Gender Minority Stress and Suicide in Transgender and Gender Nonconforming College Students: Social Support as a Moderator

by

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Abstract

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Transgender individuals and college students represent two populations that experience increased suicidality when compared to their cisgender and same-age peers. While comparisons between transgender individuals and their cisgender counterparts reflect an increased risk of suicidal ideation and self-harm behaviors, few studies have examined the intersection between college-age populations and transgender individuals. The stress of living in a non-affirming society is associated with increased suicidality. While many risk factors predict suicide, protective factors, such as social support, can ameliorate painful life events. The current study questioned whether social support moderates participants' experiences of gender minority stress and suicidality, and whether various types of social support would better account for suicidality. While it appears social support was not able to moderate the relationship of gender minority stress and suicidality, family and hetero-cisgender friend support were significantly related to suicidal ideation. Implications of these findings and suggestions for future research are provided.

Keywords: transgender, gender minority stress, college, suicidality, social support

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Chapter I: Proposal

Transgender individuals and college students represent two populations that experience increased suicidality when compared to their cisgender and same-age peers. While comparisons between transgender individuals and their cisgender counterparts reflect an increased risk of suicidal ideation and self-harm behaviors, few studies have examined the intersection between college-age populations and transgender individuals. The stress of living in a non-affirming society is associated with increased suicidality. While many risk factors predict suicide, protective factors, such as social support, can ameliorate painful life events. The current study questioned whether social support moderates participants' experiences of gender minority stress and suicidality, and whether various types of social support would better account for suicidality. While it appears social support was not able to moderate the relationship of gender minority stress and suicidality, family and hetero-cisgender friend support were significantly related to suicidal ideation. Implications of these findings and suggestions for future research are provided.

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Gender Minority Stress and Suicide in Transgender and Gender Nonconforming College Students: Social Support as a Moderator

Independent of age, suicide was the 10th leading cause of death in the United States in 2015 (Centers for Disease Control and Prevention [CDC], 2015). Among young adults, age 18 to 24, in 2014, suicide was the third leading cause of death (Bagge, Lamis, Nadorff, & Osman, 2014). The CDC (2015) reported that for individuals within the 15-24 age range, suicide was the second leading cause of death. When compared to same-age peers, some research suggests that college-age individuals are at an increased risk of suicidal ideation and suicide attempts (Bauer, Chesin, & Jeglic, 2014; Hirsch & Barton, 2011; Konick & Gutierrez, 2005). Findings suggest that college students were almost 4 times more likely to consider attempting suicide in comparison to their non-college peers (Bauer, Chesin, & Jeglic, 2014; CDC, 2011). Farabaugh and colleagues (2012) found that college students who reported high levels of depression, hopelessness, and a low quality of life were more likely to endorse having thoughts of suicide. Of the 898 college students surveyed in Farabaugh and colleagues' study, 10% endorsed having suicidal ideation (Farabaugh et al., 2012). While not all individuals who endorse suicidal ideation will go on to attempt suicide, research supports that a history of suicidal ideation increases the likelihood of future suicidal behaviors (Oquendo et al., 2004). Gonzalez and Hewell (2012) found that for college students, those who reported suicidal ideation also reported having more passive means of coping, including using alcohol. While hopelessness and perceived burdensomeness appear to predict suicidal ideation in both male and female college students, only in women was depression found to be a predictor of suicidal thoughts (Lamis & Lester, 2013). In the same study of college students, researchers found that for men only, alcohol-related problems and social support from family acted as predictors for suicidal ideation. Some

explanation for the increased risk may come from the transition to college, which can be a daunting task that leaves students feeling isolated and alone; this may further exacerbate latent mental health concerns (Zisook, Downs, Moutier, & Clayton, 2010).

Along with college students, another population that is at increased risk of suicidality is transgender and gender nonconforming (TGNC) people. Transgender, trans, or TGNC, is as an umbrella term to refer to anyone whose gender identity does not align with their gender assignment at birth (Donatone & Rachlin, 2013). Cisgender, in contrast, is defined as someone who identifies as the gender they were assigned at birth, such as a genetic male who identifies as a man (Carroll, Guss, Hutchinson, & Gauler, 2012). TGNC individuals endorse higher rates of suicidal ideation and attempts than do their cisgender counterparts. The Trans Mental Health Study (McNell, Balley, Ellis, Morton, & Regan, 2012) found that 84% of their TGNC participants endorsed having suicidal ideation at some point during their life. Of the TGNC individuals who had considered suicide at some point in their lives, a portion had suicidal ideation within the last week (27%) and others considered suicide daily (4%). By contrast, within the general population, Crosby and others reported that less than 4% of the U.S. population endorsed considering suicide within the past year (2011). When examining actual attempts, almost half (48%) of TGNC participants reported suicidal attempts (McNell et al., 2012). For suicide attempts within a year, TGNC participants reported significantly higher attempts (11%) when compared to the general population (0.5%) (Crosby et al., 2011; McNell et al., 2012). Liu and Mustanski (2012) found that LGBT participants with higher levels of suicidal ideation were more likely to report victimization and low levels of social support. Stress as the result of belonging to a gender minority group has been associated with increased risk of lower mental

health and suicidality among TGNC individuals (Baams, Beck, Hille, & Zevenbergen, 2013; Boza & Perry, 2014).

Minority Stress Model

Belonging to a minority group increases the likelihood that one will encounter stress and discrimination (Balsam, Beadnell, & Molina, 2013; Meyer, 1995). Understanding the consequences of the stress experienced by minorities is the focus of minority stress models. For example, minority stress models have been used to explore many relationships of minority and dominate cultures, including race (Harrell, 2000; Mays, Coleman, & Jackson, 2013; Mirowsky & Ross, 1980; Wei, Ku, Russell, Mallinckrodt, & Liao, 2008), women (Chang, Banks, & Watkins, 2004), and sexual minorities (Meyer, 2007; Waldo, 1999). Meyer's Minority Stress Theory (1995) posited three processes that sexual minorities may undergo. The first process in Meyer's theory is that minorities experience stress due to environmental and external events due to belonging to a minority group. The stress may come in the form of micro or macro aggressions. Sue (2010) described microaggressions as "the everyday verbal, nonverbal, and environmental slights, snubs, or insults, whether intentional or unintentional, which communicate hostile, derogatory, or negative messages to target persons based solely upon their marginalized group membership" (p. 2). Macro aggressions refer to experiences of emotional, verbal, sexual, and physical abuse that TGNC individuals face (Clements-Nolle et al., 2006; FORGE, 2005; Garofalo et al., 2006; Kenagy, 2005; Stotzer, 2009). The second process in the theory is that individuals maintain vigilance out of anticipation and expectation that external stressors will occur. The third process is that individuals begin to internalize those negative prejudices and attitudes from society. The internalization of negative prejudices and attitudes against gender minorities is what is called internalized transphobia. Researchers have discovered experiences

unique to TGNC individuals and have built upon Meyer's Minority Stress Model. For example, in a study by Levitt and Ippolito (2014), 11 out of the 17 TGNC respondents discussed feeling the need to constantly gauge their own behaviors when around others to help reduce the likelihood of being rejected or incurring violence (i.e., process number two in Meyer's Minority Stress Theory). Cisgender individuals would not experience this stress tied to their connection to the dominant culture. Testa and colleagues (2014) suggested adaption to Meyer's model that may better address experiences specific to TGNC individuals. To create a measure that explores the stressors of TGNC people, the researchers developed categories of stressors: (a) gender-related discrimination, (b) gender-related rejection, (c) gender-related victimization, (d) non-affirmation of gender identity, (e) internalized transphobia, (f) negative expectations for future events, and (g) non-disclosure (Testa et al., 2014).

Social Support

When experiencing higher levels of discrimination and victimization, sexual and gender minorities are at increased risk for mental health concerns, including suicidality (Baams et al., 2013; Goldblum et al., 2012; Hatzenbuehler, 2009). In contrast to the body of literature that highlights risk factors of suicidal ideation, such as depression (Dawood et al., 2007; Oquendo et al., 2001) and substance use (Sublette et al., 2009; Swahn & Bossarte, 2007), a growing body of literature has begun to examine what keeps people from engaging in suicidal behavior and suicidal thoughts. One such way to approach the considerable issue of increased rates of suicidal ideation and attempts in TGNC college students is to explore possible protective factors, such as social support. Chioqueta and Stiles (2007) found that perceived social support appeared to be a predictor for lower levels of suicidal ideation in a study non-specific to TGNC individuals. Similarly, Hirsch and Barton (2011) found that having access to positive social support acted as a

buffer for suicidal behaviors in cisgender college students. Budge, Adelson, and Howard (2013) found that social support was associated with lower levels of depression and anxiety in a TGNC sample. Budge and colleagues posited that as a result of low levels of social support, TGNC individuals were likely to be more reliant on avoidant-type coping skills (e.g., an individual attempts to avoid thoughts or feelings), which in turn increased the likelihood of depression and anxiety symptoms. Depression has been linked with suicidality in cisgender individuals (Beck, Steer, Kovacs, & Garrison, 1985; Kisch, Leino, & Silverman, 2005) and TGNC individuals (Nemoto, Bodeker, & Iwamoto, 2011). Social support in TGNC individuals also appears to influence rates of suicidality (Liu & Mustanskim 2012; Nemoto et al., 2011), with rates of suicidality decreasing as social support increased. The source from which one receives their social support is an important variable because there are various sources from which TGNC individuals may receive support. Three sources of support have been identified in the literature: (a) family, (b) heterosexual-cisgender peers, and (c) lesbian, gay, bisexual, transgender, queer/questioning (LGBTQ) peers.

Familial support. Koken, Bimbi, and Parsons (2009) found that the majority of transwomen of color reported hostility and aggression from their family system. Family responses of neglect and rejection were also common among these participants, with a potential for the rejection to go so far as to force the TGNC individual to leave home. Individuals have reported feeling as though they have the love and support from family members, which can help create a safe environment during the difficult process of transitioning (Koken, Bimbi, & Parsons, 2009). However, even in the circumstances of TGNC individuals staying in contact with family members, TGNC individuals may perceive themselves as having less familial support than their cisgender siblings (Factor & Rothblum, 2008). Those individuals who experienced overt

harassment or rejection, often through cold and distant interactions, were left to face isolation or find new support systems; others were forced to find new housing or face potential homelessness in addition to transitioning. The level of familial support is important to discuss, as high levels of familial support have been connected to higher scores on life-satisfaction for TGNC individuals (Erich, Tittsworth, Dykes, & Cabuses, 2008). If TGNC individuals who receive social support from their family members are generally more satisfied with their lives, one can extrapolate that these individuals would also be less likely to have suicidal thoughts or behaviors.

Heterosexual-cisgender support. Research is emerging about the function and role of friendships for TGNC individuals. However, there is little research examining the role of support for TGNC individuals from the LGBTQ community or from heterosexual-cisgender individuals. Galupo et al. (2014b) looked at the impact of their gender identity disclosure on TGNC individuals' friendships, but did not report participants' friends' gender identities. Findings reflected that friendships may be impacted in one of two ways: Either the friendship becomes strengthened through acceptance of gender identity, allowing for a deeper connection, or the friendship becomes distant or ends.

In a study by Galupo et al. (2014a), the friendship experiences of TGNC participants were categorized into heterosexual-cisgender friends, LGB friends, and TGNC friends. The researchers identified unique benefits and barriers for TGNC people in their friendships with heterosexual-cisgender individuals. The benefits included TGNC participants feeling more "normal" and validated by these friends, and aided in developing identified gender presentation. These friendships offer different perspectives and did not revolve around gender- or sexuality-related concerns. TGNC individuals also expressed appreciation for a chance to spread awareness and education of TGNC issues. TGNC participants reported specific barriers in their

friendships with heterosexual-cisgender people. In these friendships, individuals had fewer mutual experiences, which led to heterosexual-cisgender friends being less understanding of any non-normative issues. The lack of understanding also presented itself in a lack of knowledge concerning TGNC issues, leading these friends to use non-affirming language towards gender identity. TGNC people also reported it being more difficult to discuss issues specific to gender identity or sexuality, leading to a discomfort for all of those involved (Galupo et al., 2014a).

LGBTQ support. In their research of TGNC friendships, Galupo et al. (2014a) compared differences TGNC individuals may notice between their sexual minority friendships versus TGNC friendships. Researchers discovered unique benefits and barriers in friendships with sexual minority individuals in comparison to TGNC friends. Benefits included feeling as though there was a shared open-minded, non-judgmental community that provided a sense of belonging. These friendships also provided experiences and points of view different from their own, and a chance to provide information specific to TGNC issues. The barriers that were specific to sexual minority friends, but not TGNC friends, were that they were not able to understand non-normative gender experiences and generally shared fewer common experiences (Galupo et al., 2014a).

