicide risk development (O'Connor & Kirtley, 2018).

Finally, no studies have examined potential moderators of the association between minority stress and ACS. Understanding for whom these associations may exist or be stronger is imperative to improving risk detection and management. Exploring the moderating effect of non-binary gender on these associations may inform whether there are different risk factors for ACS within the transgender population. For example, non-binary individuals may experience more stigma and discrimination than their binary counterparts

(e.g., transgender men and women; Diemer et al., 2018), and thus may experience a stronger impact of minority stress on ACS.

In summary, although the literature suggests that capability for suicide, particularly acquired capability, may be relevant to increased suicide risk among the transgender population, no known studies have explored whether factors like acute instances of minority stress and gender dysphoria are associated with same- or next-day ACS among transgender people. Additionally, examining this question in a sample of transgender individuals who reside in the southeastern United States—an area rife with anti-transgender stigma and legislation (Lavietes & Ramos, 2022)—is important to understanding suicide risk development among this marginalized community. Examining potential moderators, such as non-binary gender, may also shed light on how these associations may differ across subgroups of the transgender population. This information will inform the integration of ideation-to-action theories of suicide and gender-related minority stress theory, which will guide our intervention upon suicide risk in the transgender community, especially individuals residing in areas of high structural stigma.

### *Purpose and Research Questions*

The present study aimed to explore whether gender minority stress and gender dysphoria are proximally associated with ACS in a sample of transgender adults. Prior research with transgender participants has not examined the proximal (i.e., same-day or next-day) associations between minority stressors and ACS. Examining proximal correlates of ACS—a theorized requisite for attempted suicide—is important to understanding and developing effective suicide risk management with this population.

We hypothesized the following: (a) Daily experiences of violence, discrimination, rejection, and gender dysphoria will positively correlate with same-day ACS; (b) Daily experiences of violence, discrimination, rejection, and gender dysphoria will predict *next-day* ACS while controlling for ACS on the prior day. Finally, we aimed to explore whether binary gender versus non-binary gender moderates the impact of external gender minority stress and gender dysphoria on capability for suicide.

## **Methods**

### *Participants and Daily Survey Compliance*

We tested the research questions using data from a pilot daily diary study of suicide risk with transgender adults residing in two mid-sized, southeastern

cities in the United States. Inclusion criteria were being 18 years of age or older and being “transgender, gender-diverse, of trans experience, or hav[ing] transitioned.” There were no criteria related to suicidal history. More details regarding the participants and procedures are detailed in Wolford-Clevenger et al. (2021). Briefly, individuals were recruited via community sampling, and participants completed a baseline survey and were sent a daily diary survey each day for 30 days following the baseline survey completion. Overall, 38 (63%) individuals who were screened were eligible and completed the minimum surveys (three) required to be included in the multilevel analyses. These individuals did not differ in gender ( $\chi^2 [1, n = 58] = 1.19, p = .41, \phi = .14$ ), race/ethnicity ( $\chi^2 [1, n = 59] = 0.45, p = .70, \phi = .09$ ), sexual orientation ( $\chi^2 [1, n = 59] = 0.21, p > .99, \phi = .06$ ), income ( $\chi^2 [1, n = 55] = 0.19, p = .77, \phi = .06$ ), employment status ( $\chi^2 [1, n = 60] = 1.32, p = .28, \phi = .15$ ), or degree-seeking status ( $\chi^2 [1, n = 60] = 3.59, p = .09, \phi = .25$ ). Seventy-three percent of the daily surveys were completed (836 of 1,140 surveys sent). On average, each participant completed 22 of the 30 surveys ( $SD = 8.64$ ).

