

Health Disparities between Non-Binary/Genderqueer, Transgender, and Cisgender Individuals:

An Adaptation of Minority Stress Theory

G. Tyler Lefevor,<sup>1</sup> Caroline C. Boyd-Rogers,<sup>1</sup> Brianna M. Sprague,<sup>1</sup> and Rebecca A. Janis<sup>2</sup>

<sup>1</sup>Rhodes College, <sup>2</sup>The Pennsylvania State University

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## Abstract

Interpersonal, social, and structural stressors have been identified as key elements that explain health disparities between transgender and cisgender individuals. However, most of this research has focused on binary transgender individuals, or has not differentiated between binary and non-binary individuals; little research has examined the experiences of minority stress or health of individuals identifying outside of the gender binary. Drawing on a sample of 3,568 college students from the Center for Collegiate Mental Health's 2012-2016 database—of whom 892 identify outside the gender binary—we compared experiences of distal, proximal, and mental health stressors between cisgender, transgender, and non-binary/genderqueer individuals. We found that non-binary/genderqueer individuals were harassed, sexually abused, and subjected to traumatic events at higher rates than either cisgender or binary transgender individuals, with approximately 50% of non-binary/genderqueer individuals reporting one of these experiences. We found that non-binary/genderqueer individuals experienced more anxiety, depression, psychological distress, and eating concerns than binary transgender and cisgender individuals and more social anxiety than cisgender individuals. Non-binary/genderqueer individuals were also more likely to report self-harm and suicidality than any other group, with approximately 2/3 of our sample having contemplated and nearly 50% making a suicide attempt. We extend current theorizing about minority stress (Hendricks & Testa, 2012; Meyer, 2003) to include non-binary/genderqueer individuals and delineate several aspects of the non-binary/genderqueer experience that may be responsible for these trends, including a lack of knowledge about non-binary/genderqueer experiences and pronouns, poor access to legal and medical resources, and systemic discrimination.

*Keywords:* Gender non-conforming, Gender non-binary, Genderqueer, Transgender, Minority

Stress

*Public significance statement:* this study suggests that individuals who identify outside of the gender binary (genderqueer, gender nonconforming, etc.) experience more discrimination, victimization, poor mental health outcomes, and suicidality/self-harm than both trans- and cisgender men and women. It highlights sociocultural factors that may be responsible for these trends such as lack of knowledge about non-binary/genderqueer experiences and pronouns, poor access to legal and medical resources, and systemic discrimination.

Health disparities between transgender, non-binary/genderqueer, and cisgender individuals:

An adaptation of Minority Stress Theory

Transgender identities, experiences, and concerns (e.g., the legality of gender-appropriate bathroom use, the ability to change gender on official documents, insurance coverage for gender affirmation surgery) have recently come to the forefront of sociopolitical consciousness in America, and gender identity has been included in anti-discrimination laws in at least thirty states (Movement Advancement Project, 2017). This progress has been facilitated by an explosion of research on health disparities between transgender and cisgender individuals, much of which has highlighted the role of external, societal, and structural stressors on transgender health (APA, 2015; Hendricks & Testa, 2012; Valentine & Shipherd, 2018).

Frequently, research and discourse on transgender identities has subsumed gender non-conforming and non-binary/genderqueer identities under the transgender umbrella, positing a fundamental universality of the experience of identifying with a gender different from the sex assigned at birth. Although this grouping may be necessary in certain circumstances due to the relatively small numbers of transgender individuals in America and the difficulty in obtaining more nuanced subsamples, it may not fully capture the experience of those whose gender identity falls between or outside male or female identities, those who experience being a man or woman at separate times, or those who reject a gender identity (i.e., gender non-binary/genderqueer; Matsuno & Budge, 2017). A substantial percentage of transgender individuals identify outside of the gender binary (25-35%; James, Herman, Rankin, Keisling, Motter, & Anafi, 2016), and non-binary gender identities are most common among younger individuals, suggesting that the percentage of transgender individuals who will identify outside the gender binary is likely to increase over time (James et al., 2016). Nonetheless, contemporary research and theory on

individuals identifying outside the gender binary is lacking, leaving it unclear how much the experiences of non-binary/genderqueer individuals differ from trans- or cisgender men and women. The little research that has been done has found that non-binary/genderqueer individuals experience more distress than either trans- or cisgender men and women (Budge, Rossman, & Howard, 2014; James et al., 2016), further emphasizing that the need for a more nuanced understanding of non-binary/genderqueer identities, experiences, and health outcomes is pressing.

We draw on a sample of 3,568 college students—of whom 892 identify as transgender men or women and 892 identify outside the gender binary—to examine how frequently and intensely these students experience aspects of minority stress such as discrimination, victimization, and psychological distress. From our examination of disparities between those identifying within and without the gender binary, we propose an extension of current theory to better account for these differences. To frame our analyses, we review literature on transgender health disparities, the Minority and Gender Minority Stress Theories (Hendricks & Testa, 2012; Meyer, 2003), and available literature on gender non-binary and non-binary/genderqueer health and experiences.

### **A Note on Identities and Terminology**

Individuals identifying outside of the gender binary report a range of identities, each with important nuances related to experience and geographical region (Rankin & Beemyn, 2012). Throughout this article, we use non-binary/genderqueer as an umbrella term for a host of non-binary identities including agender, androgynous, bigender, genderfluid, gender non-conforming, gender non-binary, gender questioning, neutral, and pangender (Bockting, 2008; Darwin, 2017). Of non-binary gender identities, genderqueer appears to be the most frequently endorsed (Factor

& Rothblum, 2008) and does not carry the implications about departure from “normal” like gender non-binary or gender non-conforming. Further, our sample vastly preferred genderqueer and genderfluid to any other non-binary identity label. Consequently, we refer to transgender and genderqueer individuals (TGQ) when we wish to incorporate all individuals who may fall underneath the transgender umbrella; these individuals are frequently studied as transgender and gender non-conforming (TGNC) individuals. We use the words “transgender men and women” or “transgender” to refer uniquely to TGQ individuals with binary transgender identities. We recognize that our choice of language masks some of the nuances and diversity within gender minority communities, but do so in order to matching our language as closely as possible with the expressed preferences of the populations we are studying.

