

MINORITY STRESS, RISKY BEHAVIORS, AND SEXUAL SCRIPTING AMONG  
TRANSGENDER COLLEGE STUDENTS: A MIXED METHODS STUDY

by

Melissa Decker

July, 2019

Director of Dissertation: Dr. Heather L. Littleton

Major Department: Psychology

Despite more transgender and gender nonconforming students entering college, little is known about their minority stress and resilience experiences or about how minority stress and resilience factors influence their sexual scripts. Using the gender minority stress and resilience model (GMSR; Testa et al., 2015) and sexual script theory (Simon & Gagnon, 1986), the present study examined the influence of minority stress and resilience on the wellbeing and sexual scripts of an undergraduate transgender and gender nonconforming sample. GMSR theory posits that both distal (gender-based victimization, rejection, and discrimination, and identity nonaffirmation) and proximal (internalized transphobia and identity concealment) minority stress adversely affect the mental and physical health of gender minority individuals, while resilience (pride and community connectedness) factors buffer against this stress. Sexual script theory suggests that cultural norms inform sexual behaviors, attitudes, and expectations, which individuals adapt to fit their own interpersonal experiences (Simon & Gagnon, 1986).

Recruitment took place primarily via paid advertisements on social media. The effects of gender minority stress and resilience on psychological outcomes (depression, anxiety, and posttraumatic stress disorder) and health risk behaviors (alcohol and other substance abuse and risky sex) of 265 transgender and gender nonconforming undergraduates were examined.

Additionally, sexual scripts provided by a subsample of 169 participants were analyzed. Results supported that minority stress predicted anxiety and depression. Distal stress predicted posttraumatic stress disorder, and proximal stress predicted hazardous alcohol use and sex with uncommitted partners. Minority stress failed to predict probable drug abuse and impulsive sex, altogether. Though resilience factors offered little buffer, when pride was low internalized transphobia had a stronger relationship with depressive symptoms. Sexual script themes resembled the types of sexual relationships found within the cisgender, heterosexual undergraduate population: ongoing romantic, negotiated one-time casual encounter, unplanned one-time casual encounter, and repeated casual encounter. Themes also diverged from those of cisgender peers in terms of gender roles within the sexual context and in a focus on gender-related stigma (e.g., concealment, expected rejection, etc.) and resilience factors, including sexual communication and negotiation, as well as acceptance within a nontraditional sex community or romantic partnership.

Clinicians working with this population should strongly consider the role minority stress plays in depression and anxiety. Further, as a number of participants met sexual partners through online advertising, sex education programming should address online safety and STI prevention. More generally, gender minority inclusive policies and transgender specific spaces on campus could help reduce stigma. Future research should continue exploring what minority stress and resilience factors most strongly affect the health and wellbeing of transgender and gender nonconforming undergraduates. Further, researchers may want to investigate how minority stress and resilience factors differentially affect transgender subgroups. Finally, work examining the impact of minority stress and resilience on adjustment and health risk behaviors over time among transgender and gender nonconforming undergraduates is imperative.



MINORITY STRESS, RISKY BEHAVIORS, AND SEXUAL SCRIPTING AMONG  
TRANSGENDER COLLEGE STUDENTS: A MIXED METHODS STUDY

A Dissertation

Presented to The Faculty of the Department of Psychology

East Carolina University

In Partial Fulfillment of the Requirements for the Degree

Doctor of Philosophy in Health Psychology

by

Melissa Decker

July, 2019

© Melissa Decker, 2019

MINORITY STRESS, RISKY BEHAVIORS, AND SEXUAL SCRIPTING AMONG  
TRANSGENDER COLLEGE STUDENTS: A MIXED METHODS STUDY

by

Melissa Decker

APPROVED BY:

DIRECTOR OF  
DISSERTATION:

---

(Heather L. Littleton, Ph.D.)

COMMITTEE MEMBER:

---

(Lisa Campbell, Ph.D.)

COMMITTEE MEMBER:

---

(Rob Carels, Ph.D.)

COMMITTEE MEMBER:

---

(Tony Cellucci, Ph.D., ABPP)

COMMITTEE MEMBER:

---

(Brandon Kyle, Ph.D.)

CHAIR OF THE DEPARTMENT  
OF PSYCHOLOGY:

---

(Erik Everhart, Ph.D.)

DEAN OF THE  
GRADUATE SCHOOL:

---

(Paul J. Gemperline, Ph.D.)

## ACKNOWLEDGEMENTS

This project would not have been possible without the support of many others. I would first like to acknowledge all the transgender and gender nonconforming undergraduates who had the courage to disclose their experiences and insights on my survey. Furthermore, I would like to thank all those on social media who willingly shared posts about the project. Facebook deserves recognition for the advertising they gifted me, and I am extremely grateful for the incentives for participation my dissertation chair Dr. Heather Littleton donated. Both Emily Downs and Hannah Tulburt proved pivotal in the qualitative analysis of the script data, and I am particularly thankful for their hours of coding assistance. Moreover, I am grateful to Chelsey Solar and Dr. Christine Jehu at the ECU Counseling Center for making arrangements for me to share my findings with the Transgender Support Group.

I cannot thank enough the faculty who have served on my committee, including Drs. Campbell, Carels, Cellucci, Ford, Kyle, and McCammon. Each has shown excitement for the project and provided ongoing input that has undeniably strengthened my skills as a researcher and improved upon this study. These individuals have invested heavily in both my professional and personal growth. Above all, Dr. Littleton deserves my gratitude, as she has not only guided me through the dissertation process, but also has served as my mentor for the past five years. At this point, no one knows my work or motivational style more intimately than her.

On a final note, I would like to thank my previous mentors, “Dissertation Thursday” group, friends, and family for their continual encouragement and support. My path certainly has not been a direct one, and I am grateful to every one of them for having helped me find my way. Lastly and most importantly, I want to thank my wife Grace, who has chosen to see this journey through with me and enriched my life in ways that words will always fail to capture.

## TABLE OF CONTENTS

ACKNOWLEDGMENTS.....	iv
LIST OF TABLES.....	viii
CHAPTER I: LITERATURE REVIEW.....	1
The Growth of Gender Nonconformity among Emerging Adults.....	1
Gender Dysphoria in Childhood and Adolescence.....	3
Gender Nonconforming Individuals' Adjustment to College.....	8
Transgender Individuals' Adjustment and Mental Health.....	11
Mental Health and Substance Abuse among Transgender College Students.....	13
Minority Stress Theory.....	14
Unified Sexual Stigma Conceptual Framework.....	15
The Role of Violence and Discrimination.....	17
Individual experiences of violence.....	18
Structural stigma issues.....	21
Protective Factors.....	25
Gender Minority Stress and Resilience Model.....	26
The Larger Picture of Compromised Sexual Health.....	30
Sexual Script Theory.....	33
Summary and Limitations in the Literature.....	38
Purpose of the Current Study.....	39
CHAPTER II: METHODS.....	41
Participants.....	41
Procedures.....	42

Measures.....	43
Demographics.....	43
Outness.....	43
Minority stress.....	44
Substance use.....	46
Risky sex.....	47
Psychological distress.....	48
Sexual scripts.....	49
Specific Aims and Hypotheses.....	50
Missing Data.....	54
CHAPTER III: RESULTS.....	56
Demographics.....	56
Outness and Gender Affirming Actions Taken .....	58
Descriptives of Study Variables.....	59
Aim 1: Applicability of Gender Minority Stress and Resilience Model.....	63
Aims 2 and 3: Sexual Scripts.....	80
Nature of sexual relationships.....	84
Gender stigma, trauma, and dysphoria.....	87
Open communication, gender identity disclosure, and participation in a nontraditional sex community.....	92
CHAPTER IV: DISCUSSION.....	97
Sample Characteristics Compared to Previous Studies.....	98

The Impact of Gender Minority Stress on Psychological Health and Health Risk Behaviors.....	101
The Impact of Resilience on the Effects of Minority Stress.....	104
The Influence of Minority Stress and Resilience on Sexual Scripting.....	106
Comparing the Sexual Scripts of Cisgender Heterosexual Undergraduates to Transgender and Gender Nonconforming Undergraduates.....	110
Limitations.....	114
Future Directions.....	117
Implications.....	118
REFERENCES.....	125
APPENDIX A: IRB APPROVAL.....	138
APPENDIX B: FACEBOOK STUDY ADVERTISEMENT.....	139
APPENDIX C: APPEAL TO ADVERTISE.....	140
APPENDIX D: PAGES ADVERTISING THE STUDY.....	141
APPENDIX E: INFORMED CONSENT.....	143
APPENDIX F: DEMOGRAPHICS.....	146
APPENDIX G: SEXUAL SCRIPT FOLLOW-UP PROMPTS.....	148
APPENDIX H: SEXUAL RISK SURVEY RECODING.....	149

## LIST OF TABLES

1. Participant Demographics.....	56
2. Gender Affirming Actions Taken.....	58
3. Outness Inventory.....	59
4. Descriptive Statistics of Continuous GMSR Variables.....	61
5. Descriptive Statistics of Continuous Outcome Variables.....	61
6. Correlations among Measures.....	62
7. Descriptive Statistics of Categorical Variables.....	63
8. Minority Stress as a Predictor of Depression and Anxiety Symptoms.....	64
9. Minority Stress as a Predictor of Probable PTSD.....	65
10. Minority Stress as a Predictor of Hazardous Alcohol Use.....	66
11. Minority Stress as a Predictor of Probable Drug Abuse.....	67
12. Minority Stress as a Predictor of Risky Sex.....	67
13. Minority Stress and Resilience Interactions as Predictors of Depression and Anxiety Symptoms.....	70
14. Minority Stress and Resilience Interactions as Predictors of Probable PTSD.....	72
15. Minority Stress and Resilience Interactions as Predictors of Hazardous Alcohol Use...	74
16. Minority Stress and Resilience Interactions as Predictors of Probable Drug Abuse.....	75
17. Minority Stress and Resilience Interactions as Predictors of Risky Sex.....	78
18. Simple Slopes of Internalized Transphobia and Pride Interaction as a Predictor of Depressive Symptoms.....	79
19. Sexual Script Themes.....	83

## **CHAPTER I: LITERATURE REVIEW**

### **The Growth of Gender Nonconformity among Emerging Adults**

Recent work suggests that more college students than ever identify as transgender, gender nonconforming, and in genderfluid terms (Beemyn, Curtis, Davis, & Tubbs, 2005; Bilodeau & Renn, 2005; Bockting, 2008). Though the overall rates remain small across campuses, ranging between 0.2 and 1.5% of all undergraduate students (e.g., Cantor et al., 2015; Oswalt & Lederer 2017; Rankin & Beeman, 2012), this growth is occurring nationally. In fact, the first large-scale study of transgender and gender nonconforming people in the United States, which included a survey of 3,500 individuals as well as an interview of 400 participants, demonstrated that defining gender in nontraditional ways is becoming more common amongst emerging adults, including those in college (Rankin & Beemyn, 2012). Emerging adults in the study defined gender using over a hundred variant terms—as well as at times rejecting labels altogether and describing gender identity in percentages of male, female, and otherwise. Campus climate surveys additionally have begun separating these gender minority students into their own demographic, legitimatizing their existence as a group separate from sexual minorities. For example, a study of LGBTQ (lesbian, gay, bisexual, transgender, questioning) undergraduates found almost 9% of these sexual and gender minority students identified as genderqueer, transman/transwoman, or some other nonbinary gender (Edwards & Sylaska, 2013). This may reflect a larger societal shift toward the acceptance of gender nonconformity, as the transgender community is becoming more visible. Indeed, in 2015, the United States Transgender Survey (USTS) had almost four times the number of participants as in 2008 (James et al., 2016). Additionally, 50 to 80% reported being out and supported by family, coworkers, and peers (James et al., 2016).

Most of what is currently known about transgender individuals is not specific to college students nor the growing population of emerging and young adults who adopt gender nonconforming identities. Instead, research on the transgender community has historically been couched within the broader context of studies on LGBTQ populations, resulting in the experiences of gender nonconforming individuals being overshadowed by gay men and lesbian women as well as other sexual minorities (Moradi et al., 2016). Alternatively, when studies have focused exclusively on transgender issues researchers have primarily targeted subsets of the population, such as sex workers or individuals who have completed full gender affirming surgery, who represent only a small fraction of those who identify as gender nonconforming (Graham et al., 2011). In consequence, transgender and gender nonconforming college students currently remain understudied.