When looking specifically at friendships between TGNC individuals and their TGNC friends, Galupo et al. (2014a) identified unique benefits and barriers. Benefits unique to TGNC friendships were having common experiences and a space to discuss TGNC issues. Benefits also included chances for sharing information and resources, and help in developing affirmed gender presentation. There were barriers that were specific to TGNC friendships, however. One barrier was the tendency for friendships and discussions to revolve around TGNC issues. Participants

also related being fearful that their gender identity would be inadvertently disclosed to others due to being around other TGNC friends, which led to feelings of discomfort (Galupo et al., 2014a).

Purpose of Current Study

Research supports that a relationship exists between experiencing minority stress and increased levels of suicidal ideation and suicide-like behaviors (Baams et al., 2013; Goldblum et al., 2012). There also exists a relationship between social support and suicidal behavior. What is unclear is the relationship that may exist between minority stress and social support. The current study aimed to explore the relationship of social support as a moderator to the relationship between gender minority stress and suicidal ideation. The study examined three categories of social support: familial, heterosexual-cisgender, and support from the LGBTQ community. Based on the findings in the literature, two hypotheses were proposed. First, social support was expected to act as a moderator for the relationship between suicidality and gender minority stress in transgender and gender nonconforming college students. This means that as participants' perception of social support increased, rates of suicidal ideation would decrease, despite experiences of gender minority stress. Second, it was anticipated that different types of support (i.e., familial, heterosexual-cisgender, and LGBTQ) may vary on their predictive ability for suicidal ideation.

Method

Participants

Two hundred and seventeen TGNC individuals currently enrolled in college or university across the United States were included in the current study. All levels of college (i.e., undergraduate, master's, doctoral) enrolled status were included in the study in order to examine experiences across various levels of education; however, the majority of participants were

undergraduates (N = 146, 67.3%). Seventy-nine participants identified as transgender men (36.4%), 30 identified as transgender women (13.8%), 53 identified as genderqueer or androgynous (24.4%), and the remaining 46 identified as "other" (21.2%). For those who self-identified their gender, qualitative entries of identities included, but were not limited to agender, bigender, gender-fluid, and non-binary. The majority of participants were White (N = 166, 76.5%), with other participants identifying as American Indian or Alaskan Native (N = 11, 5.1%), Black or African American (N = 5, 2.3%), Hispanic (N = 4, 1.8%), Native Hawaiian or Pacific Islander (N = 3, 1.4%), Spanish (N = 3, 1.4%), Latino (N = 3, 1.4%), Asian (N = 2, .9%), more than one race/ethnicity (N = 15, 6.9%), and "other" (N = 5, 2.3%). There were 3 participants whose ages were categorized as outliers, and thus were removed from the sample. After removing 3 participants, ages ranged from 18 to 55, although the majority were below 22 (57.6%). Participants' sexual orientations included heterosexual (n = 12, 5.5%), lesbian (n = 24, 11.1%), gay (n = 16, 7.4%), bisexual (n = 35, 16.1%), pansexual (n = 58, 26.7%), and 63 (29%) participants who chose "other." Participants' identified sexual orientations included asexual and demisexual. Table 1 provides full information regarding demographics of the current sample.

[Placeholder for Table 1]

Measures

Suicide Behaviors Questionnaire-Revised (SBQ-R). The SBQ-R was used to measure levels of suicidal ideation, self-injurious behavior, suicide attempts, and likelihood of suicidal attempts in the future. The SBQ-R is comprised of four questions with total scores ranging from 3 to 18. Higher scores on the SBQ-R indicate participants at greater risk of suicidal ideation or suicidal attempts. An example item from the assessment is "How often have you thought about killing yourself in the past year?" Response options range from 1-never to 5-very often. The

SBQ-R has been found to reliably differentiate between those who are suicidal and those who are not (Osman et al., 2001). Across various samples (inpatient versus outpatient), Osman and colleagues found Cronbach's alpha score range from an adequate .76 to moderately high .87, respectively. The SBQ-R in the current study was found to have a Cronbach's alpha score of .70. The SBQ-R has been used in a number of studies to examine rates of suicidal ideation (Bamonti, Price, & Fiske, 2013; Johnson, Gooding, Wood, & Tarrier, 2010; Ribeiro et al., 2012).

Gender Minority Stress and Resilience Measure (GMSR). Based on the minority stress model proposed by Meyer, researchers adapted the GMSR scale to explore the experiences of discrimination and victimization for transgender and gender nonconforming individuals (Testa et al., 2014). The measure features nine scales: (1) gender-related discrimination, (2) gender-related rejection, (3) gender-related victimization, (4) non-affirmation of gender identity, (5) internalized transphobia, (6) negative expectations for future events, (7) non-disclosure, (8) community connectedness, and (9) pride. For this scale, internal reliability was shown with Cronbach's alpha scores for the subscales ranging from .61 to .93 (Testa et al., 2014). Items within each individual subscale were summed together to form subscale total scores. For the sake of the current study, the subscale of community connectedness and pride were not used. In the current study, Cronbach's alpha scores for the GMSR were as follows: gender-related discrimination ($\alpha = .77$), gender-related rejection ($\alpha = .76$), gender-related victimization ($\alpha = .79$), non-affirmation of gender identity ($\alpha = .89$), internalized transphobia ($\alpha = .87$), negative expectations for future events ($\alpha = .89$), non-disclosure ($\alpha = .86$), and total scale ($\alpha = .88$)

Multidimensional Scale of Perceived Social Support (MSPSS). The MSPSS was used to measure social support. This scale measures subjective levels of support using a 7-point Likert-type scale (Zimet, Dahlem, Zimet, & Farley, 1988). The scale measures the quality of perceived

support from friends (i.e., I can count on my friends when things go wrong), families (i.e., my family really tries to help me), and significant others (i.e., there is a special person who is around when I am in need). Zimet and colleagues reported Cronbach's alpha for the total scale (α = .88), along with each subscale of Significant Other (α = .91), Family (α = .87), and Friends (α = .85). The test developers also found the MSPSS was stable over time with test-retest analysis for the total scale of .85, as well as the subscales of Significant Other (.72), Family (.85), and Friends (.75). Zimet et al. (1988) reported construct validity. The scale will be modified for the purpose of the current study to differentiate the "friend support" as support between heterosexual-cisgender friends and LGBTQ support. Each subscale was summed, as well as a perceived social support total sum. For the current study, the Cronbach's alpha for social support is as follows: Family (α = .90), LGBTQ friends (α = .94), Heterosexual-cisgender friends (α = .91), Significant Other (α = .99), and total scale (α = .86).

Procedure

The survey was administered online through an internet-based testing platform. Participants were recruited through distribution of the survey link through three targeted sources: (a) list-servs, (b) organizations related to LGBTQ issues, and (c) social media (e.g., Facebook, Tumblr, and Reddit). As access to TGNC individuals can be challenging, this study used a chain-referral sample in order to survey TGNC college students about their experiences with minority stress, perceived social support, and levels of suicidality. Participants were asked to re-post or redistribute the post or survey to other individuals who may meet the criteria. Chain sampling has been validated as a means to access populations that otherwise may be difficult to sample (Atkinson & Flint, 2001).

Results

Correlations

Pearson product-moment correlations were used to assess the relationship between social support, scores of gender minority stress (as measured by the GMSR), and suicidality (as measured by the SBQ-R). There was a significant relationship between total perceived social support and scores on the SBQ-R (r = -0.25, p < .01) and the GMSR (r = -0.25, p < .01). Findings by specific types of social support included that family support was significantly related to the SBQ-R (r = -0.37, p < .01) and the GMSR (r = -0.38, p < .01). Support from heterosexual-cisgender friends was also significantly correlated to the SBQ-R (r = -0.27, p < .01) and the GMSR (r = -0.25, p < .01). There was not a significant relationship between LGBTQ support and the SBQ-R (r = .00, p = .93) or the GMSR (r = .02, p = .79), nor between significant other support and the SBQ-R (r = -.02, p = .77) or the GMSR (r = -.04, p = .53). As perceived social support increased, specifically with family and heterosexual-cisgender support, scores on both the SBQ-R and the GMSR decreased. The same was not the case with perceived support from LGBTQ support or significant other support. There was a significant positive relationship between the SBQ-R and the GMSR (r = 0.47, p < .01), suggesting that as experiences of gender minority stress increased, so did too scores of suicidality. Table 2 provides more information regarding correlations, mean scores, and standard deviations for each of the measures.

[Placeholder for Table 2]

Hypothesis Testing

Consistent with recommendations by Cohen et al. (2003), predictors were mean centered before forming their interaction term. Preliminary analyses were conducted to examine distributional assumptions for regression analyses. A scatterplot of GMS against SBQ was

plotted. Visual inspection of the scatterplot indicated a linear relationship between the variables. There was independence of residuals, as assessed by a Durbin-Watson statistic of 1.76. There was homoscedasticity, as assessed by visual inspection of a plot of residuals for the predicted values.

Each hypothesis was tested and results of the analyses follow:

Hypothesis 1: Social support will act as a moderator for the relationship between gender minority stress and suicidality.

The Baron and Kenny (1986) model of moderation was used for the current study. Based on the theory and assumptions outlined earlier, gender minority stress and social support were entered in the first step of the regression analysis. In the second step of the regression analysis, the interaction term between gender minority stress and social support was entered, and it did not explain a significant increase in variance of suicidality, $\Delta R^2 = .00$, $F(1, 213) = .03$, $p = .88$. Thus, social support was not a significant moderator of the relationship between gender minority stress and suicidality. Table 3 provides full details on the hierarchal regression model. Figure 1 demonstrates that those with greater experiences of gender minority stress were more likely to have greater experiences of suicidal ideation, regardless of levels of perceived social support.

[Placeholder for Table 3]

[Placeholder for Figure 1]

Hypothesis 2: Varying types of support vary on their predictive ability for suicidal ideation.

A forward method, stepwise multiple regression, was conducted to evaluate whether different types of social support (i.e., family, LGBTQ, heterosexual-cisgender, and significant other) could better predict suicidality. The model selection in a stepwise regression is driven by

an automatic process based on the data instead of a model developed by previous theory or researchers (Aspelmeier & Pierce, 2009; Pope & Webster, 1972). As no previous research provided theory to guide which types of social support could best account for suicidality, stepwise regression offered an automatic process in determining the model selection. At step 1 of the analysis, family support entered into the regression equation and was significantly related to suicidality, $F(1, 215) = 34.89$, $p < .001$. The multiple correlation coefficient was 0.37, indicating approximately 37% of the variance of suicidality could be accounted for by perceived family support. At step 2 of the analysis, heterosexual-cisgender support entered into the regression equation and accounted for an additional 4.3% (R^2 change = .043), which was statistically significant, $F(1, 214) = 11.22$, $p = .001$. The multiple correlation coefficient was 0.427, indicating approximately 43% of the variance of suicidality could be accounted for by the combination of perceived family and heterosexual-cisgender friend support. Neither LGBTQ support ($t = 1.28$, $p = .204$) nor significant other support ($t = 0.88$, $p = .383$) entered into the equation at step 3 of the analysis. Thus, findings reflect that neither LGBTQ support nor significant other support were able to significantly account for experiences of suicidality.

In summary, the study found a negative relationship between perceived social support and scores of suicidality and gender minority stress. As perceived social support increased, specifically with family and heterosexual-cisgender support, scores on both the SBQ-R and the GMSR decreased. There was also a significant positive relationship between the SBQ-R and the GMSR. As occurrences of gender minority stress increased, occurrences of suicidality also increased. Data was further analyzed using a multiple regression. While social support was not able to act as a moderator for the relationship between gender minority stress and suicidality,

family and heterosexual-cisgender support were able to act as the strongest predictors of suicidality.

Discussion

The overall aim of the current research was to investigate the relationship of gender minority stress, suicidal ideation, and social support in a TGNC sample. Correlations demonstrated that support social support was negatively associated with both experiences of gender minority stress and suicidality. Furthermore, a positive and statistically significant relationship was found between gender minority stress and suicidality. These findings make sense and are congruent with the current body of literature. For example, Liu and Mustanskim (2012) and Nemoto et al. (2011) reported a significant negative relationship between social support and suicidality, similarly finding that as rates of social support increased, rates of suicidality decreased. Previous research also supports the findings of a positive relationship between gender minority stress and suicidality, and thus as experiences of gender minority stress increase, so too does the experience of suicidality (Baams et al., 2013; Goldblum et al., 2012). Prior to the current study, there was limited research demonstrating an existing relationship between gender minority stress and social support. However, similar to the current study, Boza and Perry (2014) reported a negative relationship between social support and gender-related victimization.