### **Transgender and Non-binary/genderqueer Health Disparities**

Transgender and non-binary/genderqueer (TGQ) individuals consistently report worse mental and physical health than cisgender individuals (Valentine & Shipherd, 2018). It appears that TGQ individuals experience depression (Reisner, Katz-Wise, Gordon, Corliss, & Austin 2016), anxiety (dickey, Reisner, & Juntunen 2015; Bouman, Claes, Brewin, Crawford, Millet, Fernandez-Aranda, & Arcelus, 2017 ), eating concerns (Diemer, Grant, Munn-Chernoff, Patterson, & Duncan 2015; Algars, Alanko, Santtila, & Sandnabba 2012), non-suicidal self-injury (Lytle, Blosnich, & Kamen 2016; Arceleus, Claes, Witcomb, Marshall, & Bouman, 2016) and suicidality (Perez-Brumer, Day, Russell, & Hatzenbuehler, 2017; Coulter, Blosnich, Bukowski, Herrick, Siconolfi, & Stall, 2015) at higher rates than cisgender individuals. TGQ individuals more frequently experience traumatic events including harassment (Sterzing, Ratliff, Gartner, McGeough, & Johnson, 2017; Boza & Perry, 2014), bullying (Reisner, Greytalk, Parsons, & Ybarra, 2015), and relationship abuse (Langenderfer-Magruder, Whitfield, Walls,

Kattari, & Ramos, 2016; Coulter et al., 2015) with instances of victimization often occurring explicitly because of gender (Boza & Perry, 2014). TGQ individuals also more frequently report a lower socioeconomic status (Bauermeister, Goldenberg, Connochie, Jadwin-Cakmak, & Stephenson, 2016), increased substance use (Schein, Bauer, & Schokoohi, 2017), decreased family support (Lefevor, Sprague, Boyd-Rogers, & Smack, 2018), and increased difficulty navigating intersectional spaces (e.g., religious communities, communities of color; Author Citation; Seelman, 2016) than cisgender individuals.

### **Minority and Gender Minority Stress Theories**

These disparities are most often understood through the lens of Minority Stress and Gender Minority Stress Theories (Hendricks & Testa, 2012; Meyer, 2003). These theories propose that health disparities are the product of increased distal stressors, proximal stressors, and internalized negative beliefs about self, experienced disproportionately by minority groups. Distal stressors are external events directed toward the minority individual implicitly or explicitly due to their minority status. Among TGQ individuals, these may include workplace harassment, discrimination, and physical or sexual violence. Proximal stressors, in contrast, are internal in nature and include the anticipation and expectation that future negative events will occur; unlike distal stressors, proximal stressors continue in the absence of an identifiable threat. Proximal stressors may lead to increased social anxiety due to fear of rejection, identity management/concealment, and hypervigilance when meeting new individuals. The combination of distal and proximal stressors may lead to internalized negative beliefs about self (i.e., internalized transphobia). These beliefs may include believing that one's TGQ identity is unacceptable, wrong, or less valuable than a cisgender identity. Taken together, distal stressors, proximal stressors, and internalized negative beliefs about self are theorized to interact to

produce poorer mental and physical health outcomes. For example, as the result of violence toward a transgender woman (distal stressor), she may be hypervigilant about her gender presentation when meeting new people for fear of being perceived as trans (proximal stressor), and may feel less valued because she is a transwoman (internalized transphobia). These stressors may lead her to experience depression because she has a harder time connecting with others.

In addition to producing health disparities, these factors are also thought to produce unique coping and resilience factors among minority populations (Hendricks & Testa, 2012). In particular, many individuals with a minority identity seek validation and connection within groups of other individuals with similar experiences. This process may lead to the creation of a strong within-group identity that may serve as a buffer against future stressors (Hendricks & Testa, 2012; Meyer, 2003).

### **Non-Binary/Genderqueer Experiences**

Non-binary/genderqueer individuals use a variety of strategies to express their gender identities. Similar to many transgender men and women, non-binary/genderqueer individuals may use breast binding, packing, bodybuilding, changes to hairstyle, shaving/growing body hair, electrolysis, makeup, nail polish, and/or jewelry to convey their internal sense of gender (Rankin & Beemyn, 2012). Individuals vary substantially in their desire to evade binary gender attribution, to “pass” as a man or woman, or to not convey information about their gender through their presentation (Darwin, 2017). Many seek hormone replacement therapy (HRT) or top surgery, and some seek bottom surgery to achieve congruence between their gender expression and identity (James et al., 2016), although non-binary/genderqueer individuals are less likely to seek HRT or surgery than are transgender men and women (Factor & Rothblum,

2008), perhaps because many non-binary/genderqueer individuals are less interested in adapting their bodies to a binary gender presentation.