Despite the national growth of the transgender community, especially among emerging and young adults, terms associated with gender nonconformity may remain unclear to those personally unfamiliar with individuals who identify in this way, especially as gender terms are becoming more expansive. To clarify, gender identity signifies a person's sense of masculinity, femininity, or the balance or rejection of both of these (Trans Student Educational Resources [TSER], 2017). By definition, transgender is an umbrella term used for anyone who does not identify exclusively as cisgender, which refers to gender identity congruence with the gender designated by biological sex at birth (Bornstein, 1994; Lombardi & Davis, 2006; TSER, 2017). However, a gender nonconforming person may not necessarily identify as transgender (TSER, 2017). They may instead identify using such terms as genderqueer or agender, which absolves them from prescribing to the traditional binary categories of male and female (Lombardi & Davis, 2006; TSER, 2017). Regardless of whether a person identifies as transgender or

cisgender, their gender expression, sexual orientation, hormonal makeup, physical anatomy, social expectations, or how others may perceive them remain independent of these factors (Beemyn et al., 2005; TSER, 2017). Gender expression refers exclusively to the use of physical indicators, like clothing, hairstyle, makeup, and physical contouring to represent gender identity (TSER, 2017). To complicate things, though considered separate, labels for gender and sexuality sometimes overlap. For instance, both marginalized gender identities and sexual minorities have reclaimed the slur “queer” and may identify this way (TSER, 2017).

### **Gender Dysphoria in Childhood and Adolescence**

Gender dysphoria, or experiencing discomfort with one’s assigned gender, is an experience common among children who later identify as gender nonconforming adolescents and adults (Rankin & Beemyn, 2012), and it is considered a diagnosable mental illness so long as the distress is significant enough to impair daily functioning (American Psychiatric Association [APA], 2013). Not all children who experience gender dysphoria identify as transgender upon entering adulthood. In fact, gender dysphoria often resolves as a child moves into puberty, and those individuals who experience greater discomfort during adolescence are the most likely to continue to identify as gender nonconforming later on (Coleman et al., 2012). Notably, the majority of boys who exhibit gender dysphoria in childhood eventually classify themselves as homosexual, but maintain cisgender identities (Coleman et al., 2012). This being noted, empirical support exists for the idea that the more gender nonconforming children are, the more prone they are to adopt a gender nonconforming identity as an adult (Coleman et al., 2012; Lawrence, 2010). However, it is also the case that not all gender nonconforming adolescents and adults engaged in gender nonconforming behaviors as children or experienced gender dysphoria in childhood (Coleman et al., 2012).

Rankin and Beemyn (2012) suggest that there are eight milestones gender nonconforming individuals most frequently share. The first is having a general sense of differentness from others. The second involves seeking opportunities to distinguish themselves from the gender they were assigned at birth. Third, these individuals limit, suppress, or hide their identities when faced with aggression and exclusion by others. Fourth, these individuals commonly mislabel or misunderstand their true identities early on. Fifth, they come to learn about gender nonconformity from others they meet who identify in nontraditional ways. Sixth, in time, they come to adjust their outward appearances to better fit with their internal images. Seventh, they create new relationships with loved ones and associates. Lastly, they develop a sense of wholeness within a gendered society.

While in the past gender nonconformity was less visible, today there are more gender nonconforming role models and additional language to guide individuals toward the adoption of a gender nonconforming identity (Rankin & Beemyn, 2012). For example, a transgender individual assigned female at birth who grew up prior to the 1980s may have chosen a “butch” lesbian identity, whereas today, the same individual could choose to identify as a transgender man, genderqueer individual, agender, or by a variety of other gender identities. Accordingly, most transgender and gender nonconforming individuals now recognize discomfort with their assigned gender by the age of 6, and almost all (97%) realize they do not fit their assigned gender by the age of 20 (Rankin & Beemyn, 2012). Though this recognition of gender dysphoria becomes widely apparent to most individuals from a young age, biological sex appears to determine how intense gender dysphoric children and young people feel the need to repress nonconforming behaviors. While transmen may be able to openly pass as tomboys throughout childhood, biological boys who later identify as gender nonconforming often find they must hide

their more feminine impulses to avoid abuse or discipline from their parents or caregivers (Rankin & Beemyn, 2012).

If sent for “curative” treatment, gender dysphoric children experience increased feelings of guilt and psychological dysfunction (Coleman et al., 2012; Rankin & Beemyn, 2012).

Oppositely, those children who are given the opportunity to express themselves as their identified gender in a supportive environment seem to blend in with cisgender peers. In fact, a study comparing the gender cognitions of 32 transgender children ages 5 to 12 to age-matched cisgender children recently debunked concerns that children who identify differently than their assigned gender are confused or developmentally delayed in some way (Olson, Key, & Eaton, 2015). Both on implicit bias tests and self-report measures, transgender children who are recognized socially by others as their identified gender and express themselves outwardly in congruence with their identified gender are statistically indistinguishable from cisgender children who share the same gender expression (Olson et al., 2015). Interestingly, these transgender children also deviate significantly from cisgender children of the same biological sex on the same measures, demonstrating transgender children are cognitively more similar to children of their shared gender expression than children of their shared natal sex.

A variety of intervention options are now available to treat gender dysphoria in children and adolescents. *The Standards of Care for the Health of Transsexual, Transgender, and Gender-Nonconforming People* (Coleman et al., 2012), which is currently in its seventh version, outlines best clinical practices for these interventions. The interventions vary in reversibility, so those that are fully reversible (meaning they result in no permanent change once discontinued) are preferred and generally recommended for the youngest transgender individuals. Additionally, according to the standards, it is considered best practice that individuals with gender dysphoria,

no matter what age and individual plan, proceed through transition in stages, allowing for significant time to adjust to each stage before moving on to subsequent stages (Coleman et al., 2012).

Though transition can occur in multiple forms, to transition means to begin the process of living as a gender other than that assigned at birth, or in other words, to assume a gender expression that is congruent with one's gender identity (Beemyn et al., 2005; TSER, 2017). Individuals may choose to transition socially, medically, and legally (Coleman et al., 2012). Social transition can include activities such as dressing as the identified gender, adopting a new role as the identified gender, or requesting others refer to oneself by chosen pronouns (e.g., he, she, they, ze, etc.) and names (Coleman et al., 2012). As children reach puberty and move into adolescence, several secondary sex characteristics appear, which complicate the ability of transgender individuals to pass, or blend well with cisgender individuals of the expressed gender. For example, during puberty, biologically born girls' breasts enlarge and biologically born boys develop facial hair, which occur among other noticeable physical changes. Thus, once transgender individuals move into adolescence, they may choose to make temporary physical adjustments which minimize these secondary sex characteristics, such as practicing voice therapy, binding or padding the chest to achieve the desired body shape, and engaging in genital packing or tucking (Coleman et al., 2012). Some adolescent and adult individuals may also seek longer lasting medical interventions to more permanently express their felt gender identity (e.g., electrolysis, cosmetic surgery). In addition, they may choose to pursue changing legal documentation to reflect their felt gender identity (i.e., name and identified gender; Coleman et al., 2012).

Prepubescent children diagnosed with gender dysphoria may experiment with gender role change with the support of their parents or caregivers by initially living socially as the preferred gender (Coleman et al., 2012). The World Professional Association for Transgender Health (WPATH) stresses that it is particularly important for children to understand at this stage that transition need not be permanent (Coleman et al., 2012). This can mean using different pronouns or a different name, dressing the child and cutting the child's hair in a style popular for the identified gender, and informing other people in the child's life of the transition so that safety may be maintained. For instance, making arrangements with the school for the child to use the restroom of preference, participate in sports, and be referred to by teachers and school staff with the chosen name and correct pronouns can provide for a more supportive environment for the child. Only as puberty onsets and secondary sex characteristics begin to develop do medical interventions arise as serious considerations for gender dysphoric youth (Coleman et al., 2012).

Although the suggestion remains that youth first live socially as the identified gender, additional and more permanent interventions become available to gender dysphoric adolescents (Coleman et al., 2012). Once a child enters Tanner Stage 2 (i.e., enlargement of scrotum and testes for boys and development of breast buds for girls), GnRH analogues, or "puberty blockers," may be introduced to suppress estrogen or testosterone production in the child and delay the physical changes that would naturally take place during puberty otherwise (Coleman et al., 2012). Such interventions are fully reversible, so that once the GnRH analogues are discontinued, puberty resumes. A second and partially reversible option for older adolescents is hormone therapy, which introduces hormones that either masculinize or feminize the body's physical characteristics (Coleman et al., 2012). These are partially reversible, in that while some physical characteristics (e.g., breast enlargement) may be reversed with surgical intervention,

others are irreversible (e.g., voice change). Finally, as individuals enter early adulthood, they may undergo permanent gender affirming surgical procedures to change primary or secondary sex characteristics (Coleman et al., 2012). In the case of genital surgery, specifically, the individual must have lived for at least one year as the identified gender and have reached the legal age of majority (Coleman et al., 2012). No matter what interventions are pursued, they prove extremely successful in mitigating gender dysphoria (Coleman et al., 2012). For example, between 87 and 97% of patients report satisfaction with gender affirming surgeries, and many consider hormone therapy essential to resolving feelings of gender dysphoria (Coleman et al., 2012).

### **Gender Nonconforming Individuals' Adjustment to College**

According to some scholars, transgender and other gender nonconforming adults move through their educational and professional lives similarly to their cisgender peers, but their personal lives, including marriage, community involvement, and social ties, are heavily influenced by culture (Graham et al., 2011). Furthermore, the stage of life at which a person comes out as a gender nonconforming individual is believed to affect the life course (Graham et al., 2011). Developmentally, transgender and gender nonconforming college students face the same milestones as their peers. However, they also face additional challenges specific to gender identity development, including transition-related choices, coming out, negotiating gendered environments, forming intimate relationships, and coping with ongoing discrimination and harassment (Goldberg, 2018; Gould, 2004 as cited in Beemyn et al., 2005).

Some individuals entering the college environment may have already begun the social and medical transition processes, going on puberty blockers as a young adolescent, beginning hormone therapy as an adolescent, and entering college with an interest in having gender

affirming surgery (Coleman et al., 2012). Other students may enter college and then begin exploring their gender identity (Goldberg, 2018). Those individuals who were raised in religious homes or in socially conservative communities, in particular, may not have felt safe experimenting with gender expression previously (Beemyn et al., 2005). Therefore, by leaving one's social ties, home, and family, college may provide the anonymity, comfort, and independence to do so (Beemyn et al., 2005; Goldberg, 2018). Moreover, depending upon the institution's campus climate, college may also provide a more liberal environment, offering the opportunity to surround oneself with trans-friendly peers (Beemyn et al., 2005). In other cases, students who before may have identified as a sexual minority (e.g., lesbian, gay, queer, poly) may come to realize that their original identities did not quite fit, and as they are surrounded by more diversity, they may feel it is more appropriate to also or instead identify by a transgender or genderqueer identity (Beemyn et al., 2005).

Even with growing numbers of emerging adults identifying as transgender and gender nonconforming today, young adults continue to lack adequate information on transgender health, access to a transgender supportive community, and healthy transgender role models (Catalano, 2015; Goldberg, 2018; Marine & Nicolazzo, 2014; Rankin & Beemyn, 2012). For example, Rankin and Beemyn (2012) found that though the majority of transgender emerging adults (69%) knew a person who is transgender, most did not until coming out. Therefore, the idea of coming out as transgender or gender nonconforming can lead to a fear of isolation and social rejection for some, thereby deterring them from doing so. Adding to this incentive to keep their true gender identity hidden is the fact that undergraduate institutions largely reinforce invisibility of their transgender and gender nonconforming communities by maintaining practices and policies that support traditional binary gender norms (Marine & Nicolazzo, 2014).

While transition and coming out remain personal decisions, certain factors, such as the interplay between biological sex characteristics and acceptance by others, can heavily influence these choices. Overall, more female to male (FTM) transgender individuals are “out” than male to female (MTF) individuals in college (Rankin & Beemyn, 2012). In fact, on some campuses, the difference is 10 to 1 (Rankin & Beemyn, 2012). Generally, MTF individuals who did not receive puberty blockers and hormone therapy in early adolescence face greater difficulties “passing” because of their physical features (e.g., thicker/darker body hair, deeper voice, larger hands), whereas FTM can enjoy greater autonomy as to whether or not they decide to come out (Rankin & Beemyn, 2012). Relatedly, while most FTM individuals believe genital surgery is unnecessary for them to achieve full masculinity, MTF individuals overwhelmingly desire the procedure to enhance femininity (Rankin & Beemyn, 2012). Regardless, transgender students face decisions about who to come out to and whether or not they want to in college (Rankin & Beemyn, 2012). Furthermore, those students who choose to express their gender identity do so in relation to how safe they feel and how much pressure they experience by their peers to conform to the expected pronouns, appearance and mannerisms of a certain gender identity (Catalano, 2015; Goldberg & Kuvalanka, 2018).

Indeed, Rankin and Beemyn (2012) found that those individuals who disclosed their transgender identity to others experienced significant strain in their relationships with family, friends, and coworkers because those with whom they had been close no longer felt as if they truly knew the transgender person. In effect, these transgender individuals were necessarily forced into forming new relationships in order to fulfill their need for affiliation and social support. For genderqueer and gender nonconforming individuals this proves particularly challenging, given they report less support from the sexual minority and transgender

communities than transgender individuals who are MTF or FTM (Catalano, 2015; Goldberg, 2018; Rankin & Beemyn, 2012). These individuals also report less happiness than post-transition MTF and FTM individuals (Rankin & Beemyn, 2012). Thus, the decisions to transition or come out as a transgender or gender nonconforming college student are nuanced and may result in additional stress, rather than relief from gender-related distress. Unfortunately, the stress that transgender and gender nonconforming individuals encounter seems to result in higher rates of poor adjustment and compromised mental health.