While the current study found support for the relationships between gender minority stress, suicidality, and social support similar to previous research by Nemoto, Bödeker, and Iwamoto (2011), support was not found for social support as a moderator for the relationship between gender minority stress and suicidal ideation. In the current model, social support did not account for a statistically significant portion of the relationship between gender minority stress

and suicidality. This lack of moderation differs from a research study by Bockting et al. (2013), who found that support from peers was able to moderate the relationship between enacted stigma for their gender identity and psychological distress (e.g., depression, anxiety, and somatization). However, Bockting and colleagues found that it was necessary for participants to have high levels of peer support to have the protective factor against outcomes due to stigma. While Bockting and colleagues' study referred to stigma against gender minorities, their measurement of stigma was similar to the current study's measurement of gender minority stress as they measured occurrences of discrimination (e.g., being verbally or physically abused due to gender identity, job loss because of gender identity, inability to receive health care). It is clear that despite having support from family and peers, TGNC people may continue to face gender minority stress. For example, TGNC people continue to face stigma due to the ongoing debate over TGNC individuals' right to use the restroom that best fits with their gender identity. Herman (2013) found that 70% of participants reported experiencing one or more occasions of denial of access to a restroom, verbal harassment, or physical assault in Washington, DC. With these experiences of gender minority stress from the general population, individuals may continue to experience psychological distress, including suicidality.

An additional research question was whether social support accounted for different levels of suicidal ideation. The current study is the only study known to researchers that has yet to examine different varieties of social support (i.e., friendships with heterosexual-cisgender people versus others within the LGBTQ community), and thus researchers did not have a theory of which type of social support would act as the strongest predictor. Examining by variety was intentional, as prior studies have found that TGNC individuals with family support perceive safer environments during the process of transitioning (Koken, Bimbi, & Parsons, 2009), higher levels

of life satisfaction (Erich et al., 2008; Simons et al., 2013), and lower depressive symptoms (Simons et al., 2013). Findings of the current study evidenced that family and heterosexual-cisgender friend support were most predictive of suicidality. While this is not a cause-and-effect relationship, the findings suggest that support from family and heterosexual-cisgender friends are associated with decreased experiences of suicidality. These findings are consistent with the available, be it limited, research findings. In research by Galupo et al. (2014a), the researchers articulated the benefits and barriers to TGNC people's friendships with heterosexual-cisgender people, LGB people, and other TGNC individuals. Some of the benefits that Galupo and colleagues described may be able to shed light on the protective factor of heterosexual-cisgender friendships on experiences of suicidality, including TGNC participants feeling more "normal" with these friends and validation meant more from those with normalized identities. Developing friendships with those within the majority population may help TGNC people to feel more accepted into society as a whole. While it is important to help TGNC individuals form relationships with other LGBTQ people, the current study suggests that it is especially important to develop relationships within family and heterosexual-cisgender friendships. It would be beneficial to continue growing awareness within the general population regarding gender identities that exist outside of the gender binary. Norton and Herek (2013) found that negative attitudes against transgender people were correlated with the belief in a gender binary, as well as a lack of contact with sexual minorities. As society can better understand the existence and experience of gender diverse people, TGNC individuals may be able to develop more secure relationships with family and heterosexual-cisgender supports.

Limitations

As with any research, there were limitations to the current study. Chain sampling was used to recruit participants, which could influence the data as those who participated are individuals active online or within LGBTQ organizations. The study relies upon self-report for participants' experiences of gender minority stress, suicidality, and perceived social support. Participants' perceptions may differ from objective measurements of these experiences. The majority of the participants in this study were White, and the experiences of ethnic minority trans individuals may be different than that of White trans individuals (Bradford, Reisner, Honnold, & Xavier, 2013; Garofalo et al., 2006), thus there is a need to increase the number of participants that represent varying demographic groups.

Additionally, the GMSR, while having reliable and valid analyses, is still a newly developed measure. As previously mentioned, ethnic TGNC individuals may face different experiences than their White counterparts. It would be beneficial to ensure that the GMSR has been normalized on TGNC people with varying demographic identities.

Finally, because researchers were interested in the college student population, it is possible that the selection bias influenced the results of the study. Also, results may not be generalizable to all TGNC community members. Moreover, TGNC college students are likely to have resources that may be unavailable to those non-college students within the community. One such resource is that TGNC college students may have an easier time finding others of similar gender identities. By selecting TGNC college students, the study may have a sample of individuals who were able to more easily develop connections within the LGBTQ community and develop their own self-concept (Renn, 2007). This selection bias may have influenced

LGBTQ community support's lack of meaningful association with gender minority stress or suicidality within the study.

Future Research

Research regarding transgender and gender nonconforming people's experiences is still a relatively small area of study. It would be beneficial for future research to continue exploring and studying experiences of TGNC people, specifically in regards to gender minority stress. For the purpose of this study, the two resiliency subscales (i.e., pride and community) of the GMSR were not used, but future research interested in a holistic view of transgender experiences should consider using the GMSR in its entirety. As this study found that family and heterosexual-cisgender support were related to suicidality, it may be helpful for future studies to explore factors that aid TGNC individuals to build these supports in their lives.

Conclusion

While the current study did not find that social support could act as a moderator for the relationship between experiences of gender minority stress and suicidality, the study did find social support to be a protective factor. Specifically, support from family and heterosexual-cisgender friends was found to be significantly related to lower scores of suicidality. This study was important, as it is one of the first to look at how support from different people in the lives of TGNC individuals can have different predictive abilities for experiences of gender minority stress and suicidality.

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Table 1. *Demographic characteristics of the sample.*

Demographics	N	%
Age		
18	29	13.4
19	23	10.6
20	29	13.4
21	27	12.4
22	17	7.8
23	12	5.5
24	10	4.6
25	10	4.6
26	10	4.6
27	12	5.5
28	5	2.3
29	6	2.8
30	2	.9
31	4	1.8
32	2	.9
34	1	.5
35	2	.9
36	1	.5
37	1	.5
38	2	.9
39	2	.9
40	1	.5
41	2	.9
43	1	.5
44	1	.5
46	1	.5
47	2	.9
54	1	.5
55	1	.5
Year in College		
Freshman	42	19.4
Sophomore	32	14.7
Junior	36	16.6
Senior	36	16.6
Graduate Program	58	26.6
Gender		
Transgender man	79	36.4
Transgender woman	30	13.8
Genderqueer/Androgynous	53	24.4
“Other”	46	21.2

Table 1. Continued

Demographics	N	%
Interest in gender affirming surgery		
"Yes, I already have"	27	12.4
"Yes, I would like to in the future"	127	58.5
"No"	31	14.3
Other	23	10.6
Interest in gender affirming hormone therapy		
"Yes, I already have"	86	39.6
"Yes, I would like to in the future"	67	30.9
"No"	38	17.5
Other	17	7.8
Race		
American Indian or Alaskan Native	11	5.1
Asian	2	.9
Black or African American	5	2.3
Native Hawaiian or Pacific Islander	3	1.4
White	166	76.5
Spanish	3	1.4
Hispanic	4	1.8
Latino	3	1.4
More than one race/ethnicity	15	6.9
Other	5	2.3
Sexual orientation		
Heterosexual	12	5.5
Lesbian	24	11.1
Gay	16	7.4
Bisexual	35	16.1
Pansexual	58	26.7
Other	63	29.0

Table 2. *Social support, scores of gender minority stress (as measured by the GMSR), and suicidality (as measured by the SBQ-R): Correlations and Descriptive Statistics (N = 221).*

Variables	1	2	3	4	5	6	7
1. Family Support	-						
2. LGBTQ Support	.031	-					
3. Heterosexual-Cisgender Support	.176**	.280**	-				
4. Significant Other Support	.099	.321**	.189**	-			
5. Social Support Total	.517**	.589**	.586**	.758**	-		
6. SBQ-R	-.374**	.006	-.269**	-.020	-.245**	-	
7. GMSR	-.380**	.018	-.246**	-.043	-.248**	.470**	-
M	14.60	23.50	19.66	20.27	78.02	10.35	110.05
SD	6.45	5.14	5.36	9.04	16.36	2.71	23.33
Range	4-28	4-28	0-28	0-28	30-112	4-16	39-170

**p < .001

Table 3. *Regression analyses predicting suicidality.*

Predictor	*B*	Beta	SE beta	Adjusted R^2	ΔR^2
Step 1					
Gender minority stress	0.43	0.44**	0.06	0.231	0.239**
Social support	-0.15	-0.14**	0.07		
Step 2					
Gender minority stress X Social support	0.01	0.01	0.06	0.228	.000

**p < .001

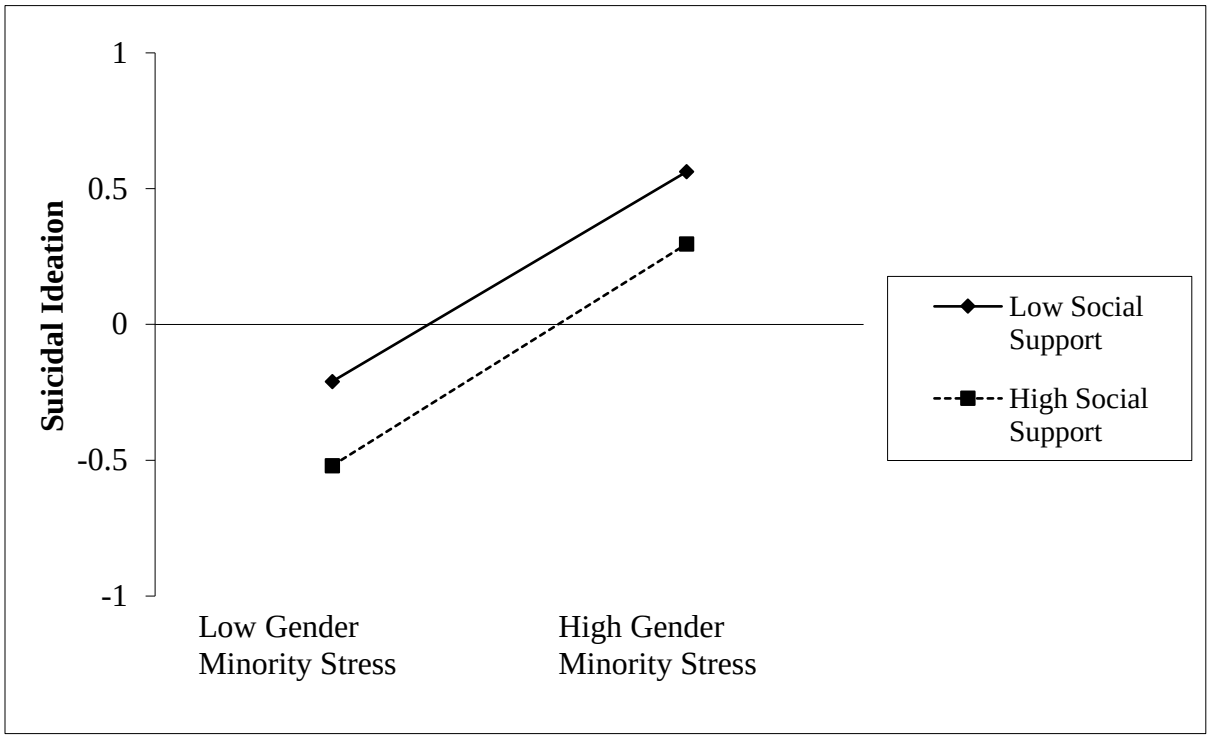

Figure 1. Demonstration of the relationship between gender minority stress, suicidality, and social support.

Chapter II: Literature Review

In the previous chapter, an overview of the current study and methodology was provided. In the current chapter, details are provided regarding the topics of gender minority stress, suicidal ideation, and social support within the transgender and gender nonconforming community. At the end of this chapter, the hypotheses for the current study are provided.

Suicidality in College Students

Suicidality continues to receive attention in society, with certain populations more likely to endorse thoughts of suicide, suicidal attempts, and suicide-like behaviors at higher rates than the general population. Independent of age, suicide was the 10th leading cause of death in the United States in 2015 (CDC, 2015). Among young adults, age 18 to 24, suicide was the third leading cause of death (Bagge, Lamis, Nadorff, & Osman, 2014). The CDC (2015) reported that for individuals within the 15-24 age range, suicide was the second leading cause of death. When compared to same-age peers, some research suggests that college-age individuals are at an increased risk of suicidal ideation and suicide attempts (Bauer, Chesin, & Jeglic, 2014; Hirsch & Barton, 2011; Konick & Gutierrez, 2005). The transition to college can be a daunting task that leaves students feeling isolated and alone, which may further exacerbate mental health concerns (Zisook, Downs, Moutier, & Clayton, 2010). Zisook and colleagues (2010) pointed out that even as college students may be at an increased risk for depression, anxiety, substance use, and suicidality, many students are not seeking services. Research suggests that college students are more likely than their same-age peers to drink alcohol in larger amounts with increased experiences of problems due to their use (Barnes, Welte, Hoffman, & Tidwell, 2010; Slutske, 2005; Slutske et al., 2004). When Blanco et al. (2008) compared college students to their same-age peers, they discovered that the two populations shared similar rates of mental health issues

such as depression and anxiety. However, findings from other studies suggest that college students were almost four times more likely to consider attempting suicide in comparison to their non-college peers (Bauer, Chesin, & Jeglic, 2014; CDC, 2011). Farabaugh and colleagues (2012) found that college students who reported high levels of depression, hopelessness, and a low quality of life were more likely to endorse suicidal ideation. Of the 898 college students surveyed, 10% endorsed having thoughts of suicide.