Non-binary/genderqueer gender identities tend to develop slightly later and to be more stigmatized than transgender identities (Factor & Rothblum, 2008), which may lead non-binary/genderqueer individuals to have a somewhat different developmental pathway than transgender men and women (Rankin & Beemyn, 2012). When non-binary/genderqueer individuals come out, people are less likely to understand their identity, which may lead non-binary/genderqueer individuals to both come out more frequently (i.e., remind people of their gender identity or pronouns; Webb, Matsuno, Budge, Krishan, & Balsam, 2017) and be less likely to come out to family than transgender men and women (Factor & Rothblum, 2008). As such, non-binary/genderqueer individuals report varying their pronoun usage based on a situation (e.g., using both “they/them” and “he/him” pronouns at work even when “they/them” pronouns more accurately reflect an individual’s gender identity) and more discomfort when their pronouns are not respected than do transgender men and women (Factor & Rothblum, 2008). Non-binary/genderqueer individuals also report feeling less safe coming out and voice frustration about society’s hostility toward them and their pronouns (Darwin, 2017). Finally, non-binary/genderqueer individuals may be less likely to feel like they “fit” in the trans or LGBTQ communities, which may deprive them of social connections that would be helpful for both identity development and buffering stress (Factor & Rothblum, 2008; Rankin & Beemyn, 2012; Webb et al., 2017).

Non-binary/genderqueer individuals experience identity-based stigma and discrimination differently and more frequently than transgender men and women (Webb et al., 2017). Non-binary identities are less culturally visible than either cisgender or binary transgender identities

(Webb et al., 2017), and as such, non-binary/genderqueer individuals may encounter greater resistance to their non-binary expression (Rankin & Beemyn, 2012). Non-binary/genderqueer individuals also experience more discrimination and harassment than trans- or cisgender men and women (James et al., 2016). Available research on health outcomes among non-binary/genderqueer individuals indicates that non-binary/genderqueer individuals experience high levels of anxiety and depression (Budge et al., 2014) and may be more likely to report serious distress than transgender or cisgender men and women (James et al., 2016).

To date, health outcomes research with non-binary/genderqueer individuals has typically *either* examined the experiences of non-binary/genderqueer individuals using qualitative, or small-*n* studies (Budge et al., 2014; Wyss, 2004) *or* examined aspects of minority stress among TGQ individuals without analyzing differences between transgender and non-binary/genderqueer individuals (Bouman et al., 2017; Reisner et al., 2016). Neither approach has been able to produce generalizable data about how non-binary/genderqueer individuals experience minority stressors. Small-*n* studies are greatly influenced by variations in sampling and methodology, and though providing rich information, are difficult to generalize. Studies focused on TGQ individuals collectively often do not test their assumption that binary and non-binary experiences of minority stress are more similar than different much like the way that many studies of LGBT individuals are truly studies of LGB (or even more accurately LG) individuals, with the “T” added on to the umbrella term without actually including substantial representation of transgender individuals (Tebbe & Moradi, 2012). Large-*n*, quantitative research on aspects of minority stress among non-binary/genderqueer individuals is needed to ascertain both if non-binary/genderqueer individuals experience similar *amounts* and *types* of minority stress as transgender men and women. Results may help inform our understanding of the stressors

experienced by non-binary/genderqueer individuals that may provide further nuance for existing models of minority stress (Valentine & Shipherd, 2018).

## **Research Questions**

To this end, we examine several aspects of minority stress among non-binary/genderqueer individuals. In keeping with previous literature, we examine distal, proximal, and mental health stressors. Our analyses were guided by two overarching questions: 1) Do non-binary/genderqueer individuals experience similar *amounts* of minority stressors as transgender men and women? and 2) Do non-binary/genderqueer individuals experiences similar *types* of minority stressors as transgender men and women? For a fuller illustration of any disparities evidenced and in keeping with much of the research on TGQ health disparities, we conducted analyses in a two-step fashion: first, we compared TGQ individuals to cisgender men and women to replicate previous findings on health disparities. We then compared non-binary/genderqueer individuals to transgender men and women to examine potential health disparities between transgender and non-binary/genderqueer individuals.

## **Method**

Data for the present study were obtained from the Center for Collegiate Mental Health (CCMH) 2012-2016 database. The CCMH is a practice-research network of over 500 college and university counseling centers located primarily in the United States. All centers that contributed data to the CCMH national database received institutional review board approval at their individual institutions prior to contributing data to the research.

## **Participants**

All students seen in a counseling center at a CCMH-participating institution in the 2012-2016 academic years who completed demographic and outcome measures in their first

counseling appointment were eligible for inclusion in the present study. Of the 278,100 eligible students, 100,764 (36.2%) identified as a cisgender man, 174,584 (36.2%) as a cisgender woman, 892 (0.3%) identified as transgender, and 1860 (0.7%) chose to self-identify their gender. Participants were only allowed to choose one option for gender identity. To allow for more evenly weighted between group comparisons, we randomly selected a comparison sample of 892 cisgender women, 892 cisgender men, 892 transgender individuals, and 892 individuals self-identifying their gender (hereafter non-binary/genderqueer), yielding a final sample size at 3,568 students. The non-binary/genderqueer sample reported a variety of gender identities including genderqueer (17.2%), genderfluid (15.5%), agender (12.3%), gender non-binary (11.9%), neutrosis/neutral (2.6%), bigender (2.2%), gender non-conforming (1.9%), androgene/androgynous (1.8%), and questioning (9.9%). The remaining 24.7% of the non-binary/genderqueer sample reported one of over 100 gender identities not listed. Further data was not available about the specific gender identities of those who identified as transgender. The final sample was largely White (71.6%), young (mean age = 22.08), and diverse in regards to religious orientation and academic status.

## **Measures**

**Standardized Data Set.** The Standardized Data Set (SDS; CCMH, 2017) is a set of questions routinely administered to students during initial visits to college counseling centers and includes questions about demographic variables, experiences of victimization, and self-harm/suicidality. The following demographic variables were included, age, gender identity, race/ethnicity, religious/spiritual identity, and academic status. Participants reported the number of times (Never, 1, 2-3, 4-5, 5+) they had experienced the following related to victimization: experiencing harassing, controlling, and/or abusive behavior from another person, experiencing a

traumatic event, and having sexual contact without giving consent. Participants were also asked to indicate the number of times (Never, 1, 2-3, 4-5, 5+) they had engaged in the following activities related to suicidality/self-harm: made a suicide attempt, seriously considered attempting suicide, and purposely injured yourself without suicidal intent.