### **Transgender Individuals' Adjustment and Mental Health**

Overall, existing research strongly suggests that transgender individuals exhibit worse functioning and mental health compared to those who are cisgender. They experience poverty at more than twice the rate (29% vs. 14%) and unemployment at three times the rate (15% vs. 5%) of the general population, and almost one third of transgender adults (30%) experience homelessness at some point during their lifetimes (James et al., 2016). Being a person of color or having a disability compounds these poor outcomes. For instance, the unemployment rate for transgender adults with a disability is 19% higher than the general population and 9% higher than transgender adults without a disability (James et al., 2016). One sample of 402 transgender adults partially explained these high rates of employment instability, in that 37% of the participants reported experiencing employment discrimination (Lombardi, Wilchins, Priesing, & Malouf, 2001). Given that unemployment remains common among these adults, 20% turn to illegal activity (e.g., selling drugs, sex work) for income, which may explain the more extensive coverage of transgender sex workers in research (James et al., 2016).

Though some studies using convenience sampling suggest transgender individuals are well-adjusted psychologically (Graham et al., 2011), the bulk of evidence weighs heavily in the

opposite direction (e.g., Coleman et al., 2012; Graham et al., 2011; James et al., 2016). Graham and colleagues (2011) explain that negative mental health outcomes amongst this community are suggested, but the extant literature lacks adequate nonprobability sampling and direct comparison to cisgender peers. According to the USTS, 39% of transgender adults reported some psychological distress during the past month (James et al., 2016), and smaller urban young adult samples appear to reflect this as well (e.g., Nuttbrock et al., 2010; Reisner, Biello et al., 2016). One community-recruited sample of 298 transgender women (ages 16-29) in Chicago and Boston found 41.5% of participants had at least one mental health or substance dependence diagnosis, and just over 20% had two or more mental health diagnoses (Reisner, Biello et al., 2016). Comparatively, the national rate of experiencing serious psychological distress during the past month is 5% (James et al., 2016).

The most prevalent psychiatric disorders among transgender adolescents and young adults include major depression, followed by substance dependence, alcohol dependence, posttraumatic stress disorder, generalized anxiety disorder, oppositional defiant disorder, and autism spectrum disorder (Coleman et al., 2012; Reisner, Biello et al., 2016). When directly compared to cisgender youth, transgender middle and high schoolers have been two to three times more likely to have used cocaine or methamphetamines at least once, to report past month inhalant or prescription pain medication use, and to use cigarettes in school (De Pedro, Gilreath, Jackson, & Esqueda, 2017), demonstrating that even before a dependency may develop, transgender students are on a riskier trajectory for poorer adjustment and substance misuse. Despite the literature on mood and anxiety disorders remaining limited, extant research supports notably high rates of depression and suicidality among young adults who are transgender (Graham et al., 2011; Grossman, Park, & Russell, 2016). Lifetime depression prevalence rates

gathered across a number of large cities range from 35% to 62% for young transgender adults, with greater endorsement by transwomen than transmen (Clements-Nolle, Marx, Guzman, & Katz, 2001; Nuttbrock et al., 2010; Reisner Biello et al., 2016). Additionally, rates of lifetime suicidal ideation range from 33% to 53% (Bockting, Huang, Ding, Robinson, & Rosser, 2005; Grossman et al., 2016; Nuttbrock et al., 2010; Xavier, Bobbin, Singer, & Budd, 2005), while suicide attempts are reported by 24% to 40% (Bockting et al., 2005; Grossman et al., 2016; James et al., 2016; Kenagy, 2005, Nuttbrock et al., 2010). In comparison, the overall national rate of a lifetime suicide attempt is 4.6% (James et al., 2016). Perhaps not surprising, both a sizable portion of transmen (36%) and transwomen (60% - 79%) directly attribute their suicidality to gender-related issues (Kenagy, 2005; Xavier et al., 2005). Moreover, according to one meta-analysis of 29 studies on transgender individuals, almost 44% of participants desired mental health counseling to address their gender concerns (Herbst et al., 2008).

### **Mental Health and Substance Abuse among Transgender College Students**

Similar to the data on the young adult transgender population more broadly, research on transgender and gender nonconforming college students suggests that they exhibit worse mental health than their cisgender peers. For instance, these college students face twice the risk of developing a diagnosable mental illness such as depression or anxiety compared to cisgender female students and more than twice the risk compared to cisgender male students (Oswalt & Lederer, 2017). They also report higher rates of suicidal thoughts (Swanbrow Becker et al., 2017) and feeling depressed almost five times as frequently as a national sample (47.2% vs. 9.5%; Stolzenberg & Hughes, 2017). One study of over 500 transgender undergraduates examining the mental health needs of this population presented markedly high rates of both diagnosed (58%) and undiagnosed (27%) mental health difficulties, including illnesses related to

depression (68%), anxiety (67%), attention deficit hyperactivity disorder (4%), disordered eating (4%), and disordered personality (4%; Goldberg, Kuvalanka, Budge, Benz, & Smith, 2019).

Additionally, though transgender and gender nonconforming students are no more likely to engage in heavy episodic drinking than female students and are actually less likely to do so than male students, those transgender students who do engage in heavy episodic drinking do so more frequently than both male and female peers (Coulter et al., 2015). Unfortunately, consuming alcohol as a transgender and gender nonconforming student amplifies potential negative consequences. Notably, transgender and gender nonconforming college students face a higher risk of sexual assault after drinking compared to cisgender students (Coulter et al., 2015). Moreover, those transgender and gender nonconforming students who drink alcohol are more likely to endorse suicidal ideation (Coulter et al., 2015). Altogether, gender nonconforming undergraduates face higher risks of experiencing psychological dysfunction and personal harm when drinking than their cisgender peers.

In sum, the research supports that transgender individuals face worse adjustment and mental health outcomes than cisgender individuals. These outcomes range from higher reports of unemployment and homelessness to mental illness and suicidality and more problematic substance use. In understanding how these concerning issues may disproportionately affect the transgender and gender nonconforming community, an examination of minority stress and how stigma structurally occurs is warranted.

### **Minority Stress Theory**

The minority stress model posits that stress among minority individuals results in diminished psychological resources for coping, which leads to poor mental and physical health outcomes (Meyer, 2003). Stressors take two forms, according to the model. Distal stressors

include actions taken by others against a minority person, such as harassment and victimization, whereas proximal stressors include those inflicted upon oneself due to minority status (e.g., identity concealment, internalized stigma, and expectations of rejection; Meyer, 2003). According to Hendricks and Testa (2012), in order to be classified as a minority individual, a person must belong to a minority group—a group that is socially devalued and subject to continuous discrimination and abuse. They explain that it is the ongoing negative treatment, or these distal stressors, that occur repeatedly against minority individuals which lead to the development of proximal stressors (Hendricks & Testa, 2012). Certainly, research has demonstrated clear links among discrimination, internalized stigma, and depression for lesbian, gay, and bisexual (LGB) individuals (Gamarel, Reisner, Parsons, & Golub, 2012; Hatzenbuehler, Nolen-Hoeksema, & Erickson, 2008; Lehavot & Simoni, 2011; Newcomb & Mustanski, 2010). Moreover, research has shown that as minority identities layer upon one another, minority stress and its effects become more pronounced (Mathy, 2002; Mathy, 2003; Reisner, White Hughto et al., 2016). Yet, application of minority stress theory to the construct of gender is a relatively new concept, which has not yet been rigorously tested with an exclusive sample of transgender and gender nonconforming undergraduates. Given the unique circumstances transgender college students face (e.g., experiencing the privilege of education, a contained campus environment, etc.), coupled with strong evidence that transgender individuals overall encounter greater stigma than cisgender individuals throughout their lifetimes, study of the experiences of this group arguably warrants further exploration.

### **Unified Sexual Stigma Conceptual Framework**

Herek (2007) introduced the unified sexual stigma conceptual framework as a structural elaboration upon the minority stress model. The framework highlights the different forms of

stigma sexual minorities consistently face. Despite its original intended use to describe varying forms of stigma against sexual minorities, like minority stress theory, the unified sexual stigma conceptual framework also may be applied to gender minorities. Just as sexuality is largely concealable, so too can transgender identity be under certain conditions. If mainly expressed privately, a person's sexuality generally remains unknown to the outside world. Similarly, if a transgender person passes well as their identified gender, that gender identity aligns with socially constructed norms, and that person chooses not to come out, transgender identity is also concealable. Yet, in both cases, prejudice against these minorities is widely accepted at the group level.

Within the sexual stigma framework, Herek (2007) describes four types of stigma: sexual, enacted, felt and internalized. The first two of these types of stigma are external to the individual, and in that way are similar to the distal stressors delineated by minority stress theory, whereas the second two may be equated to proximal stressors (internal to the individual). Sexual stigma, or gender stigma if applied to gender, refers to the understanding shared by society that sexual (gender) minority individuals hold less social status than heterosexual (cisgender) individuals, due to their abnormality. In this case, less social status equates to having less power, less access to desirable resources, and less social sway, thus, serving as a justification for othering and enacted stigma. Enacted stigma describes the deliberate victimizing and discriminatory behaviors that sexual (gender) minorities endure at the hands of others, which result in poor mental health, or heightened psychological distress. Felt stigma, on the other hand, serves as the impetus behind how sexual (gender) minorities conduct themselves. Essentially, felt stigma describes the predictions made by minority individuals about how enacted stigma will occur—in what ways and according to what conditions. Internalized stigma refers to a minority

individual's personal discomfort with their own status and their level of acceptance of the negative status they believe they deserve.

The sexual stigma framework holds up at least partially when applied to gender. According to the results of one recent study of felt stigma and responses to rejection among 30 transgender adults ( $M_{age} = 30.4$ , 70% with at least some college education), the expectation of rejection was commonplace (Rood et. al, 2016). Rejection was expected any time a participant would leave home, including to go to LGBTQ spaces. This expectation was most pronounced, however, if participants planned to enter public spaces that were conservative, religious, or rural. Rejection was described by participants as a daily expectation. Moreover, they considered environments including gender markers (e.g., bathrooms, locker rooms), medical appointments, and interactions where showing identification is necessary as typical for experiencing rejection. Rood and colleagues (2016) found that anxiety arises whether gender is affirmed or not during every interaction; furthermore, they found anxiety, depression and sadness follow these interactions. Participants also described avoiding situations because of expected rejection. Additionally, they reported using alcohol, tobacco or other drugs to cope with their negative emotional reactions to this expected rejection. Finally, Rood and colleagues (2016) found that being a person of color increased expectations of rejection.

Considering stigma appears to play a large role in how transgender individuals function, it is important to understand the range of discriminatory and abusive experiences that adversely affect this group. A sizable body of literature exists outlining how stigma is enacted against transgender individuals throughout the entirety of their development. Some of this work also addresses structural stigma within college campuses.

### **The Role of Violence and Discrimination**

**Individual Experiences of Violence.** The risk factors most often identified in the literature as contributing to the poor mental health and coping of transgender individuals include stigma, discrimination, and violence, which first appear during childhood and persist throughout the lifetime (Graham et al., 2011). According to the U.S. Transgender Survey (USTS), which is the largest survey of transgender people in the country (27,715 respondents), 10% of transgender people experienced physical violence at hands of a family member after coming out, and 8% were kicked out of the home (James et al., 2016). Similarly, one snowball sample of 55 transgender youth (ages 15-21) including 22 undergraduates, found 54% of mothers and 63% of fathers initially reacted negatively to their coming out (Grossman, D'Augelli, Howell & Hubbard, 2005). Interestingly, transgender youth are coming out at younger ages (Makadon, Mayer, Potter, & Goldhammer, 2015), and in some instances, children express discomfort with their assigned gender and biological sex, as well as a preference for clothing and toys other than what might be encouraged in or expected of the assigned gender, as early as age two (Coleman et al., 2012). Unfortunately, the more gender nonconforming transgender youth present, the more physical and verbal abuse their mothers and fathers inflict upon them (Grossman et al., 2005).

As transgender and gender nonconforming youth transition into young adulthood, they continue to experience abuse and additional violence by others outside the home. Approximately half (46% to 56%) of transgender young adults report having been verbally harassed, and 9% to 19% report having been physically assaulted because of being transgender (James et al., 2016; Lombardi et al., 2001). Nearly half (47%) also report being sexually assaulted at some point during their lifetime, and 10% report having been sexually assaulted during the past year (James et al., 2016). One study of 248 transgender young adults of color in Washington, DC found that 13% had experienced sexual abuse and 43% had been the victim of some crime (Xavier et al.,

2005). They additionally report very high rates of lifetime intimate partner violence (68%) and discrimination and violence (32%; e.g., verbal harassment, denial of benefits or service, assault), including by law enforcement, related to not having a name or gender listed on their ID matching their gender presentation (James et al., 2016).