On average, participants were 28.63 years old ( $SD = 11.62$ ). Most identified as non-Hispanic White (84.2%), followed by multiracial (7.9%). Participants spanned a range of genders. A research member who is part of the transgender community coded the 26 non-mutually exclusive gender items that participants could select into the following mutually exclusive categories: 26.3% trans women, 7.9% transfeminine, 28.9% non-binary, 13.2% transmasculine, and 23.7% trans men. When collapsing transfeminine and transmasculine individuals into the non-binary category, this resulted in 50% of the sample being non-binary and 50% having a binary gender. A large majority (64%) reported an annual income of less than \$50,000, and 57.4% of the participants were employed at least part-time. Participants' average years of education was 13.93 ( $SD = 4.17$ ), and 42% were currently seeking a degree. The distribution of sexual orientation was as follows: bisexual (36.8%), gay (15.8%), asexual (13.2%), pansexual (10.5%), heterosexual (7.9%), polyamorous (participants self-reported in “other” category, 5.3%), lesbian (2.6%), queer (2.6%), “not sure” (2.6%), and asexual homoromantic (2.6%).

### **Sampling**

Participants were recruited between 2017 and 2019 via convenience sampling. Flyers were distributed on two university campuses, at relevant community clinics, and on relevant social media pages (see Wolford-Clevenger et al., 2021 for more details). Participants could also pass along information about the study to others who may be eligible within their communities.

## Procedures

Approval for the study was granted by Institutional Review Boards at the corresponding author's former and current institutions. After electronically viewing and providing informed consent, individuals completed the screener and baseline surveys via an encrypted survey platform. The following day, a brief survey was e-mailed to them at 6 A.M. (with a reminder at 12 P.M.). The same survey was sent for a total of 30 consecutive days. Participants were instructed to report on the experiences of the day prior (from the time they woke up to the time they went to bed). Daily data were anonymous and linked via subject-generated identification codes. If suicidal thoughts or behaviors were endorsed, participants viewed a message encouraging them to contact the last author or other listed resources for support (e.g., national and local hotlines, LGBTQ+ hotlines, local LGBTQ-focused mental health clinics). Participants were compensated (\$5.00 Wal-Mart gift card for baseline survey battery, and \$0.50 added for each daily survey, up to \$20 total).

## Measures

*Demographic Variables.* We collected information at baseline including age, gender, employment status, income, education years, residence, race and ethnicity, religious background, relationship status and length, sexual orientation, and blood-relative history of suicidal behavior.

*External Gender Minority Stress.* The Gender Minority Stress and Resilience Scale is a validated measure which includes discrimination, rejection, and victimization (e.g., violence) subscales (Testa et al., 2015). These subscales were condensed and modified for the daily diary assessments, as administering the entire scale to participants daily would result in high participant burden. Single and two-item measures have been demonstrated to often be "as valid and reliable as their multi-item counterpart" (Allen et al., 2022), and in intensive longitudinal designs, single-item measures demonstrated predictive validity, with the benefit of multi-item measures being only modest (Song et al., 2023).

One item assessed discrimination at any place because of gender identity or expression ("I felt unfairly treated or discriminated against at my place of work, residence, school, or other place because of my gender identity or expression") on a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree). One item assessed rejection by anyone in the community ("I was rejected, distanced, or made to feel unwelcome by friends,

family, acquaintances, co-workers, or other people in my community because of my gender identity or expression”) on a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree). These two items were combined to represent a discrimination and rejection subscale ( $\alpha = .70$ ). Possible scores ranged from 0 to 12. Five items assessed victimization, including verbal harassment, threats of being outed/blackmailed, physical violence (e.g., pushed, shoved, hit), and sexual violence (i.e., “sexual contact. . . against my will”) on a yes-no scale (1 = yes, 0 = no). These five items were summed into a count of violence experienced on a given day. Possible scores ranged from 0 to 5. Because this is a count variable, we did not assess internal reliability of this variable. There are no measures of reliability or validity of these modified items. However, they have high face validity.

*Gender Dysphoria.* Gender dysphoria symptoms occurring on a given day were measured using two items from the Transgender Congruence Scale (Kozee et al., 2012)—a validated measure of gender dysphoria. One item was pulled from each of the scale’s two subscales: gender acceptance and appearance congruence. The items had high factor loadings on their respective factors in Kozee and colleagues’ validation study. These items assessed the degree to which participants felt their appearance expressed their gender identity and were accepting of their gender identity (“I was happy with the way my appearance expressed my gender identity; I was accepting of my gender identity”) on a 7-point Likert scale (0 = strongly agree to 6 = strongly disagree). The items were summed such that possible total scores ranged from 0 to 12. There are no measures of reliability or validity of these modified items. However, they have high face validity. The scale had acceptable internal reliability in this sample ( $\alpha = .77$ ) and the items were correlated with each other ( $r = .62, p < .001$ ).