**CCAPS-34.** The Counseling Center Assessment of Psychological Symptoms-34 is a multidimensional measure of psychological distress that has been standardized for use among college students (Locke et al., 2012). The CCAPS-34 measures distress on seven subscales—Depression, Anxiety, Social Anxiety, Academic Distress, Eating Concerns, Hostility, and Alcohol Use—whose summed score constitutes a general Distress Index. Additionally, the CCAPS-34 includes an item assessing students' current level of suicidal ideation. The instrument's authors report Cronbach's alphas for the subscales of the subscales ranging from .76 - .89 with an alpha for the Distress Index scale of .88 (Locke et al., 2012). CCAPS subscales have demonstrated adequate convergent validity with standardized measures including the Alcohol Use Disorders Identification Test, Beck Anxiety Inventory, Beck Depression Inventory, Social Phobia Diagnostic Questionnaire, Student Adaptation to College Questionnaire, State-Trait Anger Expression Inventory-2, and Eating Attitudes Test (Locke et al., 2012).

### **Data Analysis Plan**

We examined various aspects of minority stress using measures from the CCAPS-34 and SDS that most closely approximated the distal, proximal, and mental health stressors hypothesized by Minority Stress Theory. As distal stressors, we examined the number of lifetime experiences of harassment, trauma, and sexual assault. Because neither the CCAPS-34 nor the SDS include direct measures of proximal stressors, we used the Anxiety and Social Anxiety subscales of the CCAPS-34 as approximate measures of proximal stressors. Although neither

anxiety nor social anxiety are proximal stressors in themselves, these constructs include items that are suggestive of proximal stressors such as hypervigilance about discrimination or the increased self-awareness necessary for concealment. For example, “my heart races for no good reason,” “my thoughts are racing,” and “I have spells of terror or panic” are used to measure anxiety and “I am concerned that other people do not like me” and “I feel uncomfortable around people I don’t know” form part of the social anxiety scale. Finally, examined mental health stressors through the Distress Index as well as the Depression, Eating Concerns, and Alcohol Use subscales of the CCAPS-34. We also examined lifetime number of times contemplated and attempted suicide and current suicidal ideation as mental health stressors.

We analyzed the data in a two-step process. We first compared participant groups on dependent variables using chi-squared tests of independence for categorical variables and analyses of variance for continuous variables. Where significant differences existed on continuous variables, we next conducted two sets of post-hoc tests specifically targeted to our research questions, which are discussed throughout the results as our first and second post-hoc analyses. For the first set of post-hoc tests, we used contrast coding to compare cisgender and TGQ individuals to isolate the effects of gender identity on outcomes. For the second set of post-hoc tests, we compared transgender with non-binary/genderqueer individuals on outcomes to isolate the effects of having a non-binary gender identity. Due to the large number of hypothesis tests conducted, we adopted a conservative alpha of  $p < .01$  to reduce Type-I error. We also provide effect sizes to contextualize the magnitude of the relationships observed.

## **Results**

We conducted chi-squared analyses to examine how demographic characteristics varied based on gender identity. We found that TGQ individuals were more likely to identify as non-

religious than cisgender men and women ( $\chi^2(6) = 204.44, p < .01$ , Cramer's  $V = .27$ ) and that there were slightly more first-year TGQ individuals than cisgender men and women ( $\chi^2(12) = 49.42, p < .01$ , Cramer's  $V = .07$ ). No significant differences emerged based on gender identity for race/ethnicity ( $\chi^2(3) = 7.10, p = .07$ , Cramer's  $V = .05$ ) or age ( $F(3,3512) = 2.26, p = .08, \eta^2 < .01$ ). Demographic characteristics broken down by participant group are displayed in *Table 1*.

We found significant differences based on gender identity in all three measures of distal stressors (harassment, trauma, sexual assault; see *Table 2*). Our first post-hoc tests indicated that TGQ individuals experience harassment (Mean difference [ $M_D$ ] = 1.65,  $t(3442) = 18.03, p < .001, d = .62$ ), trauma ( $M_D = .62, t(3442) = 8.73, p < .001, d = .30$ ), and sexual assault ( $M_D = .65, t(3442) = 12.66, p < .001, d = .43$ ) much more frequently than cisgender men and women. Our second post-hoc tests indicated that non-binary/genderqueer individuals experience harassment ( $M_D = .54, t(1733) = 3.83, p < .001, d = .18$ ), trauma ( $M_D = .50, t(1733) = 4.58, p < .001, d = .22$ ), and sexual assault ( $M_D = .45, t(1733) = 5.15, p < .001, d = .25$ ) more frequently than transgender individuals with approximately 50% of non-binary/genderqueer individuals reporting each of these experiences.

We found significant differences based on gender identity on approximate measures of proximal stressors (anxiety, social anxiety; see *Table 3*). Our first post-hoc tests indicated that TGQ individuals experience more anxiety ( $M_D = .40, t(3566) = 11.57, p < .001, d = .39$ ) and social anxiety ( $M_D = .65, t(3566) = 19.39, p < .001, d = .65$ ) than cisgender individuals. Our second post-hoc tests indicated that non-binary/genderqueer individuals experience more anxiety ( $M_D = .30, t(1782) = 6.28, p < .001, d = .30$ ) but not more social anxiety ( $M_D = .10, t(1782) = 2.09, p = .04, d = .10$ ) than transgender men and women.