While not all individuals who endorse suicidal ideation will go on to attempt suicide, research supports that a history of suicidal ideation increases the likelihood of future suicidal behaviors (Oquendo et al., 2004). Research also suggests a relationship between suicide proneness (i.e., overtly suicidal behaviors) and high levels of depression, alcohol use, and low levels of body care and protection (Lamis, Malone, Langhinrichsen-Rohling, & Ellis, 2010). Similarly, Gonzalez (2012) found that college students with histories of suicide attempts were more likely to engage in solitary binge drinking, but not in social contexts when compared to students without suicidal attempt histories. Gonzalez and Hewell (2012) found that suicidal ideation was significantly related to college students who reported using alcohol as a means of coping. While hopelessness and perceived burdensomeness appear to predict suicidal ideation in both male and female college students, only in women was depression found to be a predictor of suicidal thoughts (Lamis & Lester, 2013). In the same study of college students, researchers found that for men only, alcohol-related problems and social support from family acted as predictors for suicidal ideation.

Farabaugh and colleagues (2012) found that for their college-based sample, rates of suicidal ideation increased as students reported higher levels of depression, hopelessness, and lower quality of life. For one sample of college students with significant symptoms of

depression, 87% reported experiencing at least mild fatigue (Nyer et al., 2015). Nyer and colleagues found that as the students' rating of fatigue increased, they were more likely to endorse higher levels of anxiety, functional impairment, and suicidal risk. When considering suicide-like behaviors, such as self-harm, Wilcox et al. (2012) found that one in six of the participants who reported self-harming behaviors had also attempted suicide. Wilcox and colleagues found that 2% of the 1,081 students surveyed reported engaging in self-harming behaviors within the last year, while 7% of the sample reported lifetime self-harming behaviors. In a study aimed to determine levels of suicidal ideation and behaviors of college students, Kisch, Leino, and Silverman (2005) found that out of 15,977 college students surveyed, 33.4% of those students who reported during their life feeling "so depressed it was difficult to function" had considered suicide while experiencing these feelings. Skala et al. (2012) discovered that 12.5% out of 1381 college students endorsed suicidal ideation at some point in their life, with higher risk for those students who used substances (nicotine, alcohol, and illicit drugs). In their sample of 354 college students, Bauer et al. (2014) found 21.6% of participants endorsed suicidal ideation within the last two weeks and 23.2% within the last year. When the same participants were asked about suicide attempts, 10.7% of participants endorsed at least one suicide attempt, with 57.9% of those with attempts having endorsed more than one attempt. The available literature suggests that college students appear to be at greater risk of suicidality than their same-age peers.

Transgender and Gender Nonconforming Individuals

Prior to exploring the literature related to transgender individuals, it is relevant to operationalize terms and provide clarity around issues of gender and gender identity. For this study, transgender (or "trans") is used as an umbrella term to refer to anyone whose gender

identity does not align with their gender assignment at birth (Donatone & Rachlin, 2013). Many individuals may use the terms transgender men (assigned female at birth, identifies as male) or transgender women (assigned male at birth, identifies as female) to describe their gender identity. However, some individuals may feel as though their identity cannot be expressed fully as just male or just female. Gender nonconforming individuals may identify as moving along a spectrum between male and female, while other gender nonconforming people may feel as though they are outside the spectrum of male and female altogether (Budge, 2013). In order to be inclusive to all gender identities, the current study used the collective term transgender and gender-nonconforming (TGNC). Cisgender, in contrast, is defined as someone who identifies as the gender they were assigned at birth, such as a genetic male who identifies as a man (Carroll, Guss, Hutchinson, & Gauler, 2012).

TGNC individuals endorse higher rates of suicidal ideation and attempts than their cisgender counterparts. Findings in the general population suggest that suicidal ideation in the last year was endorsed in 3.7% of the U.S. population (Crosby, Han, Ortega, Parks, & Gfroerer, 2011). When considering lifetime prevalence, 16.3% of participants from the general U.S. population endorsed suicidal ideation (Druss & Pincus, 2000). In contrast, researchers with the Trans Mental Health Study found that 84% of their TGNC participants endorsed having suicidal ideation at some point during their life (McNell, Balley, Ellis, Morton, & Regan, 2012). Of the TGNC individuals who had considered suicide at some point in their lives, a portion had suicidal ideation within the last week (27%) and others considered suicide daily (4%). When examining actual attempts, almost half (48%) of TGNC participants reported suicidal attempts, with 11% reporting at least one attempt in the last year (McNell et al., 2012). With their sample of TGNC individuals, Haas, Rodgers, and Herman (2014) discovered that 41% of participants had

attempted suicide at least once in their lifetime. In another study, 19% of TGNC participants reported at least one suicide attempt within the past year (Mustanski & Liu, 2013). Goldblum and colleagues (2012) found that out of the 28.5% of TGNC participants who had attempted suicide, 32.5% made one attempt, 28.6% made two attempts, and 39% made three or more attempts. In contrast to national findings, regardless of gender identity, Crosby et al. (2011) found only 0.5% of the U.S. population reported a suicidal attempt with the last year. One aspect that may contribute to suicidal ideation is a TGNC individual's ability to live life in a gender affirming way (Morgan & Stevens, 2012).

Gender Affirmation. Many TGNC people discuss early feelings as though their bodies did not accurately represent how they felt (Morgan & Stevens, 2012). Budge (2012) described three possible stages TGNC individuals may progress through throughout their lives: pre-transition, enter transitioning, and post-transition. First, pre-transition is where individuals are recognizing the dissonance between their gender identity and their assigned gender. During this time, it is likely that people will attempt to suppress any thoughts or feelings related to questioning their gender identity. When looking at the specific experiences of male-to-female (MTF) transgender people, participants described experiences of cross-dressing as a means of exploring their gender identity (Morgan & Stevens, 2012). When family members eventually discovered their behavior of cross-dressing, participants described learning the message that their TGNC identity was unacceptable and shameful. Individuals stay within the pre-transition stage until they either become comfortable enough with the idea of transitioning or feel as though transitioning is their only option in order to continue living. Morgan and Stevens' (2012) participants reported the body-mind dissonance became so overwhelming that they felt they either had to transition or they feared they would end their lives. The second stage is entering the

process of transitioning (Budge, 2012). During this stage, TGNC individuals begin the process of coming out to those important people in their lives and working to make conscious changes towards their affirmed gender identity. While transitioning, for some, may include beginning hormone therapy or gender affirmation surgeries, this is not always the case. Those who view their gender identity as moving fluidly between femininity and masculinity or those who do not identify with either man or woman may not feel the need to undergo hormone treatment or surgeries to achieve their desired gender expression. The final stage as discussed by Budge (2012) is the period after transition. This is when individuals continue to value their true identity and find ways to incorporate this way of being into their entire lives.

The act of disclosing their affirmed gender to others has been found to produce a variety of reactions. Galupo, Krum, Hagen, Gonzalez, and Bauerband (2014c) documented five potential responses to TGNC people's disclosure: (1) positive or affirming (e.g., friends and family were accepting and asked how they could help to support the participant), (2) negative responses (e.g., friends and family refusing to use affirming name and pronouns), (3) a mix of responses (e.g., some friends and family being supportive, while others reacted negatively), (4) impacts on relationship status (e.g., the participant feeling abandoned by friends or family), and (5) emotional reactions (e.g., focusing on the feelings of the family or friends after the disclosure). TGNC individuals need not disclose their affirmed gender to others to experience negative repercussions. Both those who have disclosed and those who have not disclosed their affirmed gender have experienced significant experiences at the macro and micro level.

Micro aggressions. Sue (2010) described micro aggressions as "the everyday verbal, nonverbal, and environmental slights, snubs, or insults, whether intentional or unintentional, which communicate hostile, derogatory, or negative messages to target persons based solely

upon their marginalized group membership" (p. 2). For example, a micro aggression might be friends or family members refusing to use gender affirming pronouns after one discloses their transgender identity. In a study by Levitt and Ippolito (2014), 64% of their TGNC respondents discussed feeling the need to constantly gauge their own behaviors when around others to help reduce the likelihood of being rejected or incurring violence. When asked about their experiences in high school, 44.8% of TGNC participants reported being victimized due to their gender identity (Goldblum et al., 2012). Those participants who encountered gender-based victimization were almost four times more likely to make suicide attempts than those who did not. For the sake of avoiding hostility and aggression, participants highlighted the importance of altering their gender presentation to more closely mirror cisgender identity. Societal expectations for cisgender expression also left participants feeling pressured to hide their affirmed gender identity when at work (Levitt & Ippolito, 2014). If participants did not hide their TGNC identity, 52% of participants reported having fewer job prospects or being found incompetent in jobs that they were evaluated as doing well at before their transgender identity was discovered.

While experiences of discrimination may be more common for TGNC people when interacting with the general population, TGNC also face micro aggressions with their own family and friends. Galupo, Henise, and Davis (2014b) examined the existence of micro aggressions within friendships by dividing TGNC participants' friends into two groups: heterosexual-cisgender friends and friends within the LGBTQ community. While participants reported micro aggressions were more likely to come from their heterosexual-cisgender friends, it is important to note that micro aggressions happened with all friends, even those who identified as sexual minorities or TGNC. Participants rated the micro aggressions coming from friends with similar identities as more hurtful than from heterosexual-cisgender friends (Galupo, Henise, & Davis,

2014b); that is, statements, acts, and behaviors from other sexual or gender minorities were more hurtful than those from the dominant culture groups. In all friendships, the occurring micro aggressions made participants question how close they felt to the friend and were more hurtful due to happening within their friendships versus another context (i.e., from a stranger).

Macro aggressions. While micro aggressions refer to the covert experiences of discrimination, macro aggressions refer to the overt experiences of victimization and discrimination that many TGNC individuals may face. In addition to the lack of understanding and discrimination from the dominant culture, TGNC people also face increased rates of verbal abuse, sexual assault, physical abuse, and homicide (Clements-Nolle et al., 2006; FORGE, 2005; Garofalo et al., 2006; Kenagy, 2005; Stotzer, 2009). In a meta-analysis by Stotzer (2009), 26-69% of TGNC participants endorsed being verbally harassed and 67% reported enduring emotional abuse due to their gender identity. Fifty-two to 66% of TGNC participants endorsed unwanted sexual activity (Clements-Nolle et al., 2006; FORGE, 2005; Garofalo et al., 2006; Kenagy, 2005). Over 50% of the participants also related feeling as though one or more of the occurrences of sexual assault were a result of their gender identity (Stotzer, 2009). Only in approximately one-third of the occurrences of sexual victimization was the perpetrator a complete stranger. Concerning physical violence, Stotzer (2009) reported a range of 40-65% of TGNC participants endorsed encountering physical assault. Forty-seven to 75% of participants felt their gender identity resulted in one or more of their reported physical abuses. Stotzer (2009) found across studies that perpetrators of physical violence included strangers, police, parents, sibling, other relatives, neighbors, and even friends. It appears that TGNC individuals not only must protect themselves when in public, but also when they are in their own homes. Fifty-six to 66% of individuals reported experiencing physical violence at home (Stotzer, 2009).

In the United States, between 1995 and 2005 there were at least 51 documented murders of TGNC people (Stotzer, 2009), and in Europe there were 71 reported TGNC people murdered between 2008 and 2013 (Prunas et al., 2014). Worldwide, there have been an estimated 353 TGNC people murdered since the 1970s (Stotzer, 2009). When looking at these statistics, it is not surprising that many TGNC individuals have reported feeling as though they will have a significantly shorter lifespan than the general population (Stotzer, 2009). One might suggest TGNC people should reach out to law enforcement for protection, yet the solution is not that simple. Stotzer (2009) provided clues as to why there is a mistrust of law enforcement from the TGNC community. Almost 8% of participants reported "unjustifiable arrests," 37% of the perpetuators of verbal abuse were police personnel, and 14% of physical violence occurring at the hands of police (Stotzer, 2009). This mistrust has led 83-91% of TGNC participants to fail to report their experiences of sexual assault to law enforcement. Those who did report their abuse reported unsatisfactory responses that led them feeling invalidated and unsupported (Stotzer, 2009).