*Acquired Capability for Suicide.* Acquired capability was assessed using two selected items from the ACS Scale selected due to having the highest factor loadings on the pain tolerance and fearlessness about death subscales (Smith et al., 2013). Participants were instructed to rate how they felt overall the day before (“I could tolerate a lot more pain than most people” and “I was not at all afraid to die”) on a 5-point scale (1 = strongly disagree to 5 = strongly agree). There are no measures of reliability or validity of these modified items. However, they have high face validity. The scale had acceptable internal reliability in this sample ( $\alpha = .77$ ) and the items were correlated with each other ( $r = .49, p < .001$ ).



## Data Analytic Strategy

We used *t*-tests to examine city differences in age, ACS, gender dysphoria, and gender minority stress to determine whether city needed to be controlled for. We also used chi-square tests to examine city differences in gender (binary vs. non-binary gender), sexual orientation (sexual minority vs. heterosexual), employment status (employed vs. unemployed), degree-seeking status, income (less than \$50,000 vs. greater than \$50,000), and race (non-white vs. white). We also used descriptive statistics (means and frequencies) to describe the prevalence of gender minority stress and gender dysphoria reported in the daily diaries. In order to describe the frequency of gender minority stress that was measured using Likert scale variables (i.e., discrimination, rejection, and gender dysphoria), we dichotomized these such that “disagree” or neutral responses were coded as “0,” and any level of agreement was coded as “1.”

To test our hypotheses, we used Hierarchical Linear Modeling (version 8.2, Scientific Software International) to run a multilevel model (occasions within persons; operationalized as surveys nested within participants). First, to determine the appropriateness of using multilevel modeling, null models were conducted to examine within-person variability via intraclass correlation coefficients (ICC) in ACS. Then, two separate analyses were conducted to test hypotheses. For each analysis, full maximum likelihood estimation and random intercepts and fixed slopes were used. Each variable was grand-mean centered. To test our first hypothesis, discrimination/rejection, violence, and gender dysphoria were entered at Level-1, and same-day acquired capability was entered as the outcome variable. To test our second hypothesis, the same predictor variables were entered, with same-day ACS entered as a predictor variable in Level 1 (to account for autocorrelation) and next-day capability for suicide entered as the outcome variable. Finally, to explore the impact of gender, we tested a cross-level interaction of gender (binary vs. non-binary) with gender dysphoria, violence, and discrimination and rejection to predict same-day and next-day ACS. The scale had marginally acceptable internal reliability in this sample ( $\alpha = .66$ )

## Results

### City Differences

As reported in prior publications from these data, cities did not differ in demographics (Wolford-Clevenger et al., 2021). There were no differences in gender (non-binary vs. binary gender;  $\chi^2 [1, n=38]=0.11, p=.74, \phi=.05$ ),

income (greater or less than \$50,000;  $\chi^2 [1, n=38]=0.02, p=.88, \phi=.03$ ), race/ethnicity (white vs. nonwhite;  $\chi^2 [1, n=38]=1.39, p=.24, \phi=.19$ ), employment status (employed vs. unemployed;  $\chi^2 [1, n=38]=0.31, p=.09$ ), degree-seeking status (degree-seeking vs. not;  $\chi^2 [1, n=38]=0.31, p=.58, \phi=.09$ ), sexual orientation (LGBQ+ vs. heterosexual;  $\chi^2 [1, n=38]=0.63, p=.43, \phi=.13$ ).