We found significant differences between gender identity groups on all mental health outcome variables (depression, psychological distress, eating concerns, alcohol use; see *Table 3*). Our first post-hoc tests indicated that TGQ individuals experience more depression ( $M_D = .44$ ,  $t(3566) = 12.29$ ,  $p < .001$ ,  $d = .41$ ), psychological distress ( $M_D = .39$ ,  $t(3566) = 13.95$ ,  $p < .001$ ,  $d = .47$ ), and eating concerns ( $M_D = .17$ ,  $t(3566) = 4.34$ ,  $p < .001$ ,  $d = .14$ ) than cisgender individuals. Conversely, we found that cisgender individuals report more alcohol use than TGQ individuals ( $M_D = -.21$ ,  $t(3566) = -7.59$ ,  $p < .001$ ,  $d = -.25$ ). Our second post-hoc tests indicated that non-binary/genderqueer individuals experience more depression ( $M_D = .31$ ,  $t(1782) = 6.22$ ,  $p < .001$ ,  $d = .29$ ), psychological distress ( $M_D = .25$ ,  $t(1782) = 6.54$ ,  $p < .001$ ,  $d = .31$ ), and eating concerns ( $M_D = .22$ ,  $t(1782) = 4.05$ ,  $p < .001$ ,  $d = .19$ ) than transgender individuals. No differences were found in alcohol use between non-binary/genderqueer and transgender individuals ( $M_D = .07$ ,  $t(1782) = 1.87$ ,  $p = .06$ ,  $d = .09$ ).

We also found significant differences between gender identity groups on self-harm and suicidality variables (self-injury, contemplated suicide, suicidal ideation, suicide attempts; see *Table 2*). Our first post-hoc tests indicated that TGQ individuals are more likely to have engaged in self-injury ( $M_D = 2.04$ ,  $t(3417) = 23.90$ ,  $p < .001$ ,  $d = .82$ ), have contemplated suicide ( $M_D = 1.53$ ,  $t(3442) = 20.68$ ,  $p < .001$ ,  $d = .70$ ), have current suicidal ideation ( $M_D = .1.76$ ,  $t(3560) = 10.67$ ,  $p < .001$ ,  $d = .36$ ), and have made a suicide attempt ( $M_D = 2.04$ ,  $t(1119) = 23.90$ ,  $p < .001$ ,  $d = 1.43$ ). Our second post-hoc tests indicated that non-binary/genderqueer individuals are more likely to engage in self-injury ( $M_D = .36$ ,  $t(1729) = 2.60$ ,  $p < .01$ ,  $d = .13$ ) and have current suicidal ideation ( $M_D = .20$ ,  $t(1777) = 2.97$ ,  $p < .01$ ,  $d = .14$ ) than transgender individuals. No differences were found between non-binary/genderqueer and transgender individuals on ever contemplating suicide ( $M_D = .09$ ,  $t(1748) = .74$ ,  $p = .60$ ,  $d = .04$ ) or on having made a suicide

attempt ( $M_D = .13$ ,  $t(674) = .58$ ,  $p = .56$ ,  $d = .04$ ). Approximately 2/3 of TGQ individuals in our sample had contemplated suicide, with nearly half having made an attempt.

## **Discussion**

As expected by the Gender Minority Stress and Resilience Theory (Hendricks & Testa, 2012), we found that TGQ individuals evidenced more victimization/discrimination, hypervigilance, distress, and self-injury/suicidality relative to cisgender men and women. Additionally, we found that in most of the relationships tested, non-binary/genderqueer individuals evidenced a yet further increase in aspects of minority stressors relative to transgender men and women. We discuss our results in context of the literature examining gender minority stress as an explanation for gender-related health disparities. We then extend the Gender Minority Stress and Resilience Theory (Hendricks & Testa, 2012) to non-binary/genderqueer individuals by integrating our findings with literature on the lived experiences of non-binary/genderqueer individuals, examining distal stressors, proximal stressors, and mental health stressors.

### **Extending the Gender Minority Stress Theory**

**Distal stressors.** In our sample, TGQ individuals experienced harassment, trauma, and sexual assault at much higher rates than cisgender men and women, with nearly twice as many TGQ individuals reporting these experiences than cisgender men. These findings concord with previous research noting that TGQ individuals are victimized at much higher rates than their cisgender peers (APA, 2015; Boza & Perry, 2014; National Coalition of Antiviolence Programs; Sterzing et al. 2017).

We further found evidence to suggest that non-binary/genderqueer individuals experience more severe distal stressors than transgender men and women. Non-binary/genderqueer

individuals were victimized significantly more often than any other gender-identity group. They report higher rates of ever being victimized than their transgender (and cisgender) peers, with 62.7% of non-binary/genderqueer individuals reporting experiencing harassing, controlling, or abusive behavior, 55.4% reporting experiencing traumatic event, and 41.8% reporting someone making non-consensual sexual contact with them.

Where transgender and non-binary/genderqueer individuals both share a minority gender identity and experience many similar distal stressors (e.g., gender-related discrimination, gender-related rejection, gender-related victimization, and non-affirmation of gender-identity), non-binary/genderqueer individuals face unique challenges that may exacerbate distal stressors compared to transgender men and women (Matsuno & Budge, 2017; Miller & Grollman, 2015). For instance, because gender is primarily conveyed by physical cues like body shape/size, hair length/style, and the presence or absence of secondary sex characteristics, some non-binary/genderqueer individuals seek medical interventions including hormone replacement therapy (HRT) and top/bottom surgery to express their affirmed gender identity. As non-binary/genderqueer individuals express their affirmed non-binary gender identities, they may encounter greater stress than binary transgender individuals (Matsuno & Budge, 2017). Many transgender men and women find relief after “transitioning” and being perceived as their affirmed gender. In contrast, as non-binary/genderqueer individuals express their affirmed identities, they are more likely to employ gender neutral pronouns (e.g., they/them, zie/hir) and present in a gender non-conforming manner than are transgender men and women (Darwin, 2017; James et al., 2016), which increasingly conflict with binary conceptions of gender. Consequently, as non-binary/genderqueer individuals express their affirmed gender, they are may continue to be misperceived and misgendered, resulting in greater stress.