Unfortunately, school is a notably dangerous environment for gender nonconforming youth rather than a safe haven. Compared to their peers, including cisgender sexual minority students, transgender students face more harassment, victimization, and negative school experiences (Graham et al., 2011; Kosciw, Greytak, Giga, Villenas, & Danischewski, 2016), which they attribute specifically to being transgender (James et al., 2016). Greater than half of transgender adults (54%) report having been verbally harassed throughout their elementary, middle, and high school educations with about a quarter reporting a history of physical assault (24%) and 13% a history of sexually assault (James et al., 2016). In almost a fifth of cases (17%) the mistreatment is so severe that gender nonconforming students leave school and never make it to college (James et al., 2016).

The latest biennial National School Climate Survey (NSCS), which surveyed over 10,000 LGBT students between the ages of 13 and 21 during the 2014-2015 school year, found approximately 3,488 of those students identified as something other than cisgender (Kosciw et al., 2016). Although all gender nonconforming students faced harassment more so than their cisgender peers, the abuse was most pronounced against transgender students specifically. Three quarters (75.1%) of transgender students reported feeling unsafe at school because of their gender expression, and similar feelings were echoed by fewer but a substantial number of genderqueer students (61.6%) and students identifying as some other gender identity (61.2%). Interestingly, gender nonconforming students, especially transgender students, also reported

feeling more unsafe because of their sexual orientation than cisgender sexual minority peers and endorsed experiencing more sexual orientation-based harassment than them (Kosciw et al., 2016). In total, gender nonconforming students reported feeling unsafe at about three times the rate of cisgender peers within the LGB community (Kosciw et al., 2016).

In terms of violence specifically related to gender expression, 64.5% of transgender students reported experiencing verbal harassment, 24.9% reported physical harassment, and 12.0% reported physical assault (Kosciw et al., 2016). Unfortunately, in the vast majority of cases, school faculty and staff did not intervene when negative remarks related to gender expression were made (7.8% intervened most or all the time), and in a sizable number of instances, students overheard school personnel making sexist or otherwise discriminatory remarks about students not being masculine or feminine enough (64.2%; Kosciw et al., 2016). Additionally, though most students did not make a complaint to school staff when harassed (57.6%), those who did were most often told to ignore the harassment or the staff did nothing (63.5%), and in more than a quarter of cases (26.9%), students were instructed to behave or to dress in a different way (Kosciw et al., 2016). Therefore, the more gender nonconforming a student remains in their gender expression, the more likely they are to suffer harassment and abuse, and the less likely they are to feel safe and protected (Kosciw et al., 2016). In addition, lack of faculty response to complaints of gender-related violence and reinforcement of gender-related stigma on the part of school personnel are likely symptomatic of and fueled by greater issues of institutional and structural stigma.

Abuses against transgender individuals continue beyond high school and into vocational school and college, as young transgender adults are often the target of stigma, violence, and discrimination specifically because of gender identity (Graham et al., 2011; Rankin, Weber,

Blumenfeld, & Frazer, 2010). In fact, nearly a quarter (24%) of transgender students who were out or perceived as transgender in college or vocational school were harassed verbally, physically, or sexually (James et al., 2016). Furthermore, though college sexual assault has historically been portrayed as a crime almost exclusively against undergraduate women, as it turns out, sexual assault rates are also notably elevated among transgender, genderqueer, gender nonconforming and other gender variant students (Cantor et al., 2015). Perhaps, not surprising, the greatest threats of harassment and assault occur within gender-specific spaces, including bathrooms and locker rooms, just as is the case within elementary, middle, and high schools (Beemyn et al., 2005).

In general, transgender students not only face more discrimination and harassment than their heterosexual cisgender peers, but they also experience stigma and violence more often than their sexual minority peers (Dugan, Kusel, & Simounet, 2012; Rankin et al., 2010). This enacted stigma, as minority stress theory would predict, results in transgender students reporting less social belonging, lower self-confidence, and worse academic outcomes than their matched lesbian, gay, bisexual, and heterosexual peers (Dugan et al., 2012; Eagan et al., 2016; Rankin et al., 2010). Relatedly, increased policy barriers and harassment within undergraduate education also correlate with poorer coping, lower academic performance, and compromised mental health, including increased substance use and suicidality among transgender students, notably racial minorities (Martin, 2013; Seelman, 2016; Woodford, Joslin, Pitcher, & Renn, 2017).

**Structural Stigma Issues.** The latest USTS findings suggest that public restrooms are particularly dangerous for transgender individuals, leading most to avoid these spaces at work and school (59%; James et al., 2016). Of those respondents who used public restrooms, 12% reported being harassed or assaulted. Nine percent say they were denied access to the appropriate

restroom, and 8% developed kidney or urinary tract infections because of avoiding using public restrooms. Rather than providing protections for transgender individuals so that they may safely access public restrooms, a number of states since 2013 have proposed and passed local and state “bathroom bills” which either forbid transgender individuals using public restrooms, altogether, or require they use facilities which correspond with their biological sex as documented on their birth certificates (See <http://www.ncsl.org/research/education/-bathroom-bill-legislative-tracking635951130.aspx> for legislative tracking of bathroom bills). In opposition to this legislation, the U.S. Department of Justice and Education offered a “Dear Colleague” letter in May of 2016 requiring that any school receiving public funding protect transgender students from discrimination in accordance with Title IX; although this guidance has since been retracted (National Conference of State Legislatures, 2017).

Prior to college, elementary, middle, and high schools can encourage or reinforce discrimination against transgender and gender nonconforming students in their policies and enforcement practices on an institutional level (Kosciw et al., 2016). For example, by segregating spaces and activities by sex (e.g., locker rooms, bathrooms, physical education classes, sports teams and clubs, social organizations) and implementing dress codes, gender nonconforming students are expected to adhere to traditional gender roles (Kosciw et al., 2016). Additionally, most transgender students are not referred to by their preferred pronoun or name on school documentation (Kosciw et al., 2016). Not only do these practices undermine gender nonconforming students’ senses of identity and expression, but they also create spaces they deem unsafe or uncomfortable and in effect, often avoid (Kosciw et al., 2016). Those students who feel uncomfortable or unsafe tend to refrain from engagement in extracurricular activities, school functions, and exhibit higher rates of absenteeism (Kosciw et al., 2016). In this way, school

climates are often prohibitive in allowing for gender nonconforming youth to safely access education and likely indirectly contribute to the heightened high school dropout rates among gender nonconforming students.

Those gender nonconforming students who do make it to college face a number of the same types of institutional discrimination, but in some ways the discrimination can be more pervasive. In college, students are often sharing their living quarters with other students. Therefore, sex-segregated communal spaces, including bathrooms, locker rooms, and dorm rooms, are not as easily avoided (Beemyn et al., 2005; Goldberg, 2018). Thus, transgender students may not have access to private showers with locking doors or to affordable single living quarters. Instead, in seeking out such accommodations for their own privacy and protection, they likely face additional financial burdens (Beemyn et al., 2005). Moreover, many social activities remain segregated by sex, including athletics, club sports, and social organizations, such as fraternities and sororities. In the classroom, such issues trickle down as professors may continue to call on transgender students by their given names and pronouns, rather than by ones that better fit their gender presentations (Beemyn et al., 2005; Goldberg, 2018). Similarly, institutional forms may only include male and female options, with little or no means for students to have their documents legally changed to their preferred gender identity or name (Beemyn et al., 2005; Goldberg, 2018). In terms of student health services, transgender college students may not have access to adequate health care through their student clinic for a variety of reasons (Beemyn et al., 2005; Goldberg, 2018). Student insurance may not cover hormones or gender affirming surgeries (Goldberg et al., 2019). Additionally, medical providers and clinicians at student counseling centers may not be familiar with the *Standards of Care* (Beemyn et al., 2005), and even if they are, these standards are now considered controversial in that a diagnostic label of mental illness

(i.e., gender dysphoria) by a clinical professional must be applied before gender-related medical interventions may occur (Bilodeau & Renn, 2005). Student health providers may also fail to encourage transmen to have routine pap smears or transwomen to undergo prostate exams, as would typically be recommended for cisgender students (Beemyn et al., 2005). Likewise, even when resources exist for LGBTQ students, services are most often tailored for the larger sexual minority student population rather than the smaller community of transgender students. This can prove particularly problematic for those transgender students who identify as heterosexual, as they are less likely to view these resources as relevant for their specific needs (Beemyn et al., 2005; Goldberg, 2018; Rankin et al., 2010).

On a broader scale, college anti-discrimination policies may address biological sex and sexual orientation, but fail to include gender expression (Beemyn et al., 2005). These problems may be particularly pronounced among private institutions, in that they are not required to meet Title IX provisions if they do not receive public funding (Lambda Legal & the Consortium of Higher Education LGBT Resource Professionals, 2016). This loophole, therefore, opens the door not only for these private institutions to retain sex exclusive organizations and athletics, but also to implement transgender policy statements that are inadequate or nonsensical without fear of public sanction (Goldberg, 2018; Lambda Legal & the Consortium of Higher Education LGBT Resource Professionals, 2016). With this in mind, not surprisingly, transgender and gender nonconforming college students, faculty, and staff, as compared to sexual minority cisgender individuals, are less likely to agree that their academic institution provides adequate resources on LGBTQ issues, responds positively to reported incidents of harassment, and offers adequate resources for addressing LGBTQ concerns (Rankin et al., 2010). Consequently, with the failed application of Title IX policy protections to transgender individuals, academic institutions have

historically remained unfriendly to transgender students (Lambda Legal & the Consortium of Higher Education LGBT Resource Professionals, 2016; Rankin et al., 2010).

Overall, transgender and gender nonconforming undergraduates demonstrate a high likelihood of experiencing both enacted and structural stigma throughout their early academic careers and into college. The prevalence of sex segregation on college campuses in housing and within student activities coupled with inadequate gender nonconforming resources and health services, as well as a lack of accountability for failure to meet Title IX guidelines meant to protect students against sex- and gender-related discrimination and abuse, potentially amplify the stigma experiences these students face. Yet, many transgender individuals persist and some thrive. Some academics, therefore, argue that certain protective factors contribute to resiliency within the transgender community.

### **Protective Factors**

Nuttbrock and colleagues (2010) suggest that given the amount of stressors gender nonconforming individuals face, they must develop resilience to enacted stigma early on in life. Some studies of transgender youth highlight personal strengths as protective factors, while others focus on affiliation-related factors. Individual traits predictive of positive mental health outcomes have included a sense of hope, belief in personal mastery, self-esteem, self-worth, and problem-focused coping (Grossman, D'Augelli, & Frank, 2011; Singh, Hays, & Watson, 2011). Affiliation-related protective factors have included community belonging, strong mentorship, peer and familial support, identity pride, activism, and becoming a role model (Bockting, Miner, Swinburne Romine, Hamilton, & Coleman, 2013; Goldberg, 2018; Grossman et al., 2011; Singh et al., 2011). Social support, in particular, has protected against suicidality and HIV (Grant et al., 2011), and peer support, specifically, has moderated the relationship between stigma and

psychological distress (Bockting et al., 2013). Awareness of stigma has additionally proven protective of self-esteem during incidents of blatant discrimination against transgender individuals, but this awareness has been less effective in protecting self-esteem when acts of discrimination have occurred less overtly (Kosenko, Rintamaki, Raney, & Maness, 2013). Psychological treatment for gender exploration, coping with the stress of transitioning, and strengthening social support has also been considered a method by which to improve resilience among transgender individuals (Coleman et al., 2012). Further, on an institutional level, transgender inclusive policies and resources have been found to increase sense of belonging and campus climate satisfaction among transgender students (Goldberg & Kivalanka, 2018).

Overall, findings support that transgender and nonbinary individuals face high rates of minority stress including violence, rejection, and harassment. Further, similar individual and social factors appear to confer resilience to the impact of these stressors as has been found among sexual minority individuals. As a result, recent work has sought to adapt minority stress theory (previously evaluated among sexual minority individuals) to understanding the experiences of transgender individuals.

### **Gender Minority Stress and Resilience Model**

The gender minority stress and resilience model (GMSR; Testa et al., 2015) is a contemporary version of the minority stress model updated for application to the transgender and gender nonconforming community. The model describes four types of distal (external) stressors, including gender-based victimization, gender-based rejection, gender-based discrimination, and identity nonaffirmation, together which loosely resemble a reorganization of the forms of structural stigma outlined by Herek (2007). Gender-based victimization refers to experiences of violence, harassment, and abuse inflicted upon individuals because of their gender identity or

expression. Gender-based rejection includes forms of individual, institutional and community rejection based upon gender identity or expression. Gender-based discrimination pertains to difficulties with accessing resources, including housing, employment, medical care, and legal documents because of gender identity or expression. Identity nonaffirmation describes instances of experiencing the rejection of one's transgender or gender nonconforming identity by others. Proximal (internal) stressors parallel the proximal stressors identified by Meyer (2003). These proximal stressors include negative expectations for future events (i.e., expectations of inflicted prejudice, discrimination, and social rejection), internalized transphobia (i.e., personal belief that negative societal attitudes about one's group and self are true and warranted), and concealment of one's gender identity (Testa et al., 2015). The model also includes two resilience (protective) factors: community connectedness and pride (Testa et al., 2015). The GMSR model posits three main ideas: 1. Minority stress adversely affects physical and mental health; 2. Resilience moderates the relationships between stress and health; and 3. Distal (external) stressors lead to proximal (internal) stressors.