Minority Stress Model

One way to understand what TGNC experiences may result in increased suicidal ideation is models of minority stress. Belonging to a minority group increases the likelihood that one will encounter stress and discrimination (Balsam, Beadnell, & Molina, 2013; Meyer, 1995). Models of minority stress help explain how individuals within minority groups are affected by the expectations, values, and experiences of those in the dominant culture. This model explores the amount of stress minority individuals face when living in a society that may discriminate, alienate, or ignore their needs and experiences (Meyer, 1995). The model has been used to explore many relationships of minority and dominate cultures, including race (Harrell, 2000;

Mays, Coleman, & Jackson, 2013; Mirowsky & Ross, 1980; Wei, Ku, Russell, Mallinckrodt, & Liao, 2008), women (Chang, Banks, & Watkins, 2004), and sexual orientation (Meyer, 2007; Waldo, 1999).

In order to try to understand the experiences of sexual minorities, Meyer's (1995) Minority Stress Theory posited three processes that sexual minority individuals may undergo. First is stress due to environmental and external events due to their minority status. This may come in the form of micro or macro aggressions as discussed previously. During the second process, persons maintain vigilance out of anticipation and expectation that external stressors will occur. In a study by Levitt and Ippolito (2014), 11 out of the 17 TGNC respondents discussed feeling the need to constantly gauge their own behaviors when around others to help reduce the likelihood of being rejected or incurring violence. During the third process, individuals begin to internalize those negative prejudices and attitudes from society. This process is what researchers would refer to as internalized transphobia.

While researchers have developed a model regarding sexual minorities' experiences with stress, it was not until recently that researchers began to focus specifically on the experiences of TGNC individuals. Prior to examining TGNC independently, historically, researchers may have included TGNC individuals as a part of the sexual minority status (LGB), rather than recognize that an individual may be both TGNC and a sexual minority (i.e., gay or lesbian) or TGNC and a sexual majority member (i.e., straight) (Weinstock, 1998). However, ongoing research has attempted to adapt the minority stress theory to fit that of TGNC individuals' experiences (Hendricks & Testa, 2012; Testa, Habarth, Peta, Bockting, & Balsam, 2014). After conducting a meta-analysis, Hendricks and Testa (2012) reported a scarcity of research exploring the internalized experiences of transphobia and resiliency skills of TGNC individuals. In order to

help fill these gaps in the literature, Testa et al. (2014) explored literature on TGNC experiences and existing data from TGNC focus groups. Researchers built upon Meyer's Minority Stress Model by including categories specific to TGNC experiences: gender-related discrimination, gender-related rejection, gender-related victimization, non-affirmation of gender identity, internalized transphobia, negative expectations for future events, non-disclosure, and resilience (Testa et al., 2014).

Outcomes of Gender Minority Stress

While the concerns of the TGNC population are receiving greater attention from researchers, there appears to be a lack of information specifically addressing experiences of TGNC college students. With continued media coverage of LGBTQ youth suicides, Wolff, Allen, Himes, Fish, and Losardo (2014) completed a qualitative study exploring sexual and gender minority youth suicides and media response. By examining the media responses to LGBTQ youth suicides, Wolff et al. (2014) were able to develop common warning signs of suicide, which include continued bullying and harassment, experiences of rejection after coming out, or fear of rejection leading individuals to not disclose to peers. These warning signs are a reflection of the minority stress LGBTQ individuals face. By creating an environment in which LGBTQ youth are either too fearful to reach out and disclose their sexual orientation or gender identity to those around them or potentially experience harassment if they do come out, students may feel isolated and as though the general population does not care about their concerns. Research supports that having positive and accepting reactions to disclosure can provide positive outcomes, whether it is gender identity, mental illness, stigmatized physical illness, or unseen disabilities (Galupo et al., 2014c). Receiving support after disclosing a stigmatized status or identity is related to increased self-confidence, self-acceptance, and greater levels of

psychological health. This research highlights the importance of TGNC college students to feel as though they have a safe support network where they feel comfortable to disclose their gender identities.

Social support

When experiencing higher levels of discrimination and victimization, sexual and gender minorities are at increased risk for mental health concerns, including suicidality (Baams et al., 2013; Goldblum et al., 2012; Hatzenbuehler, 2009). In contrast to the body of literature that highlights risk factors of suicidal ideation, such as depression (Dawood et al., 2007; Oquendo et al., 2001) and substance use (Sublette et al., 2009; Swahn & Bossarte, 2007), a growing body of literature has begun to examine what keeps people from engaging in suicidal behavior or having suicidal thoughts. Protective factors are thought to be a psychological variable or construct that help to buffer against negative experiences. Social support has been identified as a protective factor as it offers individuals a sense of belonging and security, thereby increasing a sense of well-being (Davidson & Demaray, 2007). With a sample of Norwegian college students (ages 17-44), Chioqueta and Stiles (2007) found that perceived social support was a predictor for lower levels of suicidal ideation. The relationship between social support and suicidal thoughts was found to be independent from both symptoms of depression and feelings of hopelessness. Similarly, Hirsch and Barton (2011) found that having access to positive social support acted as a buffer for suicidal behaviors in college students. Experiencing negative social exchanges was also a strong predictor of increased likelihood of suicidal behavior (Hirsch & Barton, 2011). Stewart (2009) found those college students who reported higher levels of perceived social support were associated with lower levels of suicidal ideation. Interestingly, those students with higher levels of suicidal ideation were also less likely to seek help for their symptoms. Those

without social support may be at risk for increased levels of suicidality, which in turn, may make it less likely for them to reach out for help.

Depression and anxiety has been linked with suicidality in cisgender individuals (Beck, Steer, Kovacs, & Garrison, 1985; Capron et al., 2013; Kisch, Leino, & Silverman, 2005) and TGNC individuals (Nemoto, Bodeker, & Iwamoto, 2011; Reisner et al., 2015). When exploring the relationship between anxiety, depression, and social support in TGNC participants, Budge, Adelson, and Howard (2013) found that social support was associated with lower levels of depression and anxiety. Budge and colleagues (2013) posited that as an effect of low levels of social support, TGNC individuals are likely to be more reliant on avoidant coping skills, which in turn increases likelihood of reported depression and anxiety symptoms. In a study focused on transgender women with a history of sex work (Nemoto, Bödeker, & Iwamoto, 2011), participants were more likely to report higher levels of depressive symptoms if they indicated feeling as though they needed more social support, received fewer occurrences of social support, or were generally dissatisfied with their social support. The same participants reported greater levels of depressive symptoms if they also endorsed experiencing more transphobic experiences, ever having suicidal ideation, or if they reported lower income or education levels. Social support in TGNC individuals also appears to influence experiences of suicidality (Liu & Mustanskim, 2012; Nemoto et al., 2011). The source of social support is an important variable because there are various sources from which TGNC individuals may receive support. Three sources of support have been identified in the literature: (a) family, (b) heterosexual-cisgender peers, and (c) LGBTQ peers. Each of these sources is addressed in greater detail below.

Familial support. Within the literature, there are varying reports of how often TGNC individuals maintain family of origin relationships and the level of importance of these family of

origin relationships. The acceptance or rejection of the family system is a pivotal moment. Koken, Bimbi, and Parsons (2009) found that the majority of transwomen of color reported hostility and aggression from their family system. Family responses of neglect and rejection were also common among these participants, with a potential for the rejection to go so far as to force the TGNC individual to leave home. In one study, approximately two-thirds of participants reported family members ridiculing and embarrassing them because of their gender identity or expression (Nemoto, Bödeker, & Iwamoto, 2011). Nemoto and colleagues (2011) found that although participants reported overall low levels of social support, TGNC women endorsed more support from both TGNC and non-TGNC friends than from their family. Individuals experienced overt harassment or rejection through cold, distant interactions. These individuals were left to face isolation, find new support systems, and potentially to find new housing or face homelessness on top of the process of transitioning.

In a study focused on the family relationships of TGNC, Erich, Tittsworth, Dykes, and Cabuses (2008) found participants were not routinely disconnected from their families. Those participants who perceived having support from their families were more likely to have greater life satisfaction. Individuals reported feeling as though they have the love and support from family members, which Koken, Bimbi, and Parsons (2009) argued helps create a safe environment during the difficult process of transitioning. However, even in the circumstances of TGNC individuals staying in contact with family members, the TGNC individual may perceive themselves as having less familial support than their cisgender siblings (Factor & Rothblum, 2008). It appears that the time in life for TGNC participants also plays an important role in how much they feel supported by their family members. Nuttbrock et al. (2009) found that the MTF (male-to-female) participants' gender affirmation, specifically positive gender role casting, from

family was much more likely to occur in middle age than it is in adolescence. An example of gender role casting refers to others using the appropriate name and pronouns for TGNC people. The idea that gender affirmation is more likely to occur from family members later in life also fits with data collected by Koken, Bimbi, and Parsons (2009). Many participants reported that even if the initial reaction was negative, over time, their family members developed more supportive behaviors and attitudes to their gender identity. The response pattern of being more accepting and supportive over time fits with the idea that families may have to go through a period of adjustment. Once given time to handle the adjustment, it appears that families have the ability to take on a supportive role for the TGNC individual (Cohen, Padilla, & Aravena, 2006).

The majority of literature supports the relationship between familial support and positive mental health outcomes. In a study with a slightly different perspective, Chioqueta and Stiles (2007) found that cisgender college student participants' perception of family cohesiveness was not associated with individuals reporting lower levels of hopelessness when accounting for their severity of depressive symptoms. Most other studies appear to support the position that familial support plays an important role in individuals' lives. When exploring familial relationships of adolescents, without specification to TGNC individuals, researchers found that receiving caring support from family was associated with fewer depressive symptoms, fewer posttraumatic symptoms, less suicidal ideation, and greater reported levels of hope (Cheng et al., 2014; Winfree & Jiang, 2010). When adolescents perceived themselves as having loving and caring parents, they were less likely to endorse suicidal ideation or attempts (Winfree & Jiang, 2010). Studies that focus specifically on TGNC individuals have reported a relationship between family support and satisfaction with life. High levels of familial support were connected to higher scores on life-satisfaction with TGNC participants (Erich, Tittsworth, Dykes, & Cabuses, 2008).

Similarly, Simons, Schrager, Clark, Belzer, and Olson (2013) found that with a sample of 66 TGNC adolescents from ages 12 to 24, higher scores on parental support were correlated to higher life satisfaction, lower perceived feeling of being a burden due to being TGNC, and fewer depressive symptoms. Parents are in an important position, as their support or lack thereof can either help to solidify their child's gender identity, hopefully leading to positive mental health, or create further obstacles that may intensify the problems their children face (Cohen, Padilla, & Aravena, 2006; Nuttbrock et al., 2009; Simons et al., 2013). While familial support appears to be important, individuals are likely to have relationships with others outside of the family. The next section will examine the impact of non-family relationships for TGNC individuals.

Heterosexual-cisgender support. Research is emerging about social support and friendships for TGNC individuals. As discussed by Weinstock (1998), there is a tendency in the literature for a focus on sexual minorities. Although the term "transgender" may be included in research, these individuals are often not the focus. For this reason, there is little research examining the role of support for TGNC individuals from the LGBTQ community or from heterosexual-cisgender individuals. When research is reviewed that specifically addresses TGNC individuals, specific mention will be made in order to clarify the population studied.

When Cheng and colleagues (2014) examined social support of cisgender adolescents in India, it became clear that when participants reported lower levels of support from caring family members, they were much more likely to report greater levels of perceived peer support. As previously discussed, after disclosing their true gender identity to family, TGNC individuals may feel less supported by their family. They may reach out to their peers for support during this adjustment period.

One may question whether the gender or sexual orientation of friends have influence in friendship development. In a study focused on sexual minorities, participants reported that sexual orientation of their close friends was unimportant, as they were more concerned with the function of the friendships (Galupo, 2007). Participants stated that mutual support, the friend being there when the participant needed them, and having someone to talk to were the important characteristics of their friendships, regardless of sexual orientation of the friend. In a similar study, Galupo (2009) also found that sexual minority participants were less likely than heterosexual men or women to rely on aspects of similarity in order to develop friendships. The development of friendships goes beyond similarities of sexual orientation, seen in the fact that it was common for participants to develop friendships with those outside of the LGBTQ community. More research is needed in order to understand whether TGNC individuals would report the same patterns of friendship development as sexual minorities. Galupo et al. (2014c) looked at the impact of disclosure on TGNC individuals' friendships, but did not report participants' friends' gender identities. Findings reflected that friendships may be impacted in one of two ways: Either the friendship becomes strengthened through acceptance by the friend, allowing for a deeper connection, or the friendship becomes distant or ends. While friendships may also need some time for adjustment, Nuttbrock et al. (2009) found that transwomen participants reported gender role casting (i.e., affirming gender identity) was more likely to be achieved in their friendships than their family of origin. While friends in general may be a greater source of support, Munoz-Plaza, Quinn, & Rounds (2002) found that, specifically discussing sexual minorities, participants perceived there to be limitations in the emotional support supplied by their heterosexual peers.