The differences in the amount of conflict with societal norms can be seen reflected in the relative differences in gender-related discrimination, rejection, and victimization between transgender men and women and non-binary/genderqueer individuals (James et al., 2016). Non-binary/genderqueer individuals likely face discrimination at greater rates than transgender men and women as they experience more difficulty finding gender-inclusive public restrooms, barriers in obtaining appropriate legal documentation due to a lack of a gender-neutral gender marker, and inadequate or inappropriate care from medical professionals who are ignorant to gender non-binary identities and experiences (Factor & Rothblum, 2008; Testa, Habarth, Peta, Balsam, & Bockting, 2015). This systemic discrimination may lead non-binary/genderqueer individuals to be hesitant to seek medical care, to reach out to law enforcement officers in a situation of crisis, or to go to locations where they would be required to show government issued identification (James et al., 2016).

Non-binary/genderqueer individuals likely also experience more gender-related rejection as a result of this discrimination. People who are not familiar or comfortable with non-binary gender identities and expressions may stare, ask inappropriate questions (e.g., but what gender are you *really*?), or avoid non-binary/genderqueer individuals. Non-binary/genderqueer individuals may be consistently asked to educate others about the gender binary, the importance of using an individual's affirmed pronouns, and the interpersonal damage done when someone is not gender affirming. Further, because non-binary identities are less commonly discussed and more poorly understood than binary transgender identities in media or otherwise, non-binary/genderqueer individuals may be misgendered, misunderstood, and mistreated more frequently than binary transgender individuals (Citation withheld). This "otherness" of the non-

binary/genderqueer experience may lead some to feel emboldened to engage in aggressive and abusive ways toward non-binary/genderqueer individuals.

**Proximal stressors.** Given the higher rate of distal stressors, it is unsurprising that TGQ individuals evidenced more anxious symptoms, which have been associated with proximal stressors, than did cisgender individuals. That TGQ individuals experience more proximal stressors than cisgender men and women has been noted in the literature (Bouman et al., 2017; dickey et al., 2017) and is likely related to the increased gender-related discrimination experienced by TGQ individuals (Scandurra, Amodeo, Valerio, Bochicchio, & Frost, 2017). In addition to experiencing more discrimination, TGQ individuals are less likely to have strong social support, which is an important factor in reducing hypervigilance and establishing safety and security (Yang, Wang, Gu, Song, Hao, Zhou, & Zhao, 2016). On a more concrete level, TGQ individuals may experience more anxious symptoms because the world *is* more dangerous for them (National Coalition of Antiviolence Programs). Consequently, although the hypervigilance will have negative mental health consequences, it may be psychologically adaptive for some TGQ individuals.

We further found that, relative to transgender men and women, non-binary/genderqueer individuals reported more anxious symptoms, evidencing significantly more anxiety and marginally more social anxiety than individuals with any other gender identity. Although transgender and non-binary/genderqueer individuals both experience proximal stressors (e.g., hypervigilance, concealment, internalized transphobia; Testa et al., 2015) related to their gender identity, non-binary/genderqueer individuals may experience them more frequently or intensely than transgender individuals. Because non-binary/genderqueer individuals are victimized more frequently than any other gender identity group, including transgender men and women, many

likely accurately encode the world as unsafe. These negative expectations may lead non-binary/genderqueer individuals to be less likely to engage in social interactions and to be more socially isolated (Wyss, 2004). Hypervigilance about the potential for future acts of discrimination and rejection may be thus protective and necessary while still being psychologically harmful (Hendricks & Testa, 2012).

This hypervigilance may lead to stigma management through identity non-disclosure (concealment; Citation withheld), which non-binary/genderqueer individuals may experience differently than transgender individuals. In many languages, gender is a salient identifying characteristic, and gender-neutral options are either awkward or absent. Even in languages such as English where gender-neutral pronouns exist, many people are not aware of these pronouns. As such, non-binary/genderqueer individuals are likely to experience invisibility and invalidation due to the erasure of their gender identity (Matsuno & Budge, 2017). In either case, using ego syntonic pronouns may come at the cost of a long explanation to others about gender, language, and the non-binary/genderqueer experiences, which may lead many non-binary/genderqueer individuals not to disclose their gender identities (Citation withheld). Further, even after explaining, non-binary/genderqueer individuals are more likely to face misgendering on a consistent basis and by a wider variety of people than even transgender individuals (McLemore, 2014). Due to the difficulty for many in finding community in either LGBTQ or trans communities (Factor & Rothblum, 2008; Rankin & Beemyn, 2012) which may be helpful in reducing internalized transphobia and promoting resilience (Testa et al., 2015), non-binary/genderqueer individuals may have a stronger experience of internalized transphobia.

**Mental health outcomes and suicidality.** We found that TGQ individuals evidenced more depression, psychological distress, and eating concerns, which may be a result of the

increased amount of distal and proximal stressors experienced (Testa et al., 2015). That TGQ individuals experience more depression and high levels of distress has been well-established in the research literature (Bouman et al., 2016; Pflum, Testa, Balsam, Goldblum, & Bonger, 2015; Reisner et al., 2016). Among TGQ individuals, eating concerns may be closely related to gender-related body dissatisfaction and non-surgical ways to achieve greater gender congruence (Algars et al., 2012; Witcomb, Bouman, Brewin, Richards, Fernandez-Aranda, & Arcelus, 2015). There is evidence that TGQ individuals who receive gender affirmative medical interventions are less likely to engage in disordered eating behavior (Testa, Rider, Haung, & Balsam, 2017).