Components of the GMSR model have been supported by various studies, in that discrimination has proven to lead to substance use and suicidality, as well as symptoms of depression and anxiety, among transgender youth and adults (Bockting et al., 2013; Hendricks & Testa, 2012; Seelman, 2016; Testa et al., 2012). For adolescents with gender dysphoria, gender-related victimization and gender-related rejection by peers both significantly relate to behavioral and emotional issues (Coleman et al., 2012; Shiffman et al., 2016). The first study to apply minority stress theory to a gender framework and test the relationship between bullying and substance use among adolescents (ages 13-18;  $N = 5,542$ ) also established bullying as a mediator between gender minority status and increased substance use (i.e., alcohol use, marijuana use, and

other illicit drug use; Reisner, Greytak, Parsons, & Ybarra, 2015). Additionally, upon testing anticipated rejection, Bockting and colleagues (2013) found that the expectation of social rejection positively correlated with psychological distress and inversely related to degree of outness (how open one is to others about their gender identity) among nearly 1,100 transgender individuals. As far as protective factors, Mizock and Mueser (2014) highlighted when gender nonconforming individuals actively avoided anticipated rejection by choosing transgender and gender nonconforming friendly environments, they experienced less internalized transphobia and external gender-related discrimination. On the other hand, Chodzen, Hidalgo, Chen, and Garofalo (2019) found that among transgender pediatric patients (ages 12-18) internalized transphobia resulted in an increased likelihood of meeting diagnostic criteria for major depressive disorder and generalized anxiety disorder, but community connectedness did not lower the likelihood of these negative outcomes.

One study examining the interpersonal theory of suicidality in relation to GMSR found that among an online convenience sample of 816 transgender participants in the United States and Canada, gender minority stress served multiple mediating roles relative to suicidality (Testa et al., 2017). This study is of substantial interest not only because it tested the full GMSR model, but also because suicidality is a well-established and particularly dangerous negative outcome significantly elevated within the transgender and gender nonconforming community. Results supported that internalized transphobia mediated the relationships of both gender-based rejection and gender-based nonaffirmation to suicidality. Further, negative expectations for future events mediated the relations of gender-based victimization, rejection, and nonaffirmation to suicidal ideation. Finally, interpersonal factors, such as thwarted belongingness and perceived burdensomeness, independently mediated the relationships of internalized transphobia and

negative expectations to suicidal ideation, highlighting the protective role that positive affiliation plays in combating poor outcomes within this minority group (Testa et al., 2017).

Another study also testing all elements of the full GMSR model but with a much smaller community sample ( $N = 83$ ) examined the effects of minority stress and resilience on symptoms of depression and anxiety, as well as past suicide attempts, among Midwestern transgender and gender nonconforming adults (Brennan et al., 2017). Results demonstrated partial support for the model. Proximal stress predicted depressive symptoms, and distal stress predicted past suicide attempts. Resilience related to decreased anxiety symptoms and decreased odds of a suicide attempt.

Arguably the most comprehensive study of the application of the minority stress and resilience model to an undergraduate sample ( $N = 776$ ) investigated the effects of institutional discrimination, individual nonaffirmation, and harassment/physical assaults against LGBT students on psychological health (Woodford et al., 2018). Both the ability to bounce back in stressful situations and pride were tested as protective moderators against depression and suicidality. Though researchers did not use the GMSR measure (Testa et al., 2015) to test the model, they incorporated similar elements in their study. Results demonstrated differences between the cisgender and transgender students, in that moderators diverged. More specifically, the ability to bounce back in stressful situations moderated the relationship between harassment and suicide among cisgender LGBQ students, and pride moderated the relationship between victimization and depression relationship among transgender students. While supporting that a minority stress and resilience model may help explain the psychological health of transgender undergraduates, this research further highlights the problematic nature of applying findings with cisgender LGBQ individuals to those of transgender identities.

The primary focus of the research that has supported the GMSR model has remained on psychological distress outcomes (i.e., symptoms of depression, anxiety, and suicidality) and adverse coping behaviors (i.e., problematic drinking), rather than on indicators of poor physical health. However, within the transgender and gender nonconforming community, because of the distal and proximal stress factors that this population experiences as barriers to sexual health care, in addition to their heightened risk of experiencing sexual violence, perhaps sexual health is a particularly salient concern. Certainly, compromised sexual health has received less attention as an outcome of the model than psychological distress or substance use. Yet, given that minority stress theory proposes a link between ongoing stigma enacted by others with negative expectations for social encounters and internalized transphobia, it would be expected that these appraisals would broadly influence sexual health, including beliefs about sex and sex behaviors. To date, little is known about the sexual health of transgender and gender nonconforming undergraduates. This limited knowledge being noted, compromised sexual health and a high incidence of engagement in risky sexual behaviors are both suggested.

### **The Larger Picture of Compromised Sexual Health**

Despite sexuality and gender constituting independent facets of identity, transgender individuals face increased risk for several sexual health problems, including HIV infection. Systematic reviews estimating HIV risk demonstrate that transgender individuals engage in a number of risky sexual behaviors (Becasen et al., 2019; Herbst et al., 2008). These risky behaviors include having multiple partners (41.7 - 43.7%), sex while under influence of substances (36.4%), unprotected intercourse (24.5 - 38.2%), and performing sex work (31.0%; Becasen et al., 2019). Though data on transmen is more limited, the most recent literature supports that they engage in less sex work and unprotected sex than transwomen, but are just as

likely to have multiple sexual partners or have sex while under the influence of substances (Becasen et al., 2019). Of note, two-thirds of transmen report reserving sex for monogamous relationships, yet nearly all of them endorse engaging in some sexual risk behaviors (90.6 - 93.3%; Herbst et al., 2008). Perhaps, the differing trends in risky sexual behaviors between transmen and transwomen, along with a number of other psychosocial factors, explain why HIV rates are elevated among transwomen (3.4% vs. 1.4% for the general transgender community; Clements-Nolle et al., 2001; Herbst et al., 2008; James et al., 2016) and especially Black transwomen (19.0% vs. 0.3% cisgender adults; James et al., 2016).

Increased disease risk constitutes only one area of sexual health problems experienced among transgender individuals. Sexual arousal and difficulties with orgasm achievement also arise as sexual health issues transgender adults face. Among 181 adult transgender participants attending a sexual health seminar (141 transwomen and 34 transmen), 34% reported low sexual desire, 38% reported difficulties with sexual arousal, and 28 - 35% had difficulties reaching orgasm with a partner or alone (Bockting et al., 2005). Interestingly, while the effects of feminizing hormone use are less clear (Nemoto, Operario, & Keatley, 2005), sexual arousal and orgasm achievement have been shown to improve with masculinizing hormone use among transmen and gender affirming surgery completion among transwomen (Klein & Gorzalka, 2009; Lawrence, 2005). These results seem to offer support for the positive benefits medical intervention can have in alleviating the negative effects of gender dysphoria. Yet, one's sexual fulfillment or lack thereof may simply reflect psychological health, in that gender affirmation by others and body satisfaction appear to increase desire for sex and experiences of sexual satisfaction among transgender individuals independent of gender affirming medical interventions (Fox Tree-McGrath, Puckett, Reisner, & Pantalone, 2018; Nikkelen & Kreukels,

2018). Given these sexual health issues coupled with poor mental health and adjustment, questions remain about how transgender adolescents and young adults function sexually while in college.

The research on transgender sexual health among college students is markedly limited or at least difficult to isolate, as gender nonconforming students are often grouped with undergraduate sexual minorities rather than studied independently. Further, work pertaining to the sexual behaviors of younger transgender individuals largely includes homeless youth. These participants, who are often transwomen living in urban areas, demonstrate extensive engagement in sex work (59%) and low condom use during both casual and commercial sex (49%), with high rates of substance use during sex (53%; e.g., Wilson et al., 2009). Additionally, these studies report high rates of HIV infection (22%) among this population (Graham et al., 2011). None of this research answers sexual health and behavior questions specifically related to transgender undergraduates or low risk transgender young adult populations more broadly. Overall, extrapolating inferences about the sexual behaviors of gender nonconforming undergraduates from the available literature is problematic in that the transgender youth demographic is heavily weighted toward homeless urban transwomen who engage in sex work and other risk behaviors more so than other groups (Reisner, Vettes et al., 2015).

Because the sexual health of transgender and gender nonconforming undergraduates has not been studied independently, little is known about their sexual beliefs and behaviors. Their same age transgender peers who are not in college report compromised sexual functioning, high rates of sexual transmitted infections, and heightened engagement in risky sex. Still, given that transgender and gender nonconforming undergraduates are likely to face restricted access to

appropriate sexual health care services and education, it is likely they also hold internalized sexual beliefs and attitudes that negatively affect their sexual health.

### **Sexual Script Theory**

According to sexual script theory, sexual behaviors and attitudes related to sex are informed by cultural norms and shaped according to sexuality-related expectations, which individuals adapt to fit their own interpersonal experiences and intrapsychic rehearsals (Simon & Gagnon, 1986). The traditional heterosexual script, therefore, assigns different roles to men and women in their romantic and sexual relationships (Kim et al., 2007). Whereas men are expected to pursue sex, attract women through power, and avoid relational commitment; women are expected to set sexual limits, attract men with physical beauty, and seek commitment (Simon & Gagnon, 1986). While not exactly opposite, these sex roles are intended to be complimentary to one another (Kim et al., 2007). Moreover, they assume the actors involved in the sexual encounter are cisgender.

The work of Paul and Hayes (2002) demonstrates that male and female cisgender college students who engage in heterosexual sex describe the same traditional gendered roles during sexual encounters as first described by Simon and Gagnon (1986), particularly during casual and one-time encounters. While undergraduate men more often take on the role of sexual aggressor and exhibit pride and satisfaction after a sexual encounter, their female counterparts are likely to report experiencing disappointment or regret for not having refused sex. As Paul and Hayes (2002) explain, despite modern college sexual relationships appearing more casual and egalitarian than when sexual script theory was originally introduced, the sex roles remain the same. They highlight that college students engage in minimal communication, typically meet at a bar or party, and alcohol is usually involved prior to or during the sexual encounter, but the

reported effects of these sexual encounters affect men and women in the ways that would still be predicted given their continued differing sex roles (Paul & Hayes, 2002). Later work has continued to reinforce the findings of Paul and Hayes (2002), in that heterosexual college men and women still report differing motives for engaging in sexual behaviors and variant emotional consequences afterwards (e.g., Bradshaw, Kahn, & Saville, 2010; Owen & Fincham, 2011).

Because transgender and gender nonconforming college students do not neatly fit into the biological or sexual categories or roles that the larger society already has defined for them at birth, very little may be assumed of their sexual scripts. Further complicating the issue, sexual identity development can prove particularly complex and fluid among this group of transgender individuals, as they may be actively searching to establish an identity that best suits them throughout their undergraduate careers (Bilodeau & Renn, 2005). For instance, Beemyn and colleagues (2005) provide the example of a student who initially begins college as a lesbian, who then decides the genderqueer identity is a better fit and finally, identifies as a homosexual or heterosexual man. Provided this complexity, Bilodeau and Renn (2005) argue that stage models of identity development cannot adequately capture the lived experiences of those who do not adhere to a traditional gender binary. In consequence, because gender and sexuality may shift repeatedly among transgender and gender nonconforming college students, how these students form their sexual scripts, including whether they choose to conform to the traditional heterosexual script or choose to develop their own new script, remains unknown.

According to sexual script theory, as introduced by Simon and Gagnon (1986), the formation of sexual scripts occurs on three levels. The first is the cultural level, which would reflect the beliefs and attitudes of the culture. The second level is interpersonal, based upon the past encounters individuals have experienced with others. The third level is the intrapsychic,

which represents the internal desires and fantasies of the individual, or what that individual may expect will occur during a sexual encounter. Though no previous scholarship or research has linked minority stress theory to sexual script theory, the two would seem to overlap. At the cultural level, transgender and gender nonconforming individuals are considered a minority and therefore face gender-related stigma. In effect, whether transgender and gender nonconforming individuals adopt the scripting of the majority cisgender, heterosexual culture or adapt it, by the fact they belong to a gender minority category, the dominant culture would view them as deviant in their sexual roles and relationships. Regardless of their attempts at sexual conformity to the majority culture, because gender-related stigma and enacted stigma are clearly linked, certainly, the sexual histories of transgender and gender nonconforming individuals are likely to include negative interpersonal encounters. Likewise, these negative encounters would necessarily influence predictions as to how sexual encounters will unfold in the future.