In a study by Galupo et al. (2014a), the friendship experiences of TGNC participants were categorized into heterosexual-cisgender friends, LGB friends, and TGNC friends. The researchers identified eight unique benefits and six barriers for TGNC people in their friendships with heterosexual-cisgender individuals. The benefits included (a) TGNC participants feeling more "normal" with these friends; (b) as though validation meant more from those with normalized identities; (c) friendships that did not revolve around TGNC or sexuality concerns and topics; (d) friendships aided in developing identified gender presentation and appearance; (e) a larger population provided greater opportunities to develop friendships; (f) friends offered a different perspective from their own; (g) friends that were more emotionally stable; and (h) a chance to spread awareness and education of TGNC issues. TGNC participants reported specific barriers in their friendships with heterosexual-cisgender people. In these friendships, individuals had fewer mutual experiences, which led to heterosexual-cisgender friends being less understanding of any non-normative issues. The lack of understanding also presented itself in a lack of knowledge concerning TGNC issues, leading these friends to use non-affirming language towards gender identity. TGNC people also reported it being more difficult to discuss issues specific to gender identity or sexuality, leading to a discomfort for all of those involved (Galupo et al., 2014a).

LGBTQ Support. In a study of LGBT college students' experiences with Gay-Straight Alliances (GSA) during high school, Heck, Lindquist, Stewart, Brennan, and Cochran (2013) found that being a member of a GSA program during high school increased the likelihood of individuals being "out" in their schools. Poteat, Sinclair, DiGiovanni, Koenig, and Russell (2012) found in their study of both LGBTQ and heterosexual high school students that in schools with GSA programs, participants endorsed lower levels of suicidal ideation and attempts than

schools without GSAs. The difference was significantly higher for the LGBTQ students than their heterosexual peers. Sadly, despite positive effects for the existence of GSAs in schools, only about half of the schools had GSAs present (14 out of 31 schools).

Specially looking at sexual minorities, Munoz-Plaza, Quinn, and Rounds (2002) found that participants reported that both heterosexual and LGBTQ peers and non-family adults were more supportive in providing emotional and instrumental support. However, participants reported that LGBTQ peers and non-family adults were able to provide more support beyond that of their heterosexual peers. Participants reported receiving important informational and appraisal support from others in the LGBTQ community (Munoz-Plaza, Quinn, & Rounds, 2002). Lombardi (1999) discussed the importance of social networks for TGNC individuals to be more involved in political movements. Lombardi posited that not only do organized social interactions help to disperse information concerning medical care, living day to day, and legal concerns, but they also provide a safe arena for individuals to become part of the TGNC community. Lombardi also argued that the size of TGNC individuals' networks, such as the number of people they are open about their TGNC identity with, was an indication of how open to their larger social network individuals would be about their gender identity. By being open to more people in their lives about their transgender identity, the more likely individuals are to engage in activities outside of LGBTQ community meetings.

While it appears the LGBTQ community can provide very specific kinds of support that TGNC individuals may not be able to find elsewhere, friendships within this community also posit their own difficulties. In a study focused on the experiences of transmen's friendships, Zitz, Burns, and Tacconelli (2014) found an interesting pattern between transmen and their friendships with lesbians. Many participants related that their friendships with lesbian women were the most

demanding and rejecting as participants embraced identities that were more masculine. Participants reported their lesbian friends reacted in a range from concerns about participants taking on male privilege to some claiming the participant was abandoning them to become part of the patriarchy. While some participants described being able to use the concerns of their lesbian friends to further develop their identities, some other participants described withdrawing themselves from lesbian friendships and the community as a whole (Zitz, Burns, & Tacconelli, 2014).

In their research of TGNC friendships, Galupo et al. (2014a) compared differences TGNC individuals may notice between their sexual minority friendships versus TGNC friendships. Researchers discovered four unique benefits and two barriers in friendships with sexual minority individuals in comparison to TGNC friends. Benefits included (a) feeling as though there was a shared community that provided a sense of belonging, (b) feeling friends were not judgmental and could be open-minded, (c) provided experiences and point-of-views different from their own, and (d) a chance to provide information specific to TGNC issues. The barriers that were specific to sexual minority friends, but not TGNC friends, were that they (a) were not able to understand non-normative gender experiences and (b) generally shared fewer common experiences (Galupo et al., 2014a).

When looking specifically at friendships between TGNC individuals and their TGNC friends, Galupo et al. (2014a) identified five unique benefits and four barriers. Benefits unique to TGNC friendships are (a) having common experiences, (b) chances for sharing information and resources, (c) feeling comfortable to be true-self with friends, (d) developing affirmed gender presentation, and (e) having a space to discuss TGNC issues. There were barriers that were specific to TGNC friendships, however. The barriers included (a) the friendship and discussions

revolving around TGNC issues, and (b) feeling as though friends were emotionally unstable, which led to conflict and negative affect. Participants also related being fearful that their gender identity would be inadvertently disclosed to others due to being around other TGNC friends, which led to feelings of discomfort (Galupo et al., 2014a).

Based on the literature, there exists a relationship between experiences of gender minority stress and suicidality for TGNC individuals. Research also supports the idea of social support as a buffer for suicidality. What is yet to be researched is whether social support can moderate the relationship between gender minority stress and suicidal ideation, suicidal attempts, and suicide-like behaviors. It is also unclear whether the source of social support (familial, heterosexual-cisgender, or LGBTQ) would influence the impact of the protective factor. Based on the void in the literature, the following hypotheses are proposed.

A) As experiences of minority stress increase, so too will suicidal ideation.

B) Social support will act as a moderator for the relationship between suicidal ideation and gender minority stress in transgender and gender nonconforming college students. As perception of social support increases, participants will report less experiences of suicidality.

C) Different types of support (familial, heterosexual-cisgender, LGBTQ) may vary on their predictive ability for suicidal ideation and attempts.

Chapter III: Method

The previous chapter outlined the specific concerns transgender and gender nonconforming (TGNC) individuals encounter, along with exploring if there is a connection between social support and suicidality. This current chapter describes how the researcher propsed to answer those research questions.

Participants

Two hundred and seventeen TGNC individuals currently enrolled in college or university across the United States were included in the current study. All levels of college (i.e., undergraduate, master's, doctoral) enrolled status were included in the study in order to examine experiences across various levels of education; however, the majority of participants were undergraduates (N = 146, 67.3%). Seventy-nine participants identified as transgender men (36.4%), 30 identified as transgender women (13.8%), 53 identified as genderqueer or androgynous (24.4%), and the remaining 46 identified as "other" (21.2%). For those who self-identified their gender, qualitative entries of identities included, but were not limited to agender, bigender, gender-fluid, and non-binary. The majority of participants were White (N = 166, 76.5%), with other participants identifying as American Indian or Alaskan Native (N = 11, 5.1%), Black or African American (N = 5, 2.3%), Hispanic (N = 4, 1.8%), Native Hawaiian or Pacific Islander (N = 3, 1.4%), Spanish (N = 3, 1.4%), Latino (N = 3, 1.4%), Asian (N = 2, .9%), more than one race/ethnicity (N = 15, 6.9%), and "other" (N = 5, 2.3%). There were 3 participants whose ages were categorized as outliers, and thus were removed from the sample. After removing 3 participants, ages ranged from 18 to 55, although the majority were below 22 (57.6%). Participants' sexual orientations included heterosexual (n = 12, 5.5%), lesbian (n = 24, 11.1%), gay (n = 16, 7.4%), bisexual (n = 35, 16.1%), pansexual (n = 58, 26.7%), and 63

participants who chose "other." Participants' identified sexual orientations included asexual and demisexual. Table 1 provides full information regarding demographics of the current sample.

Table 1. *Demographic characteristics of the sample.*

Demographics	N	%
Age		
18	29	13.4
19	23	10.6
20	29	13.4
21	27	12.4
22	17	7.8
23	12	5.5
24	10	4.6
25	10	4.6
26	10	4.6
27	12	5.5
28	5	2.3
29	6	2.8
30	2	.9
31	4	1.8
32	2	.9
34	1	.5
35	2	.9
36	1	.5
37	1	.5
38	2	.9
39	2	.9
40	1	.5
41	2	.9
43	1	.5
44	1	.5
46	1	.5
47	2	.9
54	1	.5
55	1	.5
Year in College		
Freshman	42	19.4
Sophomore	32	14.7
Junior	36	16.6
Senior	36	16.6
Graduate Program	58	26.6
Gender		
Transgender man	79	36.4
Transgender woman	30	13.8

Table 1. *continued*

Genderqueer/Androgynous	53	24.4
"Other"	46	21.2
Interest in gender affirming surgery		
"Yes, I already have"	27	12.4
"Yes, I would like to in the future"	127	58.5
"No"	31	14.3
Other	23	10.6
Interest in gender affirming hormone therapy		
"Yes, I already have"	86	39.6
"Yes, I would like to in the future"	67	30.9
"No"	38	17.5
Other	17	7.8
Race		
American Indian or Alaskan Native	11	5.1
Asian	2	.9
Black or African American	5	2.3
Native Hawaiian or Pacific Islander	3	1.4
White	166	76.5
Spanish	3	1.4
Hispanic	4	1.8
Latino	3	1.4
More than one race/ethnicity	15	6.9
Other	5	2.3
Sexual orientation		
Heterosexual	12	5.5
Lesbian	24	11.1
Gay	16	7.4
Bisexual	35	16.1
Pansexual	58	26.7
Other	63	29.0

Measures

Suicide Behaviors Questionnaire-Revised (SBQ-R). The SBQ-R was used to measure levels of suicidal ideation, self-injurious behavior, suicide attempts, and likelihood of suicidal attempts in the future. The SBQ-R is comprised of four questions with total scores ranging from 3 to 18. Higher scores on the SBQ-R indicate participants at greater risk of suicidal ideation or suicidal attempts. An example item from the assessment is "How often have you thought about

killing yourself in the past year?" Response options range from 1-never to 5-very often. The SBQ-R has been found to reliably differentiate between those who are suicidal and those who are not (Osman et al., 2001). Across various samples (inpatient versus outpatient), Osman and colleagues found Cronbach's alpha score range from an adequate .76 to moderately high .87, respectively. The SBQ-R in the current study was found to have a Cronbach's alpha score of .70. The SBQ-R has been used in a number of studies to examine rates of suicidal ideation (Bamonti, Price, & Fiske, 2013; Johnson, Gooding, Wood, & Tarrier, 2010; Ribeiro et al., 2012).

Gender Minority Stress and Resilience Measure (GMSR). Based on the minority stress model proposed by Meyer, researchers adapted the scale to explore the experiences of discrimination and victimization for transgender and gender non-conforming individuals (Testa et al., 2014). The measure features nine scales: (1) gender-related discrimination, (2) gender-related rejection, (3) gender-related victimization, (4) non-affirmation of gender identity, (5) internalized transphobia, (6) negative expectations for future events, (7) non-disclosure, (8) community connectedness, and (9) pride. For this scale, internal reliability was shown with Cronbach's alpha scores for the subscales ranging from .61 to .93 (Testa et al., 2014). Items within each individual subscale were summed together to form subscale total scores. For the sake of the current study, the subscale of community connectedness and pride were not used. In the current study, Cronbach's alpha scores for the GMSR was as follows: gender-related discrimination ($\alpha = .77$), gender-related rejection ($\alpha = .76$), gender-related victimization ($\alpha = .79$), non-affirmation of gender identity ($\alpha = .89$), internalized transphobia ($\alpha = .87$), negative expectations for future events ($\alpha = .89$), non-disclosure ($\alpha = .86$), and total scale ($\alpha = .88$)

Multidimensional Scale of Perceived Social Support (MSPSS). The MSPSS was used to measure social support. This scale measures subjective levels of support using a 7-point Likert-

type scale (Zimet, Dahlem, Zimet, & Farley, 1988). The scale measures the quality of perceived support from friends (i.e., I can count on my friends when things go wrong), families (i.e., my family really tries to help me), and significant others (i.e., there is a special person who is around when I am in need). Zimet and colleagues reported Cronbach's alpha for the total scale (α = .88), along with each subscale of Significant Other (α = .91), Family (α = .87), and Friends (α = .85). The test developers also found the MSPSS was stable over time with test-retest analysis for the total scale of .85, as well as the subscales of Significant Other (.72), Family (.85), and Friends (.75). Zimet et al. (1988) reported construct validity. The scale was modified for the purpose of the current study to differentiate the "friend support" as support between heterosexual-cisgender friends and LGBTQ support. Each subscale was summed, as well as a total perceived social support total sum. For the current study, the Cronbach's alpha for social support is as follows: Family (α = .90), LGBTQ friends (α = .94), Heterosexual-cisgender friends (α = .91), Significant Other (α = .99), and total scale (α = .86).