In our sample, non-binary/genderqueer individuals evidenced worse mental health outcomes relative to transgender men and women. This pattern was consistent for depression, psychological distress, and eating concerns. Given that non-binary/genderqueer individuals experience more distal and likely more proximal stressors than both trans- or cisgender men and women, it is unsurprising that they also experience substantial differences in mental health outcomes (Meyer, 2003; Testa et al., 2015). Likely, these mental health disparities are the result of increased gender-related discrimination, rejection, and victimization in combination with increased hypervigilance, lack of safety for gender disclosure, and internalized transphobia. Indeed, the majority of non-binary/genderqueer individuals who seek treatment for a mental health diagnosis report that their mental health issues arise at least partially from the stress of identifying with a non-binary/genderqueer identity in a cisnormative society (Citation withheld).

These discrepancies may also be a result of the difficulty non-binary/genderqueer individuals face in accessing competent mental health treatment to ameliorate psychological suffering (Citation withheld), evidenced by literature documenting the difficulties transgender individuals in general have in accessing competent mental health services (Ellis, Bailey, &

McNeil, 2015; James et al., 2016). Additionally, studies relying on non-binary/genderqueer samples have found that non-binary/genderqueer individuals report negative experiences with mental healthcare providers ranging from explicit invalidation, overemphasis of gender identity, avoidance of gender identity, and lack of education about non-binary identities and experiences (Citation withheld). Similar to the general public, there is a great need for mental health providers to become better educated about non-binary/genderqueer identities and experiences.

Although transgender individuals have been noted to engage in self-harm (Lytle et al., 2016), experience suicidal ideation (Perez-Brumer et al., 2017), and make suicide attempts (Grossman, Park, & Russell, 2016) at much higher rates than cisgender individuals, relatively little research has explored these experiences among non-binary/genderqueer individuals. Similar to past research, we observed large differences between TGQ and cisgender individuals on all indicators of suicidality and self-injury. Further, non-binary/genderqueer individuals evidenced significantly more self-injury and current suicidal ideation than their transgender counterparts, with over 2/3 of our non-binary/genderqueer sample reporting having contemplated suicide at one point and nearly 1/2 having made a suicide attempt. Increased suicidality and self-harm likely result from the experience of additional distal and proximal stressors as well as the cumulative experience of mental health stressors. That suicidality and self-harm are so common among non-binary/genderqueer individuals speaks to the urgency with which research is needed to address these disparities.

### **Limitations, Implications and Future Directions**

The generalizability of our findings may be limited by our reliance on a relatively young, White, college sample. However, available research has indicated that non-binary/genderqueer individuals more generally tend to be young (James et al., 2016) and likely to seek psychological

treatment (Citation withheld). Though a substantial percentage of our sample identified as people of color (28.4%), we recognize that this is under representative of individuals of color and encourage further intersectional research, especially among GQ individuals of color. Further all individuals in the sample were seeking mental health treatment at the time of assessment. Although the present sample may have evidenced higher rates of stressors than a non-clinical sample, there is likely still a disparity between cisgender and TGQ individuals, and further between transgender and non-binary/genderqueer individuals. Further research should examine the prevalence of these stressors and the health disparities evident in populations not seeking treatment. Additionally, although we studied a host of variables deemed to be relevant distal, proximal, or mental health stressors, the survey questions were not designed with minority stress (Hendricks and Testa, 2012; Meyer, 2003) in mind. As such, many of our variables are imprecise measures of the aspects of minority stress discussed. Future research should examine these stressors among non-binary/genderqueer individuals using more purposive survey development. Finally, due again to the limitations of the dataset used, we were not able to attain information on clients' sex assigned at birth. Research has consistently indicated that outcomes vary both among transgender and non-binary/genderqueer individuals based on sex assigned at birth (Valentine & Shipherd, 2018; James et al., 2016). Future research should also explore these variables to further nuance our findings.

The results of the present study also carry substantial implications for therapists, researchers, and health-care providers. We documented substantial health disparities across multiple domains between TGQ and cisgender individuals and particularly between binary transgender individuals and non-binary/genderqueer individuals. Nonetheless, we located a small handful of articles examining the experiences of non-binary/genderqueer individuals (e.g.,

Matsuno & Budge, 2017), very few that provided concrete clinical implications (e.g., Matsuno, 2018), and only one article that used national data explicitly examining the experiences of non-binary/genderqueer individuals (James et al., 2016). Much more research is needed to understand the systemic factors that are responsible for the mental health disparities exhibited by non-binary/gender queer individuals. Furthermore, more theoretical and empirical articles are needed to understand how mental health care providers can provide competent care for non-binary/genderqueer individuals.

## **Conclusion**

Using a United States national sample of treatment seeking college students, we found that transgender and non-binary/genderqueer individuals experience more distal and mental health stressors, likely more proximal stressors, and increased self-harm/suicidality relative to cisgender men and women. Further, we found that non-binary/genderqueer individuals experienced these stressors more frequently and intensely than transgender men and women. These differences were substantial (average of a medium effect size; Cohen, 1988) and were consistent across a number of indicators of minority stress. To our knowledge, this is the first large-scale study exploring multiple aspects of minority stress among non-binary/genderqueer individuals, and as such, we propose additional nuance to the Gender Minority Stress and Resilience Theory (Hendricks & Testa, 2012) to account for the differences observed. Non-binary/genderqueer individuals likely experience many of the same stressors as transgender men and women such as gender-related discrimination, victimization, and rejection as well as internalized transphobia and hypervigilance that have been shown to account for differences in mental health and self-harm/suicidality (Hendricks & Testa, 2012). We hold that non-binary/genderqueer individuals experience additional stressors unique from transgender men and

women that account for the disparities between transgender and non-binary/genderqueer individuals. These stressors include general unawareness of non-binary/genderqueer identities, experiences, and pronouns that can lead to a sense of invisibility and invalidation, lack of an acceptable gender-neutral identifier for legal documents, and poor access to gender inclusive restrooms or services. Given the relative paucity of large-scale research on the experiences of non-binary/genderqueer individuals and the disparities noted, we encourage researchers, policy makers, and the public alike to explore in greater depth the experiences of non-binary/genderqueer individuals that may be responsible for the disparities noted.