Only one published study has thus far investigated the sexual scripts of transgender individuals. Schrock and Reid (2006) interviewed nine male to female transgender adults who had completed gender affirming surgery, asking them to share their sexual biographies. Interestingly, they argued that participants produced traditionally gendered sexual scripts, essentially “queering” straight sex and “straighten[ing] gay sex.” In other words, despite previously male body parts, they posited that all participants recounted their personal sexual encounters invariably from the perspectives of women (Schrock & Reid, 2006). Thus, for some, sex with women felt unnatural and was possible only because of biological response. For others, the understood implication was lesbianism. In fact, the majority of participants produced sexual narratives following from heterosexual scripts (Schrock & Reid, 2006). Commonly, participants described taking a more submissive and traditionally feminine role during sex, refraining from

sexual dominance, and instead, engaging in sexual acts to please others. They also described feeling ashamed and unhappy dressing as woman, but not having the body of a woman (Schrock & Reid, 2006), potentially suggestive of internalized transphobia. The authors therefore concluded that by attempting to normalize their sexual experiences, the transgender individuals in this sample were seeking to re-affirm their identities as women, rather than as either heterosexual or homosexual men (Schrock & Reid, 2006).

Though primarily focused on dating scripts, rather than sexual scripts exclusively, a few studies have offered insight into the roles partners take on in same sex relationships. Findings have suggested an adoption of heterosexual scripting, as well as a rejection of it. Klinkenberg and Rose (1994) found gay men more so than lesbian women produced both hypothetical and actual dating scripts that emphasized sex (i.e., making out, staying over, having sex versus. kissing/hugging goodnight), alcohol use, and orchestrating behaviors (e.g., planning the date), whereas lesbian women highlighted affective responses to the date (e.g., evaluating feelings) and shared responsibilities for date orchestration (Klinkenberg & Rose, 1994). They concluded that same sex dating scripts paralleled heterosexual ones among predominantly well-educated, middle-class, White gay men and women ( $M_{age} = 32.2$ ), in that gendered desires were similar; however, gendered roles within the dating pair deviated from those of heterosexual dating scripts in that they were less rigid (Klinkenberg & Rose, 1994). They surmised that because women typically take on a sexual gatekeeping role within heterosexual encounters, within a gay encounter neither party readily adopts this role so that sex is not only more likely to occur but also becomes a prominent feature of what is expected during the date. On the contrary, because women within the heterosexual context often take on a reactionary role in response to initiated

sexual contact and in a lesbian relationship neither party would necessarily initiate physical contact, sex tends to occur as a result of negotiation.

Apparently, this negotiation is not necessarily congruent across variant communities of homosexual individuals. For instance, according to a study of an urban Black lesbian community, Wilson (2009) found that the majority of community members adopted or were pressured to adopt either a strict masculine (“stud”) or feminine (“femme”) role within dating and sexual relationships. Under these circumstances, while studs initiated physical contact and generally took on a more dominant role, they also deviated totally from traditional masculinity in their sexual relations, in that they prioritized their partners’ sexual pleasure over their own. Essentially, the ultimate goal of sex then becomes orgasm of the more feminine partner, rather than the masculine one—a total reversal of the sexual goals within a cisgender heterosexual relationship (Wilson, 2009). Similarly, while femmes tended to adopt a more responsive, passive role in the relationship generally, they also tended to more willingly and readily accept sexual pleasure from their more masculine partners than would be expected in a heterosexual relationship.

What may be gleaned from the work on sexual scripts thus far in relation to the transgender and gender nonconforming community is that gender minority sexual scripts likely borrow from those of the dominant cisgender heterosexual community and also deviate from it. According to the extant research on transgender and sexual minority populations thus far, there is evidence both of minority status-related shame as well as attempts at conceptual normalization. Thus, though the sexual scripts of transgender and gender nonconforming undergraduates have not yet been studied, it would be expected that minority stress largely influences these scripts. In

particular, past experiences, would likely influence how sexual scripts among this group are formed.

### **Summary and Limitations in the Literature**

To summarize, more undergraduate students than ever are identifying in ways that are gender nonconforming. At the same time, while the extant literature would suggest that these students face a high risk of compromised mental and physical health outcomes, along with compromised skills for coping, only recently was a stress minority model specific to gender nonconformity introduced. This is despite overwhelming evidence that transgender and gender nonconforming individuals experience more stigma, violence, and discrimination than both their cisgender and LGB peers. These experiences of enacted stigma occur on individual and structural levels and unfold throughout the entire life-course, taking place many times in academic settings. At the college level, because campuses exist as contained environments, stigma can prove especially pervasive in accordance with campus climate. Therefore, just as gender nonconforming students may be facing amplified potential risk of sexual assault, dating violence, and binge drinking, they also must navigate identity development against a backdrop of discrimination and marginalization. Currently, how transgender individuals adjust to the pressures of the college culture while forming intimate and sexual relationships is unknown. Further, we know little about the sexual behaviors, health, and beliefs of gender nonconforming undergraduates.

At the outset of this decade, the Committee on Lesbian, Gay, Bisexual, and Transgender Health Issues and Research Gaps and Opportunities Populations identified transgender social influences as a priority research area for the recommended NIH research agenda, with minority stress offered as a suggested approach (Graham et al., 2011). Since that time, a number of new

studies have been published on transgender issues (e.g., Bockting et al., 2013; Coulter et al., 2015; James et al., 2016, etc.). However, none of them have applied minority stress theory or sexual script theory to the transgender and gender nonconforming college population exclusively, using the GMSR model introduced by Testa and colleagues (2015), nor have any studies rigorously explored how health behaviors related to minority stress may influence sexual script theory.

### **Purpose of the Current Study**

Thus, the current study sought to address some of these glaring gaps in the literature via a quantitative and qualitative study of the experiences of a sample of 265 gender nonconforming undergraduate college students. Specifically, the minority stress theory model was tested with an undergraduate sample of college students who identify as transgender or gender nonconforming. Secondly, via examination of these undergraduates' beliefs about how a typical sexual encounter involving a transgender or gender nonconforming student unfolds, I sought to better understand the sexual scripts of these individuals, including how minority stress and resilience factors as well as heterosexual scripts influence them. Partially exploratory in design, this dissertation intended to address the following research questions:

1. Can the gender minority stress and resilience model be effectively applied to the experiences of transgender and gender nonconforming undergraduates?
2. Do minority stress and resilience factors influence the sexual scripts of transgender and gender nonconforming undergraduates?
3. To what extent are the sexual scripts of transgender and gender nonconforming undergraduates similar to and different from those of heterosexual students?

In answering these questions, I believe this study can better inform campus LGBTQ+ (lesbian, gay, bisexual, transgender, queer/questioning, etc.) curriculum, resource center education, and counseling services that serve transgender and gender nonconforming college students. Moreover, the data gathered is hoped to help promote campus-wide transgender-inclusive programming on healthy sexuality and risk reduction strategies. Only by properly understanding the beliefs and experiences of these minority undergraduates, may colleges prioritize an accepting, safe climate for all students.

## CHAPTER II: METHODS

### Participants

Data collection followed IRB approval from East Carolina University [See Appendix A]. Though recruitment used broad terms (e.g., gender nonconformity), eligibility criteria was very specific. For inclusion, participants had to be between 18 and 25 years of age, identify as some gender other than what was assigned to them at birth, speak English, and be currently enrolled in a U.S. college or university. College students who engaged in gender nonconforming behaviors or expression but identified as cisgender were not eligible for inclusion in the research study. Additionally, graduate students, and undergraduates attending academic institutions outside of the U.S. were excluded.

A total of 503 individuals consented to participate in the study. Twenty-four were eliminated for providing duplicate responses (initial responses were retained). One hundred and forty individuals were excluded for having extensive missing data (less than a third of the survey was completed). Seventy-three individuals were excluded for not meeting age requirements, reporting graduate student status, or because they indicated a match between their biological sex and their gender identity. One individual was excluded for providing likely invalid responses. Two hundred and sixty-five participants who met recruitment criteria completed the survey. There were no significant differences between those participants who completed the entire survey and those who did not, with one exception. Of the five Middle Eastern participants who took the survey, two, or 40%, did not complete it, as compared to the overall 11.2% noncompletion rate,  $\chi^2(1, N = 265) = 3.95, p = .047$ . There were no differences in other demographics (biological sex, racial/ethnic group, school year, sexual preference, gender identity, and relationship status), trauma history, probable posttraumatic stress disorder (PTSD),

hazardous alcohol use or illicit substance use, living in one's affirmed gender all or mostly all the time, or history of mental illness.

## **Procedures**

The study was approved by the ECU Social and Behavioral Sciences IRB [See Appendix A]. Transgender and gender nonconforming undergraduates were recruited nationally through social media. Information about the study was primarily posted on Facebook. After creating a Facebook page for the study (Health of Transgender and Gender Nonconforming College Students @HealthTGNCStudy) [See Appendix B], all Facebook connections of this study's author were invited to like the page and share the page widely with others. Due to others' sharing, the page was additionally promoted on Reddit and at least three email listservs. Permissions to post on 122 pages catering to young LGBTQ+ adults (found on Facebook by the search terms "trans, transgender, queer, and LGBT") and college student LGBTQ+ resource centers (listed at <http://www.collegeequalityindex.org/list-colleges-lgbt-center>) were then requested via Facebook messenger [See Appendix C] or email, if messenger was not enabled by the page. In addition, a targeted Facebook advertisement with a link to the survey was run for a total of four weeks on Facebook and Instagram. Advertising targeted individuals of all genders between the ages of 18-27 across the United States, with interests in "BuzzFeed LGBT; gender variance; Lesbian, Gay, Bisexual, & Transgender Community Center; LGBT Culture; and LGBTQ Nation." Finally, the author requested permissions to post on class pages for the years 2018 through 2022 for the top 30 largest public colleges in the U.S. Postings were allowed on 6 resource center/service organization pages and several class pages [See Appendix D]. The study was described as an anonymous study of transgender and gender nonconforming U.S. college students' experiences with social support and sexual relationships. All participants were provided

a list of national resources for LGBT support, substance use and mental illness, suicide prevention, sexual assault, and domestic violence [See Appendix E].

The online survey, including informed consent [See Appendix E], was administered through Qualtrics, a secure survey collection site. No IP addresses were collected to increase anonymity of all data. To ensure participants were appropriate for inclusion in the study, demographic items asked about sex assigned at birth, gender identity, and age. To encourage full completion of the survey, after finishing, participants could choose to enter a drawing to win one of ten \$25 gift cards. To protect confidentiality, optional contact information for the drawing was obtained through a separate Qualtrics survey that did not link this identifying information to study responses. At the beginning of the main survey, to minimize repeat participation, participants were asked if they had already completed the survey, which then followed with a statement indicating completing the survey more than once would not increase the odds of winning a gift card. Information about national resources available to transgender and gender nonconforming students was provided during the informed consent process, as well as optionally at the end of the main survey, in case a participant experienced any emotional distress.

## **Measures**

**Demographics.** A 10-item demographic measure [See Appendix F] assessed sex assigned at birth, gender identification, transition steps taken, age, ethnicity, academic year, grade point average, sexual orientation, and relationship status.

**Outness.** The Outness Inventory (OI; Mohr & Fassinger, 2000) was modified to determine how “out” each participant was in terms of their gender identification. The measure was originally designed to determine level of outness of sexual identity, and prior studies of transgender and gender nonconforming adults, including those of college students, have utilized

modified versions of the measure to determine outness related to gender identity (e.g., Factor & Rothblum, 2008; Fredriksen-Goldsen et al., 2013). For the purposes of this study, the word “sexual” was replaced with “gender.” Items are scored on an 8-point scale from 0 - 7. The participant chooses 0 if the item does not pertain to them at all. Otherwise, item responses indicate whether or not a specified person (e.g. sibling, acquaintance) for each item has knowledge of the participant’s gender identity and how openly that gender identity is discussed. A score of 1 would indicate that the specified person definitely does not know the participant’s gender identity and it is never discussed. On the opposite end of the spectrum, a score of 7 would indicate the participant’s gender identity is definitely known and it is openly discussed. Intermediary scores denote that the gender identity might be known or is probably known and that the identity is rarely discussed or sometimes discussed. The measure consists of three subscales: Outness to Family (items 1 - 4), Outness to World (items 5, 6, 7, and 10), and Outness to Religion (items 8 and 9). Subscale scores are computed by averaging the scores of each item within that subscale, and missing data is handled by ignoring missing responses and averaging the remaining completed subscale items. An Overall Outness score can also be calculated by averaging the three subscale scores. The measure has demonstrated good reliability and validity amongst a sample of over 1,000 lesbian women and gay men (Mohr & Fassinger, 2000). In the current study, Cronbach’s alpha was acceptable ( $\alpha = .78$ ).