Prior to conducting the *t*-tests, tests of normality and homogeneity of variance were conducted. Homogeneity of variance was supported for age but not for acquired capability, violence, gender dysphoria, or discrimination/rejection. In these cases, the *t*-test results without equal variances assumed were reported. Assumptions of normality were violated for each variable except age; however, this did not change our analytic plan given the robustness of *t*-test analysis to this violation (Bartlett, 1935; Boneau, 1960; Posten, 1984; Rasch & Guiard, 2004). Cities did not differ in age ( $t[36]=1.36, p=.18$ , Cohen's  $d=.44$ ). Cities differed in capability for suicide, violence, and rejection/discrimination, but not in gender dysphoria. Participants recruited from City 2 reported higher levels of acquired capability than participants recruited from City 1 ( $M=6.58, SD=2.27$  vs.  $M=5.43, SD=2.58$ ;  $t[825]=6.54, p<.001$ ). City 1 demonstrated marginally significantly higher levels of gender dysphoria than City 2 ( $M=4.41, SD=3.16$  vs.  $M=3.96, SD=3.29$ ;  $t[829]=2.15, p=.05$ ; Cohen's  $d=.14$ ). City 1 experienced higher levels of violence than City 2 ( $M=0.14, SD=0.51$  vs.  $M=0.07, SD=0.28$ ;  $t[821]=2.31, p=.02$ ; Cohen's  $d=.17$ ). City 1 experienced higher levels of discrimination and rejection than City 2 ( $M=3.23, SD=2.47$  vs.  $M=2.33, SD=2.74$ ;  $t[830]=4.91, p<.001$ ; Cohen's  $d=.35$ ). Thus, city was controlled for as a Level-2 predictor of the intercept of each of these Level-1 variables in multilevel analyses.

### Minority Stress and Gender Dysphoria Experiences

Descriptives of minority stress and gender dysphoria experiences over the 30-day assessment period revealed that external minority stress experiences were reported on 16% ( $n=183$ ) of the completed surveys for which we had full data on each minority stress variable ( $n=822$ ). Twenty-six (68%) participants reported experiencing external minority stress on at least 1 day over the past 30 days. The percentages of completed daily surveys on which specific external minority stress events are as follows: rejection (17.9%), verbally harassed/teased (7.5%), discrimination (5.3%), threatened with being outed or blackmailed (1.7%), threatened with physical harm (1.7%), physical violence (1.7%), and sexual violence (0.4%). The percentages of participants reporting any instance of specific external minority stress events are as follows: rejection (55.3%), verbally harassed/teased (42.1%), discrimination (34.2%), threatened

**Table 1.** Descriptives of Daily Diary Variables.

Statistic	Discrimination and Rejection	Gender Dysphoria	Acquired Capability for Suicide
N	832	831	827
Mean (SD)	2.88 (2.62)	423 (3.22)	5.88 (2.53)
Range	12	12	8
Skewness	0.86	0.74	-0.10
Kurtosis	0.12	-0.11	-1.12

with being outed or blackmailed (10.5%), threatened with physical harm (13.1%), physical violence (13.1%), and sexual violence (5.3%). Gender dysphoria occurred on 37.2% of completed days. A majority (78.9%) of participants reported experiencing gender dysphoria on at least one day over the 30-day assessment period. See Table 1 for descriptives of the daily variables.

### Hypothesis Tests

The ICC showed that 86% of the variance in ACS was due to between-person differences; thus, 14% of the variance was due to within-person differences. This supported the use of multilevel modeling for the analyses. For hypothesis 1, the multilevel model revealed that violence (coefficient=0.18,  $p=.072$ ) trended toward significance and gender dysphoria (coefficient=0.003,  $p=.84$ ) was not associated with same-day ACS while controlling for time at Level-1 and city at Level-2 (predicting Level-1 intercept). Discrimination and rejection were related to same-day ACS in this model (coefficient = .05,  $p=.014$ ). See Table 2.

For hypothesis 2, violence and rejection/discrimination did not predict next-day capability for suicide while controlling for time at Level-1, prior-day capability for suicide, and city at Level-2 (predicting Level-1 intercept). Solely prior-day ACS predicted next-day ACS (coefficient=0.35,  $p < .001$ ). See Table 3.

In our secondary exploratory analyses, gender (binary vs. non-binary gender) did not emerge as a cross-level predictor ( $ps > .05$ ) of the associations of violence, rejection/discrimination, and gender dysphoria with acquired capability (same and next-day). In these analysis with same-day acquired capability as the outcome, discrimination and rejection remained as the sole correlates of acquired capability (coefficient=0.04,  $p=.04$ ). In the analyses with next-day acquired capability as the outcome, solely prior day acquired capability emerged as a significant predictor (coefficient=0.36,  $p < .001$ ).