Table 1. Demographic Characteristics by Participant Group.

			<i>n</i>	Percentage	$\chi^2$	Cramer's <i>V</i>		
Religion	Religious	Man	414	46.6%	204.44**	.265		
		Woman	474	53.1%				
		Transgender	248	27.8%				
		Self-identify	258	28.9%				
	Non-religious	Man	323	36.2%				
		Woman	274	30.7%				
		Transgender	474	53.1%				
		Self-identify	493	55.3%				
	Did Not Specify	Man	155	17.4%				
		Woman	144	16.1%				
		Transgender	170	19.1%				
		Self-identify	141	15.8%				
Academic Status	First year	Man	202	22.6%	49.42**	.068		
		Woman	201	22.5%				
		Transgender	284	31.8%				
		Self-identify	242	27.1%				
	Sophomore	Man	207	23.2%				
		Woman	209	23.4%				
		Transgender	146	16.4%				
		Self-identify	196	22.0%				
	Junior	Man	211	23.7%				
		Woman	200	22.4%				
		Transgender	212	23.8%				
		Self-identify	167	18.7%				
	Senior	Man	165	18.5%				
		Woman	167	18.7%				
		Transgender	160	17.9%				
		Self-identify	155	17.4%				
	Graduate Student	Man	107	12.0%				
		Woman	115	12.9%				
		Transgender	90	10.1%				
		Self-identify	132	14.8%				
Ethnicity	White	Man	643	72.1%	7.10	.045		
		Woman	623	69.8%				
		Transgender	666	74.7%				
		Self-identify	622	69.7%				
	Person of Color	Man	249	27.9%				
		Woman	269	30.2%				
		Transgender	226	25.3%				
		Self-identify	270	30.3%				
			<i>M</i>	<i>SD</i>			<i>F</i>	$\eta^2$
		Age	Man	22.35			4.51	2.26
Woman	21.88		4.68					
Transgender	22.19		4.93					
Self-identify	21.90		4.00					

Note: \*\*  $p < .01$

Table 2. Analyses of Variance of Distress Variables by Participant Groups.

		% Ever Experiencing	<i>M</i> Frequency	<i>SD</i>	<i>F</i>	$\eta^2$
Harassment	Men	20.0%	0.92	2.10	126.22**	.100
	Women	37.9%	1.64	2.54		
	Transgender	54.6%	2.66	2.90		
	Self-identify	62.7%	3.20	2.96		
Trauma	Men	31.6%	0.82	1.62	38.84**	.034
	Women	42.5%	1.19	1.95		
	Transgender	42.1%	1.37	2.15		
	Self-identify	55.4%	1.87	2.33		
Sexual Assault	Men	6.3%	0.13	0.68	169.82**	.064
	Women	23.4%	0.54	1.31		
	Transgender	26.8%	0.76	1.67		
	Self-identify	41.8%	1.20	1.91		
Self-injury	Men	16.3%	0.57	1.56	206.59**	.154
	Women	29.6%	1.26	2.27		
	Transgender	57.3%	2.77	2.88		
	Self-identify	61.9%	3.13	2.92		
Contemplated Suicide	Men	28.4%	0.84	1.75	143.02**	.111
	Women	32.7%	0.94	1.76		
	Transgender	64.2%	2.37	2.49		
	Self-identify	66.8%	2.46	2.52		
Current Suicidal Ideation	Men	37.4%	0.75	1.16	77.68**	.061
	Women	35.7%	0.71	1.13		
	Transgender	57.0%	1.27	1.38		
	Self-identify	64.1%	1.46	1.39		
Suicide Attempt	Men	13.2%	0.66	1.83	30.45**	.096
	Women	21.0%	1.17	1.36		
	Transgender	45.5%	2.62	3.02		
	Self-identify	48.7%	2.76	3.03		

Note: \*\*  $p < .01$

Table 3. Analyses of Variance of CCAPS-34 Variables on Participant Groups.

		<i>M</i>	<i>SD</i>	<i>F</i>	$\eta^2$
Generalized Anxiety	Men	1.68	1.01	72.90**	.058
	Women	1.99	1.06		
	Transgender	2.08	1.03		
	Self-identify	2.39	0.98		
Social Anxiety	Men	1.77	1.05	129.42**	.098
	Women	1.90	1.02		
	Transgender	2.43	0.99		
	Self-identify	2.53	0.96		
Depression	Men	1.57	1.11	65.22**	.052
	Women	1.69	1.05		
	Transgender	1.91	1.08		
	Self-identify	2.22	0.99		
Distress	Men	1.61	0.86	84.68**	.067
	Women	1.77	0.84		
	Transgender	1.96	0.85		
	Self-identify	2.20	0.77		
Eating Concerns	Men	0.66	0.96	36.85**	.030
	Women	1.12	1.26		
	Transgender	0.95	1.12		
	Self-identify	1.17	1.20		
Alcohol Use	Men	0.76	0.91	24.99**	.021
	Women	0.61	0.87		
	Transgender	0.43	0.74		
	Self-identify	0.50	0.81		

Note: \*\*  $p < .01$

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