**Minority stress.** The Gender Minority Stress Resilience Measure (GMSR; Testa et al., 2015) examines experiences of gender minority stress, assessing seven gender minority stress factors identified by the gender minority stress resilience model, as well as two resiliency factors (community connectedness and pride). The first 17 items address distal stressors, including experiences of gender-related discrimination, gender-related rejection, and gender-related

victimization. Typically, they are scored as “never” = 0, “yes, before age 18” = 1, “yes, after age 18” = 1, or “yes, in the past year” = 1. For the purposes of this study, scoring was adapted to “never” = 0, “yes, before college” = 1, and “yes, since college” = 1. Distal stressor subscale scores were calculated by summing items. The next 41 items assess mainly proximal stressors and resilience, specifically, gender nonaffirmation (distal stressor), internalized transphobia, negative expectations for the future, gender identity concealment, community connectedness, and pride. These items are scored on a Likert scale bounded by 0 (strongly disagree) and 4 (strongly agree). For each scale, an average item scale score is calculated. Higher scores indicate both greater stress and greater resiliency for each related subscale.

Results of a psychometric study with 844 transgender and gender nonconforming participants demonstrated good model fit, as well as criterion, convergent, and discriminant validity for all scales (Testa et al., 2015). All factors correlated with measures of depression and social anxiety in predicted ways (positive correlation for the seven minority stress factors and negative correlation for the two resiliency factors). Additionally, six of the stress scales (all but Gender-related Victimization) positively correlated with general life stress, whereas perceived social support and community connectedness were positively correlated with life stress. Authors of a recent review of current assessment tools available for use with transgender and gender nonconforming research participants suggested using this measure specifically when examining the effects of minority stress (Shulman et al., 2017). In the current study, the overall internal consistency of the GMSR measure was good ( $\alpha = .85$ ). Cronbach’s alpha was not acceptable on the Discrimination (.66) and Rejection (.68) subscales, so these were eliminated from analyses. On all other subscales, Cronbach’s alpha ranged from .79 to .90.

**Substance use.** Two measures screened for problematic substance use, if participants indicated they have engaged in any alcohol or other substance use during the past year: the Five Item Alcohol Use Disorders Identification Test (AUDIT-5; Piccinelli et al., 1997) and/or the Drug Abuse Screening Test, Short Form (DAST-10; Bohn, Babor, & Kranzler, 1991) was/were administered.

The AUDIT-5 is a five-item screening tool for detecting hazardous alcohol use (items 1 and 2), alcohol dependency (items 3 and 4) and harmful drinking patterns (item 5). Each item has five possible responses, which are scored from 0 - 4. The highest possible score is 20, with a cut score of 5 demonstrating good predictive validity for hazardous alcohol use among college students (Miles, Winstock, & Strang, 2001). The measure is derived from the longer Alcohol Use Disorders Identification Test (AUDIT) and demonstrates similar sensitivity (0.79) and specificity (0.95) to the original measure (sensitivity = 0.84; specificity = 0.90) with good test accuracy (AUC = 0.93) and improved positive predictive value (0.73 compared to 0.60; Piccinelli et al., 1997). For this study, total scores were used in analyses, and internal consistency was acceptable ( $\alpha = .72$ ).

The Drug Abuse Screening Test, Short Form (DAST-10) is a 10-item screening instrument intended for the detection of probable drug abuse associated with the use of substances other than alcohol (Bohn et al., 1991). Items ask about using more than one drug at a time, difficulties stopping the use of drugs, and negative consequences due to drug use (e.g., medical problems, feelings of guilt, failure to fulfill obligations). Responses (yes/no) are scored as either 0 or 1, and a cut point of 3 is suggested for the identification of probable drug abuse (Bai et al., 2019; Cocco & Carey, 1998; French, Roebuck, McGeary, Chitwood, & McCoy, 2001). The DAST-10 exhibits good internal consistency (Cronbach's  $\alpha = 0.86$ ) and test-retest

reliability (ICC = 0.71), as well accuracy in identifying potential substance use problems (Cocco & Carey, 1998). Within a large undergraduate population, past year frequency of substance use positively correlated with DAST-10 scores (McCabe, Boyd, Cranford, Morales, & Slayden, 2006). For this study, the cut score was used to determine probable drug abuse amongst those participants who endorsed substance use other than alcohol, and the variable was converted from a continuous one into a dichotomous one. The dichotomous “yes” or “no” probable drug abuse variable was used in all quantitative analyses.

**Risky sex.** Sexual Risk Survey (SRS; Turchik & Garske, 2009) items pertaining to relevant sexual risk behaviors in the last six months were administered to assess risky sexual behaviors. Seventeen open-ended items were administered that assessed sex without commitment, intentions to engage in risky sex, as well as impulsive and risky sexual behaviors. Given responses are open-ended, Turchik and Garske (2009) advise recoding data into the following categories: 1 = bottom 40% of non-zero responses, 2 = next 30% of non-zero responses, 3 = next 20% of non-zero responses, and 4 = top 10% of non-zero responses. Incomplete data is addressed by mean substitution (Turchik & Garske, 2009). Validated with undergraduate samples, the SRS demonstrates good convergent validity and concurrent validity (Turchik & Garske, 2009; Turchik, Walsh, & Marcus, 2015), showing positive correlations with numbers of lifetime sexual partners and diagnoses of sexually transmitted infections. Cronbach’s alpha for subscales range from 0.78 to 0.89, and test-retest reliabilities over two weeks range from 0.70 to 0.90 (Turchik & Garske, 2009). In this study, Cronbach’s alpha was acceptable for the Impulsive Sex subscale ( $\alpha = .70$ ) and good for the Sex with Uncommitted Partners subscale ( $\alpha = .88$ ). Internal consistency was not acceptable for the remaining subscales (Risky Sex Acts =

.53 and Intent to Engage in Sexual Risk Behaviors = .58), so these variables were not included in analyses.

**Psychological distress.** The Depression Anxiety Stress Scales 21 (DASS-21; Lovibond & Lovibond, 1995a) and the Primary Care PTSD Screen for DSM-5 (PC-PTSD-5; Prins et al., 2016) assessed current psychological distress. The first captures symptoms of depression and anxiety, and the second screens for PTSD.

The DASS-21 is a brief 21 item measure of depression (e.g., I felt that I had nothing to look forward to), anxiety (e.g., I felt I was close to panic), and stress (e.g., I found it hard to wind down) symptoms. Symptoms during the past week are rated on a 4-point scale from 0 (did not apply at all) to 3 (applied to me very much, or most of the time). Subscale scores are obtained by computing a summed score for each of the items on the subscale. Minimum summed scores for moderate depression, anxiety, and stress are as follows: 14, 10, and 19, respectively (Lovibond & Lovibond, 1995a). It is a shortened version of the longer DASS (42 items), so DASS-21 scale scores are doubled to calculate the final score. If only one item response is missing on a scale, other item responses may be averaged to replace the missing information for that participant; any more than one missing item response on a scale is problematic, and a scale score cannot be validly derived. Prior research supports strong internal consistencies, including among undergraduate students (Depression = 0.87, Anxiety = 0.78, and Stress = 0.83; Littleton, Kumpula, & Orcutt, 2011; Lovibond & Lovibond, 1995b). For this study, only the Depression and Anxiety subscales were used in analyses. Internal consistency for these subscales ranged from good (Anxiety = .81) to excellent (Depression = .92).

The PC-PTSD-5 consists of five items and was designed for use in primary care settings. The first item is intended to assess whether the respondent has been exposed to a traumatic

event. The PC-PTSD-5 only continues if the respondent answers “yes.” If a respondent answers “yes,” five additional yes/no items follow (scored 0 or 1), which query the effects of that trauma exposure on the respondent during the past month. Preliminary data suggest that the PC-PTSD-5 should be considered “positive” if a respondent affirms any three of the five items about how the traumatic event(s) have affected them during the past month. The PC-PTSD-5 appears psychometrically sound for identifying patients who require further assessment for PTSD (Prins et al., 2016). For the purposes of this study, a score of 3 was considered indicative of probable PTSD. A dichotomous variable indicating either probable PTSD or not probable PTSD was used in analyses.

**Sexual scripts.** Sexual script prompts requested participants describe their own versions of a typical sexual experience involving a transgender/gender nonconforming college student. Drawing on the work of earlier script studies (e.g., Littleton and Axsom, 2003), the following instructions were given.

*We are interested in how you may describe a variety of events related to sexual experiences. Below, with as much detail as possible, please write a description of what you would expect to occur before, during, and after a typical sexual experience, involving a transgender or gender nonconforming college student. Including their thoughts and feelings, please describe as many characteristics of the individuals involved as possible. While there may be no such thing as a typical sexual experience involving a transgender or gender nonconforming person, and no sexual situations are exactly the same, please, write what comes to mind when you hear the word typical. As a reminder, your responses are anonymous, and you do not have to complete the task if you are uncomfortable or do not wish to for any reason.*

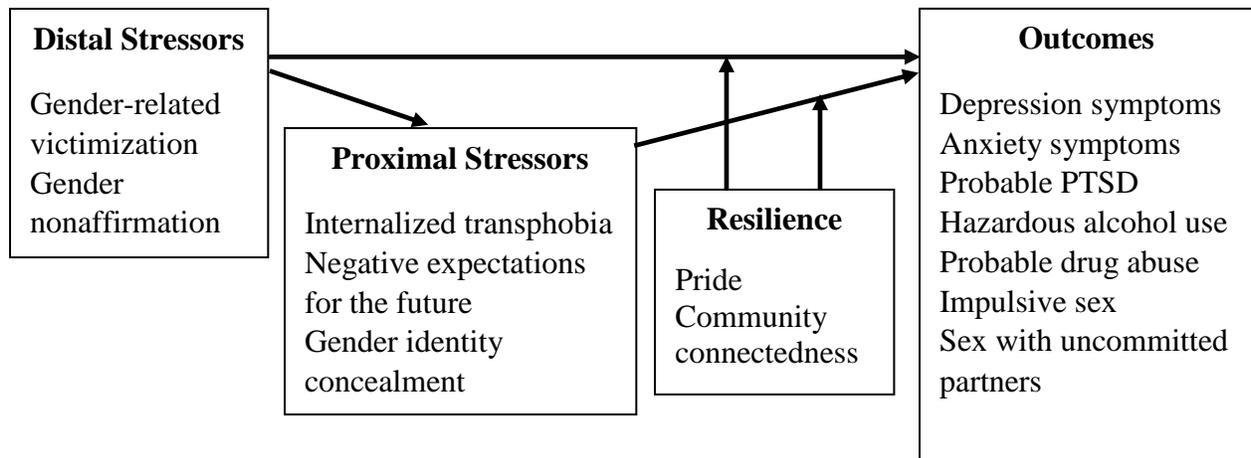
Further prompts [See Appendix G], based on the work of Paul and Hayes (2002), followed to gather more detailed information. These prompts asked who is involved in the sexual experience, including how well the parties know one another, who initiates the sexual encounter, if planning is involved, where the sexual encounter takes place, if alcohol is involved, how much communication takes place during the encounter, how each person feels during and after the

encounter and how typical the script is as a description of the participant’s own sexual experiences.

**Specific Aims and Hypotheses**

Aim 1: Examine the applicability of the gender minority stress and resilience model to the experiences of transgender and gender nonconforming undergraduates. According to the theory, forms of violence and nonaffirmation enacted by others (distal stressors) and negative views of oneself and the future (proximal stressors) heighten psychological distress (i.e., depression symptoms, anxiety symptoms, and probable PTSD) and result in problematic coping behaviors which affect health (i.e., hazardous alcohol use, probable drug abuse, impulsive sex, and sex with uncommitted partners). However, distress and health risk behaviors are mitigated by resiliency, including pride and community connectedness. [See Figure 1.]

**Figure 1.** Gender Minority Stress and Resilience Model Being Tested



*Figure 1.* Model being tested. Adapted from “Development of the Gender Minority Stress and Resilience Measure,” by R. J. Testa and colleagues, 2015, *Psychology of Sexual Orientation and Gender Diversity*, 2, p. 67.

Hypothesis 1: Minority stress, both distal (gender-related victimization and gender nonaffirmation) and proximal (internalized transphobia, negative expectations for

the future, and gender identity concealment) would predict psychological distress (depression, anxiety, and PTSD), in accordance with the minority stress model.

Hypothesis 2: Distal and proximal minority stress would predict alcohol consumption and other substance use.

Hypothesis 3: Distal and proximal minority stress would predict engagement in risky sex.

To test hypotheses 1, 2 and 3, hierarchical linear regressions were run with continuous dependent variables (depressive symptoms, anxious symptoms, hazardous alcohol use, impulsive sex, and sex with uncommitted partners). All minority stress factors were operationalized according to the GMSR measure and were mean-centered prior to analyses to reduce collinearity, except for gender-related victimization which was changed to a dichotomous variable (yes = experienced or no = have not experienced). Distal stress variables (gender-related victimization and gender nonaffirmation) were entered in step 1, and proximal stress variables (internalized transphobia, negative expectations for the future, and gender identity concealment) were entered in step 2. Remaining dependent variables (probable drug abuse and probable PTSD) were run in logistic regressions. Steps 1 and 2 were entered in the same order as with the hierarchical linear regressions.