**Table 2.** Parameters for Hierarchical Linear Models Predicting Same-Day Capability for Suicide.

Level-1 (Daily) Variables	Coefficient	SE	t	df	p
Intercept	5.89	0.38	15.43	36	<.001
Day	0.004	0.004	1.12	773	.26
Gender dysphoria	-0.01	0.018	-0.44	773	.66
Discrimination and rejection	0.05	0.02	2.46	773	.01
Violence	0.18	0.10	1.80	773	.07
Level-2 (Baseline) Variables					
Predicting Level-1 Intercept	Coefficient	SE	t	df	p
City	0.86	0.77	1.13	36	.27

**Table 3.** Parameters for Hierarchical Linear Models Predicting Next-Day Capability for Suicide.

Level-1 (Daily) Variables	Coefficient	SE	t	df	p
Intercept	5.87	0.26	22.77	36	<.001
Day	0.003	0.004	0.76	643	.45
Gender dysphoria	-0.02	0.02	-0.93	643	.35
Discrimination and rejection	-.006	0.02	-0.28	643	.78
Violence	0.06	0.10	0.55	643	.58
Level-2 (Baseline) Variables					
predicting Level-1 Intercept	Coefficient	SE	t	df	P
City	-0.21	0.52	-0.39	36	.69

## Discussion

This study is the first to test the proximal associations among external gender minority stress (i.e., violence, rejection, discrimination), gender dysphoria, and ACS among transgender individuals. Additionally, our sample consists of transgender individuals residing in the southeastern United States, a community experiencing a consistent onslaught of anti-transgender policies. Using a novel daily diary assessment method, we found that external gender minority stress, but not gender dysphoria, was associated with same-day acquired capability, and neither was associated with next-day acquired capability. Gender (non-binary vs. binary identity) did not moderate these associations. Notably, violence only trended toward significance. Additionally, this study

demonstrated an alarming prevalence of external minority stress and gender dysphoria—a proximal stressor—experienced by transgender individuals across a short time frame. Given the high prevalence of these experiences and their link with ACS, this underlines the importance of the additional study of the potential acute impact of these factors on suicide risk among transgender individuals.

These findings provide new insights into understanding how external gender minority stress and gender dysphoria may contribute to the trajectory toward suicidal behavior. External gender minority stress was associated with same-day capability for suicide, but not next-day capability for suicide. This supports prior theoretical assertions (Klonsky & May, 2015; O'Connor & Kirtley, 2018; Van Orden et al., 2010) and empirical findings (Brooks, 2019; Clark et al., 2022) that painful and fearsome events, such as minority stress, may increase capability for suicide. However, we did not find these events to prospectively predict next-day capability for suicide. Future work is needed to replicate these temporal associations and elucidate any causal associations—through lab-based manipulations of minority stress. For example, a film-based stress induction has been validated with lesbian, gay, and bisexual individuals (Seager van Dyk et al., 2021); however, we strongly urge researchers to seek advice from the transgender community before conducting such a study with transgender participants to reduce potential harm and ensure its usefulness. Additionally, the present study did not investigate the accumulation of ACS over time; future daily diary research should consider approaches (e.g., latent growth curve analysis) which would be better suited for examining trajectories and changes in capability for suicide over time.

Gender dysphoria was not associated with same-day or next-day capability for suicide. Although replication is needed, this null association may indicate that gender dysphoria does not relate to capability for suicide in the same way that external minority stress does. Although theoretical and empirical work suggest that gender dysphoria may generate disconnection from one's body that would theoretically generate pain tolerance and fearlessness about death (Brausch et al., 2021; Hunt et al., 2020; O'Connor & Kirtley, 2018), the present study does not support this. Given the impact of external gender minority stress on proximal stressors such as gender dysphoria (Hendricks & Testa, 2012; Lindley & Galupo, 2020), such external stress may account for any variance contributed by gender dysphoria. It is also possible that this sample was underpowered to detect an association. Future work with a larger sample size may test whether proximal stressors, such as gender dysphoria, mediate the association between external minority stress and capability for suicide—which would be more consistent with minority stress theory.