Procedure

The survey was administered online through an internet-based testing platform. Participants were recruited through distribution of the survey link through three targeted sources: (a) list-servs, (b) organizations related to LGBTQ issues, and (c) social media (e.g., Facebook, Tumblr, and Reddit). As access to TGNC individuals can be challenging, this study used a chain-referral sample in order to survey TGNC college students about their experiences with minority stress, perceived social support, and levels of suicidality. Participants were asked to re-post or redistribute the post or survey to other individuals who may meet the criteria. Chain sampling has been validated as a means to access populations that otherwise may be difficult to sample (Atkinson & Flint, 2001).

Chapter IV: Results

In this chapter, the data analyses used to test the hypotheses will be discussed. To review, the current study was interested in examining the relationship between gender minority stress, suicidality, and the relationship of social support to the two variables. First, in this chapter, descriptive statistics of the sample are reported, as well as means and standard deviations on the variables of interest. Next, correlations between variables are reported, and finally, regression analyses are reported, testing each of the hypotheses.

Correlations

Pearson product-moment correlations were used to assess the relationship between social support, scores of gender minority stress (as measured by the GMSR), and suicidality (as measured by the SBQ-R). There was a significant relationship between total perceived social support and scores on the SBQ-R (r = -0.25, p < .01) and the GMSR (r = -0.25, p < .01). Findings by specific types of social support included that family support was significantly related to the SBQ-R (r = -0.37, p < .01) and the GMSR (r = -0.38, p < .01). Support from heterosexual-cisgender friends was also significantly correlated to the SBQ-R (r = -0.27, p < .01) and the GMSR (r = -0.25, p < .01). There was not a significant relationship between LGBTQ support and the SBQ-R (r = .00, p = .93) or the GMSR (r = .02, p = .79), nor between significant other support and the SBQ-R (r = -.02, p =.77) or the GMSR (r = -.04, p =.53). As perceived social support increased, specifically with family and heterosexual-cisgender support, scores on both the SBQ-R and the GMSR decreased. The same was not the case with perceived support from LGBTQ support or significant other support. There was a significant positive relationship between the SBQ-R and the GMSR (r = 0.47, p < .01), suggesting that as experiences of gender

minority stress increased, so did too scores of suicidality. Table 2 provides more information regarding correlations, mean scores, and standard deviations for each of the measures.

Table 2. *Correlations and Descriptive Statistics*

Variables	1	2	3	4	5	6	7
1. Family Support	-						
2. LGBTQ Support	.031	-					
3. Heterosexual-Cisgender Support	.176**	.280**	-				
4. Significant Other Support	.099	.321**	.189**	-			
5. Social Support Total	.517**	.589**	.586**	.758**	-		
6. SBQ-R	-.374**	.006	-.269**	-.020	-.245**	-	
7. GMSR	-.380**	.018	-.246**	-.043	-.248**	.470**	-
M	14.60	23.50	19.66	20.27	78.02	10.35	110.05
SD	6.45	5.14	5.36	9.04	16.36	2.71	23.33
Range	4-28	4-28	0-28	0-28	30-112	4-16	39-170

**p < .001

Hypothesis Testing

Consistent with recommendations by Cohen et al. (2014), predictors were mean centered before forming their interaction term. Preliminary analyses were conducted to examine distributional assumptions for regression analyses. A scatterplot of GMS against SBQ was plotted. Visual inspection of the scatterplot indicated a linear relationship between the variables. There was independence of residuals, as assessed by a Durbin-Watson statistic of 1.78. There was homoscedasticity, as assessed by visual inspection of a plot of residuals for the predicted values.

Each hypothesis was tested and results of the analyses follow:

Hypothesis 1: Social support will act as a moderator for the relationship between gender minority stress and suicidality.

The Baron and Kenny (1986) model of moderation was used for the current study. Based on the theory and assumptions outlined in Chapter 2, gender minority stress and social support were entered in the first step of the regression analysis. In the second step of the regression analysis, the interaction term between gender minority stress and social support was entered, and it did not explain a significant increase in variance of suicidality, $\Delta R^2 = .00$, $F(1, 213) = .03$, $p = .88$. Thus, social support was not a significant moderator of the relationship between gender minority stress and suicidality. Table 3 provides full details on the hierarchal regression model. Figure 1 demonstrates that those with greater experiences of gender minority stress were more likely to have greater experiences of suicidal ideation, regardless of levels of perceived social support.

Table 3. *Regression analyses predicting suicidality.*

Predictor	*B*	Beta	SE beta	Adjusted R^2	ΔR^2
Step 1					
Gender minority stress	0.43	0.44**	0.06	0.231	0.239**
Social support	-0.15	-0.14**	0.07		
Step 2					
Gender minority stress X Social support	0.01	0.01	0.06	0.228	.000

**p < .001

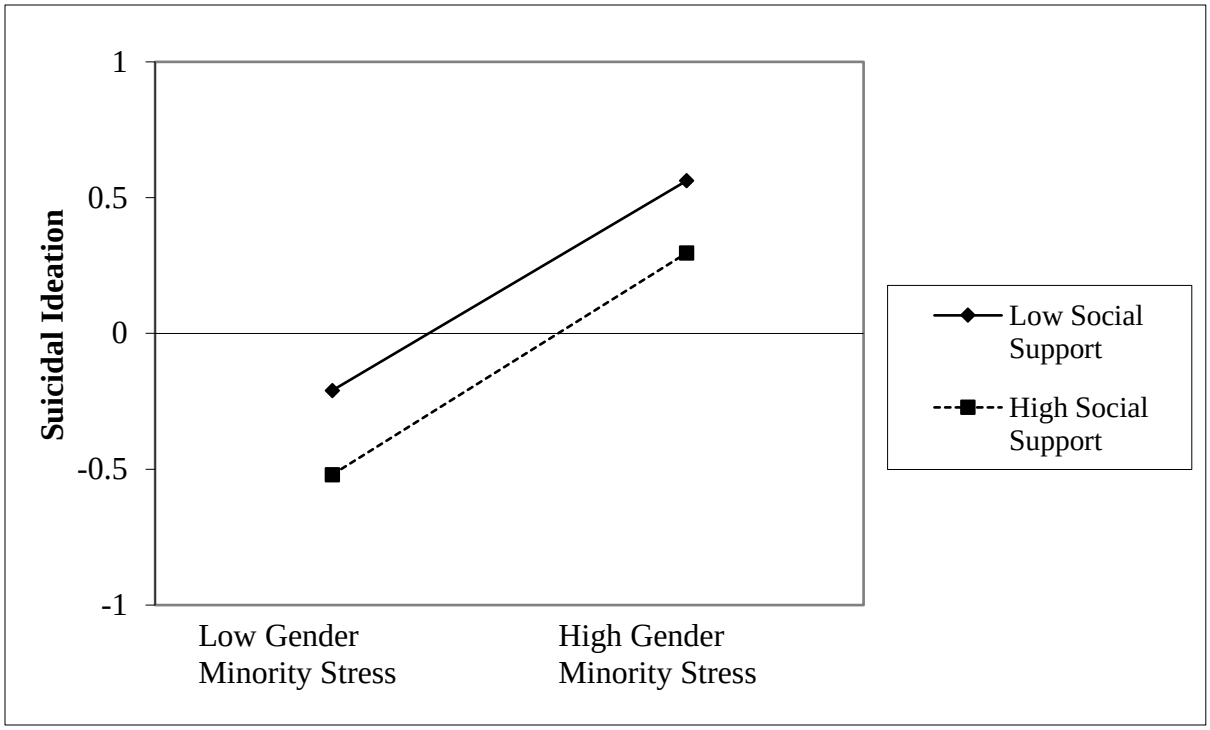

Figure 1. Demonstration of the relationship between gender minority stress, suicidality, and social support.

Hypothesis 2: Varying types of support vary on their predictive ability for suicidal ideation.

A forward method, stepwise multiple regression, was conducted to evaluate whether different types of social support (i.e., family, LGBTQ, heterosexual-cisgender, and significant other) could better predict suicidality. The model selection in a stepwise regression is driven by an automatic process based on the data instead of a model developed by previous theory or researchers (Aspelmeier & Pierce, 2009; Pope & Webster, 1972). As no previous research provided theory to guide which types of social support could best account for suicidality, stepwise regression offered an automatic process in determining the model selection. At step 1 of the analysis, family support entered into the regression equation and was significantly related to suicidality, $F(1, 215) = 34.89$, $p < .001$. The multiple correlation coefficient was 0.37, indicating

approximately 37% of the variance of suicidality could be accounted for by perceived family support. At step 2 of the analysis, heterosexual-cisgender support entered into the regression equation and accounted for an additional 4.3% (R^2 change = .043), which was statistically significant, $F(1, 214) = 11.22$, $p = .001$. The multiple correlation coefficient was 0.427, indicating approximately 43% of the variance of suicidality could be accounted for by the combination of perceived family and heterosexual-cisgender friend support. Neither LGBTQ support ($t = 1.28$, $p = .204$) nor significant other support ($t = 0.88$, $p = .383$) entered into the equation at step 3 of the analysis. Thus, findings reflect that neither LGBTQ support nor significant other support were able to significantly account for experiences of suicidality.

In summary, the study found a negative relationship between perceived social support and scores of suicidality and gender minority stress. As perceived social support increased, specifically with family and heterosexual-cisgender support, scores on both the SBQ-R and the GMSR decreased. There was also a significant positive relationship between the SBQ-R and the GMSR. As occurrences of gender minority stress increased, occurrences of suicidality also increased. Data was further analyzed using a multiple regression. While social support was not able to act as a moderator for the relationship between gender minority stress and suicidality, family and heterosexual-cisgender support were able to act as the strongest predictors of suicidality.

Chapter V: Discussion

In this chapter, the implications of the data analyses will be discussed. To review, the current study examined the relationship between gender minority stress and suicidality, and the ability of social support to act as a predictor of suicidality. First, correlations between variables are reported. Next, regression analyses are reported, testing each of the hypotheses.

Correlations demonstrated that support social support was negatively associated with both experiences of gender minority stress and suicidality. Furthermore, a positive and statistically significant relationship was found between gender minority stress and suicidality. These findings make sense and are congruent with the current body of literature. For example, Liu and Mustanskim (2012) and Nemoto et al. (2011) reported a significant negative relationship between social support and suicidality, similarly finding that as rates of social support increased, rates of suicidality decreased. Previous research also supports the findings of a positive relationship between gender minority stress and suicidality, and thus as experiences of gender minority stress increase, so too does the experience of suicidality (Baams et al., 2013; Goldblum et al., 2012). Prior to the current study, there was limited research demonstrating an existing relationship between gender minority stress and social support. However, similar to the current study, Boza and Perry (2014) reported a negative relationship between social support and gender-related victimization.

While the current study found support for the relationships between gender minority stress, suicidality, and social support similar to previous research by Nemoto, Bödeker, and Iwamoto (2011), support was not found for social support as a moderator for the relationship between gender minority stress and suicidal ideation. In the current model, social support did not account for a statistically significant portion of the relationship between gender minority stress

and suicidality. This lack of moderation differs from findings by Bockting et al. (2013), who found that support from peers was able to moderate the relationship between enacted stigma for their gender identity and psychological distress (e.g., depression, anxiety, and somatization). However, Bockting and colleagues found that it was necessary for participants to have high levels of peer support to have the protective factor against outcomes due to stigma. While Bockting and colleagues' study referred to stigma against gender minorities, their measurement of stigma was similar to the current study's measurement of gender minority stress as they measured occurrences of discrimination (e.g., being verbally or physically abused due to gender identity, job loss because of gender identity, inability to receive health care). It is clear that despite having support from family and peers, TGNC people may continue to face gender minority stress. For example, TGNC people continue to face stigma due to the ongoing debate over TGNC individuals' right to use the restroom that best fits with their gender identity. Herman (2013) found that 70% of participants reported experiencing one or more occasions of denial of access to a restroom, verbal harassment, or physical assault in Washington, DC. With these experiences of gender minority stress from the general population, individuals may continue to experience psychological distress, including suicidality. For this reason, the relationship between gender minority stress and suicidality may be moderated by the micro and macro aggressions that TGNC people face from individuals outside of their friends and family groups. In support of this idea, Hirsch and Barton (2011) found that experiencing negative social exchanges was a strong predictor of increased likelihood of suicidal behavior for college students. While the current study found social support to be a protective factor for suicidality, it may be that experiencing discrimination from strangers or acquaintances makes up a significant portion of gender minority stress. Thus, gender minority stress related to interactions with the

general population may account for a greater portion of experiences of suicidality than accounted for by family and friend support.