These findings add to the understanding of the impact of anti-transgender stigma on health outcomes such as suicide risk. The level of external minority stress experienced by this sample and its association with capability for suicide reinforces messages that interventions are needed to reduce the impact of external minority stress on the health and well-being of transgender individuals. The prevalence of external gender minority stress and gender dysphoria over the daily diary assessment period highlights the pervasive nature of such stressors in transgender individuals' daily lives. National studies of transgender individuals have highlighted the prevalence of minority stress (Grant et al., 2011), and the present study adds to this literature by describing the frequency of these experiences over a short time frame. There was a concerning prevalence of external minority stress and gender dysphoria reported in the present daily diary study. This highlights the need for additional granular measurements of external and internal gender-related minority stress to complement existing cross-sectional data on these experiences. Relatedly, researchers have proposed the need for multilevel interventions (e.g., at the policy, interpersonal, and individual levels) to reduce the impact of minority stress on health outcomes (White Hughto et al., 2015). For these efforts to be successful, additional empirical studies, including those that implement daily diary and ecological momentary designs, are needed on individual, interpersonal, and structural factors that impact suicide risk factors, such as capability for suicide.

### *Implications for Practice and Policy*

The results of this study have several implications for practice and policy. The high prevalence of external minority stress experiences within the sample highlights the tumultuous sociopolitical climate for transgender individuals in the southeastern United States (Laviertes & Ramos, 2022). The current study and previous research (White Hughto et al., 2015) indicate a need for structural and interpersonal interventions to reduce discrimination and stigma against transgender individuals and its associated adverse mental health effects, including suicidality. Policymakers must act to reverse policies that enable discrimination and violence against transgender people (e.g., bathroom bills, gender-affirming healthcare bans), as well as work to reduce interpersonal violence and discrimination toward the transgender population. Practitioners should be cognizant of these high rates of external minority stress experiences and explore how these experiences may impact mental health and risk for suicide. Furthermore, practitioners may consider screening for and, when appropriate, openly discussing factors related to acquired capability in clients who discuss external minority stress experiences. It is,

however, important that practitioners do not generalize all transgender individuals to being at risk of increased acquired capability due to experiencing these events, as these data are preliminary and replication is required. Such a generalization could lead to pathologizing this community.

### *Limitations*

There are several limitations to the present study. The temporal sequencing of external minority stress, gender dysphoria, and capability for suicide within the same day is unknown. Future studies may employ more frequent (e.g., multiple assessments per day) or event-triggered sampling to shed more light on temporal or causal associations. Response bias is also a concern. While the research team did not collect information regarding the reason for participants' non-response, past research has demonstrated that partial responders and non-responders have higher suicide risk than complete responders (Svensson et al., 2015). Additionally, participants may have become more aware of their external gender minority stressors after being asked daily, thereby reporting more often as they moved through the daily surveys.

Also related to measurement, our measurement of capability for suicide was subjective, limited to two items, and had marginally acceptable internal consistency. All constructs measured daily were measured using a few items derived from larger scales. This was to decrease participant burden. The reliability and validity of these items were also not well understood. Research validating measures amenable to daily diary research is needed. Additionally, we did not measure resilience factors (e.g., pride, community connectedness) that may buffer the impact of minority stress on suicide-related constructs. As the measures used within the study were self-reported, social desirability in responses may have affected results. Future research should include resilience factors and employ broader and more objective measurements of capability for suicide. Finally, there are some concerns with the sample. The sample was small, although repeated measurements improve power. The sample consisted of primarily white individuals, and key demographic variables were not adequately measured, such as disability status, assigned sex at birth, HIV status, and sex work history. Thus, the present findings may not generalize to individuals with multiple minoritized identities. Future research with more diverse samples is critical to replicate these findings.

### **Conclusions**

Despite these limitations, this study provides some of the most granular evidence to date of associations among exposure to external and proximal

minority stressors and suicide-related outcomes (i.e., ACS) in a sample of transgender adults. Using a novel theoretically informed daily diary study design, results from this study demonstrate that exposure to external minority stress is associated with same-day ACS. To prevent suicide in transgender adults living in highly stigmatizing geographic regions such as the southeastern United States, additional studies of multilevel risk and protective factors are needed.

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