An additional research question was whether social support accounted for different levels of suicidal ideation. As was noted in earlier chapters, the current study is the only study known to researchers that has yet to examine different varieties of social support (i.e., friendships with heterosexual-cisgender people versus others within the LGBTQ community), and thus researchers did not have a theory of which type of social support would act as the strongest predictor. Examining by variety was intentional, as prior studies have found that TGNC individuals with family support perceive safer environments during the process of transitioning (Koken, Bimbi, & Parsons, 2009), higher levels of life satisfaction (Erich et al., 2008; Simons et al., 2013), and lower depressive symptoms (Simons et al., 2013). Findings of the current study evidenced that family and heterosexual-cisgender friend support were most predictive of suicidality. While this is not a cause-and-effect relationship, the findings suggest that support from family and heterosexual-cisgender friends are associated with decreased experiences of suicidality. These findings are consistent with the available, be it limited, research findings. In research by Galupo et al. (2014a), the researchers articulated the benefits and barriers to TGNC people's friendships with heterosexual-cisgender people, LGB people, and other TGNC individuals. Some of the benefits that Galupo and colleagues described may be able to shed light on the protective factor of heterosexual-cisgender friendships on experiences of suicidality, including TGNC participants feeling more "normal" with these friends and validation meant more from those with normalized identities. Developing friendships with those within the majority population may help TGNC people to feel more accepted into society as a whole. While it is important to help TGNC individuals form relationships with other LGBTQ people, the

current study suggests that it is especially important to develop relationships within family and heterosexual-cisgender friendships. It would be beneficial to continue growing awareness of the general population regarding gender identities that exists outside of the gender binary. Norton and Herek (2013) found that negative attitudes against transgender people were correlated with the belief in a gender binary, as well as a lack of contact with sexual minorities. As society can better understand the existence and experience of gender diverse people, TGNC individuals may be able to develop more secure relationships with family and hetero-cisgender supports.

Limitations

As with any research, there were limitations to the current study. Chain sampling was used to recruit participants, which could influence the data, as those who participated are individuals active online or within LGBTQ organizations. The study relies upon self-report for participants' experiences of gender minority stress and suicidality, and perceived social support. Participants' perceptions may differ from objective measurements of these experiences. The majority of the participants in this study were White and the experiences of ethnic minority trans individuals may be different than that of White trans individuals (Bradford, Reisner, Honnold, & Xavier, 2013; Garofalo et al., 2006), thus there is a need to increase the number of participants that represent varying demographic groups.

Additionally, the GMSR, while having reliable and valid analyses, is still a newly developed measure. As previously mentioned, ethnic TGNC individuals may face different experiences than their White counterparts. It would be beneficial to ensure that the GMSR has been normalized on TGNC people with varying demographic identities.

Finally, because researchers were interested in the college student population, it is possible that the selection bias influenced the results of the study. In addition, results may not be

generalizable to all TGNC community members. TGNC college students are likely to have resources that may be unavailable to those non-college students within the community. One such resource is that TGNC college students may have an easier time finding others of similar gender identities. By selecting TGNC college students, the study may have a sample of individuals who were able to more easily develop connections within the LGBTQ community and develop their own self-concept (Renn, 2007). This selection bias may have influenced LGBTQ community support's lack of meaningful association with gender minority stress or suicidality.

Future Research

Research regarding transgender and gender nonconforming people's experiences is still a relatively small area of study. It would be beneficial for future research to continue exploring and studying experiences TGNC people, specifically in regards to gender minority stress. For the purpose of this study, the two resiliency subscales (i.e., pride and community) of the GMSR were not used, but future research interested in a holistic view of transgender experiences should consider using the GMSR in its entirety. As this study found that family and heterosexual-cisgender support were related to suicidality, it may be helpful for future studies to explore factors that aid TGNC individuals to build these supports in their lives.

Conclusion

While the current study did not find that social support could act as a moderator for the relationship between experiences of gender minority stress and suicidality, the study did find social support to be a protective factor. Specifically, support from family and heterosexual-cisgender friends was found to be significantly related to lower scores of suicidality. This study was important, as it is one of the first to look at how support from different people in the lives of

TGNC individuals can have different predictive abilities for experiences of gender minority stress and suicidality.

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Appendix

Measures and Questions included in Survey

Instructions: We are interested in how you feel about the following statements. Read each statement carefully. Indicate how you feel about each statement.
Circle the "1" if you **Very Strongly Disagree**
Circle the "2" if you **Strongly Disagree**
Circle the "3" if you **Mildly Disagree**
Circle the "4" if you are **Neutral**
Circle the "5" if you **Mildly Agree**
Circle the "6" if you **Strongly Agree**
Circle the "7" if you **Very Strongly Agree**

Family support

1. My family really tries to help me.	1	2	3	4	5	6	7
2. I get the emotional help and support I need from my family.	1	2	3	4	5	6	7
3. I can talk about my problems with my family.	1	2	3	4	5	6	7
4. My family is willing to help me make decisions.	1	2	3	4	5	6	7

LGBTQ support

1. I can count on my LGBTQ friends when things go wrong.	1	2	3	4	5	6	7
2. My LGBTQ friends really try to help me.	1	2	3	4	5	6	7
3. I have LGBTQ friends with whom I can share my joys and sorrows.	1	2	3	4	5	6	7

4. I can talk about my problems with my LGBTQ friends.	1	2	3	4	5	6	7

Cisgender, heterosexual support

1. My cisgender, heterosexual friends really try to help me.	1	2	3	4	5	6	7
2. I have cisgender, heterosexual friends with whom I can share my joys and sorrows.	1	2	3	4	5	6	7
3. I can count on my cisgender, heterosexual friends when things go wrong.	1	2	3	4	5	6	7
4. I can talk about my problems with my cisgender, heterosexual friends.	1	2	3	4	5	6	7

Significant other support

1. There is a special person who is around when I am in need.	1	2	3	4	5	6	7
2. There is a special person with whom I can share my joys and sorrows.	1	2	3	4	5	6	7
3. I have a special person who is a real source of comfort to me.	1	2	3	4	5	6	7
4. There is a special person in my life who cares about my feelings.	1	2	3	4	5	6	7

Instructions: Please choose the statement or phrase that best applies to you.

1. Have you ever thought about or attempted to kill yourself?

1 = Never

2 = It was just a brief passing thought

3a = I have had a plan at least once to kill myself but did not try to do it
3b = I have had a plan at least once to kill myself and really wanted to die

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4a = I have attempted to kill myself, but did not want to die
4b = I have attempted to kill myself, and really hoped to die

2. How often have you thought about killing yourself in the past year?
   1 Never
   2 Rarely (1 time)
   3 Sometimes (2 times)
   4 Often (3-4 times)
   5 Very Often (5 or more times)

3. Have you ever told someone that you were going to commit suicide, or that you might do it?

   1 = No

   2a = Yes, at one time, but did not really want to die
   2b = Yes, at one time, and really wanted to do it

   3a = Yes, more than once, but did not want to do it
   3b = Yes, more than once, and really wanted to do it

4. How likely is it that you will attempt suicide someday?

   0 = Never
   1 = No chance at all
   2 = Rather Unlikely
   3 = Unlikely
   4 = Likely

5 = Rather Likely
6 = Very Likely

Instructions
Gender-related discrimination, rejection, and victimization items (first 17 items). Please check all that apply (for example, you may check both *after age 18* and *in the past year* columns if both are true). In this survey gender expression means how masculine/feminine/androgynous one appears to the world based on many factors such as mannerisms, dress, personality, etc.

All other items. Please indicate how much you agree with the following statements.

Gender-related discrimination
Response options: *Never*; *Yes, before age 18*; *Yes, after age 18*; *Yes, in the past year*
1. I have had difficulty getting medical or mental health treatment (transition-related or other) because of my gender identity or expression.
2. Because of my gender identity or expression, I have had difficulty finding a bathroom to use when I am out in public.
3. I have experienced difficulty getting identity documents that match my gender identity.
4. I have had difficulty finding housing or staying in housing because of my gender identity or expression.
5. I have had difficulty finding employment or keeping employment, or have been denied promotion because of my gender identity or expression.

Gender-related rejection
Response options: *Never*; *Yes, before age 18*; *Yes, after age 18*; *Yes, in the past year*
1. I have had difficulty finding a partner or have had a relationship end because of my gender identity or expression.
2. I have been rejected or made to feel unwelcome by a religious community because of my gender identity or expression.
3. I have been rejected by or made to feel unwelcome in my ethnic/racial community because of my gender identity or expression.
4. I have been rejected or distanced from friends because of my gender identity or expression.
5. I have been rejected at school or work because of my gender identity or expression.
6. I have been rejected or distanced from family because of my gender identity or expression.

Gender-related victimization
Response options: *Never*; *Yes, before age 18*; *Yes, after age 18*; *Yes, in the past year*
1. I have been verbally harassed or teased because of my gender identity or expression. (For example, being called “it”)
2. I have been threatened with being outed or blackmailed because of my gender identity or expression.
3. I have had my personal property damaged because of my gender identity or expression.
4. I have been threatened with physical harm because of my gender identity or expression.
5. I have been pushed, shoved, hit, or had something thrown at me because of my gender identity or expression.

6. I have had sexual contact with someone against my will because of my gender identity or expression.

Non-affirmation of gender identity
Response options: 5-point scale from *strongly disagree* to *strongly agree*
1. I have to repeatedly explain my gender identity to people or correct the pronouns people use.
2. I have difficulty being perceived as my gender.
3. I have to work hard for people to see my gender accurately.
4. I have to be "hypermasculine" or "hyperfeminine" in order for people to accept my gender.
5. People don't respect my gender identity because of my appearance or body.
6. People don't understand me because they don't see my gender as I do.

Internalized transphobia
Response options: 5-point scale from *strongly disagree* to *strongly agree*
1. I resent my gender identity or expression.
2. My gender identity or expression makes me feel like a freak.
3. When I think of my gender identity or expression, I feel depressed.
4. When I think about my gender identity or expression, I feel unhappy.
5. Because my gender identity or expression, I feel like an outcast.
6. I often ask myself: Why can't my gender identity or expression just be normal?
7. I feel that my gender identity or expression is embarrassing.
8. I envy people who do not have a gender identity or expression like mine.

Question to determine appropriate wording for items regarding negative expectations for the future and nondisclosure: Do you currently live in your affirmed gender all or almost all of the time? (Your affirmed gender is the one you see as accurate for yourself.)
Response options: *Yes, I live in my affirmed gender most or all of the time*; *No, I don't live in my affirmed gender most or all of the time*
If *yes*: use "history" in items below. If *no*: use "identity" in items below.

Negative expectations for the future
Response options: 5-point scale from *strongly disagree* to *strongly agree*
1. If I express my gender IDENTITY/HISTORY, others wouldn't accept me.
2. If I express my gender IDENTITY/HISTORY, employers would not hire me.
3. If I express my gender IDENTITY/HISTORY, people would think I am mentally ill or "crazy."
4. If I express my gender IDENTITY/HISTORY, people would think I am disgusting or sinful.
5. If I express my gender IDENTITY/HISTORY, most people would think less of me.
6. If I express my gender IDENTITY/HISTORY, most people would look down on me.
7. If I express my gender IDENTITY/HISTORY, I could be a victim of crime or violence.
8. If I express my gender IDENTITY/HISTORY, I could be arrested or harassed by police.
9. If I express my gender IDENTITY/HISTORY, I could be denied good medical care.

Nondisclosure
Response options: 5-point scale from *strongly disagree* to *strongly agree*

1. Because I don't want others to know my gender IDENTITY/HISTORY, I don't talk about certain experiences from my past or change parts of what I will tell people.
2. Because I don't want others to know my gender IDENTITY/HISTORY, I modify my way of speaking.
3. Because I don't want others to know my gender IDENTITY/HISTORY, I pay special attention to the way I dress or groom myself.
4. Because I don't want others to know my gender IDENTITY/HISTORY, I avoid exposing my body, such as wearing a bathing suit or nudity in locker rooms.
5. Because I don't want others to know my gender IDENTITY/HISTORY, I change the way I walk, gesture, sit, or stand.

Demographics:

What is your age?

What year are you in college?

- Freshman
- Sophomore
- Junior
- Senior
- Other (Specify)

What is your gender identity?

- Trans man
- Cisgender man
- Trans woman
- Cisgender woman
- Genderqueer/Androgynous
- Other (Specify)

Please describe your gender transition. _____

Are you currently or have you considered using gender affirmation surgery/surgeries to transition?

Yes, I already have
Yes, I would like to in the future
No
Other (Specify)

Are you currently or have you considered using hormones to transition?
Yes, I already am
Yes, I would like to in the future
No
Other (Specify)

How would you describe your race?

- American Indian or Alaskan Native
- Asian
- Black or African American
- Native Hawaiian or Pacific Islander
- White
- Spanish
- Hispanic
- Latino
- More than one race/ethnicity
- Other (specify)

How would you describe your sexual orientation?

- Heterosexual
- Lesbian
- Gay
- Bisexual
- Other (specify)