Hypothesis 4: There would be significant interactions between gender minority stress factors and resilience factors, such that both distal minority stress and proximal minority stress would be weaker predictors of psychological distress as resilience increased.

Hypothesis 5: There would be significant interactions between gender minority stress factors and resilience factors, such that both distal minority stress and proximal

minority stress would be weaker predictors of alcohol consumption and other substance use as resilience increased.

Hypothesis 6: There would be significant interactions between gender minority stress factors and resilience factors, such that both distal minority stress and proximal minority stress would be weaker predictors of risky sex as resilience increased.

To test hypotheses 4, 5 and 6, similar regression approaches were used. Each minority stress variable was entered in step 1, resilience variables were entered in step 2, and interaction terms were entered in step 3. Interactions between distal stress variables and resilience variables (pride and community connectedness) were analyzed separately from interactions between proximal stress variables and resilience variables. Significant interactions were considered evidence of moderating effects, and post-hoc probing was completed when necessary to determine the nature of these interactions (Holmbeck, 2002).

For post-hoc probing, Holmbeck (2002) suggests testing the simple slopes for significant difference from zero. During this process, two new regressions are run using new conditional moderator variables. Continuous conditional moderator variables were created by adding and subtracting the resilience standard deviations, such that the high resilience conditional variables were computed by subtracting one standard deviation and the low resilience conditional variables were computed by adding one standard deviation to mean-centered resilience variable scores. By this method, the moderator 0 point was manipulated, allowing for the examination of conditional effects (Holmbeck, 2002). In result, high pride equaled 0 when pride centered was one standard deviation above the mean, and low pride equaled 0 when pride centered was one standard deviation below the mean. New interaction variables were created using the conditional variables (e.g., high resilience X internalized transphobia and low resilience X internalized transphobia).

Then, two post-hoc regressions were run for the significant interaction, including the main effect, a conditional variable, and the corresponding conditional interaction term (e.g., minority stress centered, high resilience, and high resilience X minority stress). These regressions, thus, provided the simple slopes (coefficients for minority stress) for each condition (high or low resilience) and showed whether or not they were significant.

Aim 2: Examine the extent to which minority stress and resilience factors influence the sexual scripts of transgender and gender nonconforming undergraduates.

Aim 3: Examine the extent to which the sexual scripts of transgender and gender nonconforming undergraduates similar to and different from, those of heterosexual students.

To evaluate aims 2 and 3, analysis of the qualitative data took place in multiple steps. Steps followed those suggested by Braun and Clarke (2006) for conducting thematic analysis of qualitative data. Thematic analysis allowed for developing an understanding of patterns of common meaning and enabled for comparison of these patterns between the current sample and those described among heterosexual, cisgender college women within existing sexual script research. Qualitative coding was based upon the sexual scripts provided by 169 participants. First, several reviews of the sexual scripts by myself and two research assistants took place to identify script elements. These elements were then organized into groups, and preliminary themes were derived from review and grouping of these elements. Coders practiced using these themes on a small sample of cases (15) to ensure shared understanding of thematic coding. Themes were then added and revised, as necessary, to appropriately capture the script data offered by participants, and once final thematic patterns were decided upon, all scripts were coded and reviewed a last time to confirm thoroughness. Throughout the coding process, the coding team met with one another and the dissertation chair to discuss coding progress and

obstacles to agreement. When a coding disagreement arose it was first discussed among coders, and if an agreement was not reached at that time, the dissertation chair made the final coding decision.

### **Missing Data**

To reduce noncompletion of items during data collection, participants were notified at the end of each survey page of any missing responses. Before proceeding, participants with incomplete responses were informed of the number of unanswered questions on the survey page and given the opportunity to complete missing responses or to continue to the next survey page. In most cases, the page would advance if this option was selected. However, a participant could not continue with the survey without agreeing to the information contained within the informed consent or without completing items related to inclusion criteria (i.e., biological sex assigned at birth, gender identity, age, and academic standing). Similarly, in order to encourage participant submission of a sexual script, a timer was embedded within the survey which would not allow participants to advance to the sexual script prompts until one and a half minutes passed. A text response was also required for the sexual script item, though a participant could respond by stating, “Do not wish to answer,” if they decided they did not want to for any reason.

Any participants who did not make at least 33.0% progress through the survey were eliminated before analysis. This marker of progress delineated the point at which a participant progressed through the GMSR measure. A total of 234 participants (88.3%) completed the entire survey and left no items blank. Eleven participants (4.2%) provided no response to fewer than 10 items with most in this group missing 1 ( $n = 5$ ) or 2 ( $n = 3$ ) items. The remaining 20 participants (7.7%) provided no response for 14 to 46 items with most participants within this group missing

data on 22 items ( $n = 12$ ). According to Little's MCAR test, any data missing was completely at random,  $X^2(5937) = 5951.03, p = .45$ .

Missing data ranged from 0 – 7.0% on all items. The items with the largest percentage of missing responses came from the DASS-21. Imputation was not performed for missing responses in most cases for a number of reasons. No guidance yet exists for handling missing data on the GMSR, and as such, the effects of imputing missing data are unknown. Additionally, given their brevity, using imputation for data points on screening measures could significantly affect whether or not participants met cut scores, thus potentially artificially altering their levels of risk. On the DASS-21, mean replacement on missing subscale items is acceptable; however, this is only appropriate if no more than one item value is missing, thus one participant's data was imputed on the DASS-21 Depression subscale. Other participants with missing responses on the DASS-21 exceeded the missing item limit on both the Depression and Anxiety subscales, and when this occurs case deletion is recommended (Lovibond & Lovibond, 1995a). Statistical analyses were performed using listwise deletion, as this is an acceptable means for handling missing data when data is missing completely at random and because imputation was not performed. According to a priori analysis, the sample size exceeded the 100 complete cases necessary for good power with medium effect size at the 95% confidence interval for hierarchical regression analyses including interaction terms (Soper, 2017).

## CHAPTER III: RESULTS

### Demographics

Participants' mean age was 20.2 years. Generally, undergraduate academic years were similarly represented (e.g., freshmen through seniors). Participants' mean self-reported grade point average was 3.37. Most participants identified as White (89.1%), Latino (12.5%), or multi-ethnic (8.3%), and the majority reported their sex assigned at birth as female (77.7%).

Participants provided a variety of terms for gender identity, with the most popular being “nonbinary” (29.4%). Similarly, sexual orientations varied greatly, with the most commonly reported orientation being “pansexual” or “panromantic” (37.8%). Just under half of participants reported being single (47.5%), while just over a quarter reported being in a monogamous relationship (26.4%). Approximately 75% of participants reported a history of being diagnosed with a mental illness, often with frequent comorbidity. The most common mental health diagnoses included anxiety and depression. Participant demographics are summarized in Table 1.

Table 1

#### *Participant Demographics*

	%	<i>n</i>
Race/ethnicity		
White	89.1	236
Latino/a	12.5	33
Multiethnic	8.3	22
Asian	6.0	16
Black	4.9	13
Native American	4.2	11
Middle Eastern	1.9	5
Caribbean	0.8	2
Pacific Islander	0.8	2
Other	1.1	3
Academic year		
Freshman	27.5	73

Sophomore	24.2	64
Junior	22.3	59
Senior	20.8	55
Other	5.3	14
Sex assigned at birth		
Female	77.7	206
Male	21.5	57
Intersex	0.8	2
Gender identity		
Nonbinary	29.4	78
Transgender	26.4	70
Genderqueer	14.0	37
Agender	11.3	30
Genderfluid	10.2	27
Other (e.g., demigirl/boy, male/female, genderless)	23.4	62
Sexual orientation		
Pansexual/panromantic	37.8	98
Bisexual	23.5	64
Queer	18.3	48
Asexual	9.7	25
Lesbian	5.0	13
Gay	4.9	13
Demi	2.8	7
Straight	2.3	6
Other	4.8	12
Romantic relationship		
Single	47.5	126
In a relationship	26.4	70
Not exclusive	13.6	36
Married	4.2	11
Divorced/widowed	0.4	1
Other	7.9	21
Type of mental health diagnosis		
Anxiety disorder (GAD, Panic, Social anxiety)	53.6	134
Depressive disorder (MDD, PDD)	52.8	132
Attention deficit hyperactivity disorder	15.9	40
PTSD	13.5	34
Personality disorder (Borderline, Avoidant, Antisocial)	8.8	22
Bipolar disorder	8.0	20
Gender dysphoria	4.8	12

Obsessive compulsive and related disorders	4.8	12
Autism spectrum disorder	3.2	8
Eating disorder	2.8	7
Other mood disorder (Schizoaffective, Seasonal affective)	2.8	7
Schizophrenia	1.2	3

*Note.* GAD = Generalized anxiety disorder, MDD = Major depressive disorder, PDD = Persistent depressive disorder.

### **Outness and Gender Affirming Actions Taken**

Most participants reported a match between gender identity and expression, in that they dress in clothing, style their hair, or otherwise groom themselves in ways that express their gender identities (93.3%). Additionally, most participants reported using and responding to gender identity-congruent pronouns (91.5%). Other common actions taken to affirm gender included use of a name reflective of one’s gender identity and nonsurgical modification of one’s body contours through binding, tucking, padding, etc. (61.9%). Though about 5% of participants reported having completed top surgery, no participants reported undergoing bottom surgery. For a summary of gender affirming actions taken by participants, see Table 2.

Table 2

*Gender Affirming Actions Taken (N = 265)*

	%	<i>n</i>
Identity expression match	93.3	247
Pronoun match	91.5	237
Name match	66.1	175
Body contour modification	61.9	164
Name change	31.3	83
Hormone therapy	27.2	72
Top surgery	4.9	13
Use of puberty blockers	3.8	10
In process of/preparation for taking action	2.0	5
Alteration of voice pitch	0.8	2
Other surgery	0.4	1
No steps taken	3.4	9

Participants endorsed being most “out” about their gender identity to their friends, in particular cisgender friends made during college, followed by those made prior to college. Just over a third (35.1%,  $n = 93$ ) reported cisgender friends made during college as definitely knowing about the participant’s gender identity and the topic being discussed openly. However, while more open about their gender identity with friends made prior to college than several other groups, about 30% of participants reported that whether or not these friends know the participant’s gender identity, the topic is never discussed (29.9%,  $n = 79$ ). Following friends, participants reported being most out with their mothers, siblings, and people at school. They reported being least out within their religious communities, and a large portion of participants indicated these items did not apply to them (members of my religious community 69.4%,  $n = 184$ ; leaders of my religious community 71.3%,  $n = 189$ ). Table 3 provides descriptive statistics for the results of the Outness Inventory.

Table 3

*Outness Inventory (N = 265)*

	Min	Max	<i>M</i>	SD
Cisgender friends made during college	0	7	4.97	2.16
Cisgender friends made prior to college	0	7	4.46	2.15
Mother	0	7	4.32	2.24
Siblings	0	7	3.76	2.51
Classmates	0	7	3.55	1.97
My professor(s)/academic advisor(s)	0	7	3.38	2.03
Father	0	7	3.30	2.34
Strangers, new acquaintances	0	7	2.59	1.86
Extended family/relatives	0	7	2.58	1.86
Members of my religious community	0	7	0.69	1.52
Leaders of my religious community	0	7	0.68	1.56

*Note.* Item scores range from 0 to 7. Higher scores indicate increased “outness” to the particular person/people identified. The more “out” a person is, the more their gender identity is known and openly discussed.

### **Descriptives of Study Variables**

Before completing analyses related to study hypotheses, skew and kurtosis of all continuous variables were examined. According to Bulmer (1979) estimates and Z-testing for normality as suggested by Kim (2013), internalized transphobia, gender identity concealment, pride, and anxiety symptoms were approximately normally distributed. Negative expectations for the future and community connectedness were moderately negatively skewed, largely reflecting fears of being victimized because of one's gender identity or expression but also experiencing a sense of belonging when interacting with other members of the transgender community. Participants commonly endorsed instances of gender nonaffirmation, mostly related to having to explain their gender identity or correct the pronouns others use when speaking to them, as well as a general sense of being misunderstood because of not being seen as their identified gender by others. In consequence, gender nonaffirmation was highly negatively skewed and leptokurtic, resulting in a non-normal distribution (Hair, Hult, Ringle, & Sarstedt, 2017; Kim, 2013). The distribution of depression symptoms was platykurtic with a large standard deviation, meaning that outlier scores were uncommon and participants endorsed responses across the entire range of options. Hazardous alcohol use was highly positively skewed and leptokurtic, meaning most participants do not engage in hazardous alcohol use, though a minority are at high risk. Both sex with uncommitted partners and impulsive sex were positively skewed, which reflects SRS recoding (lowest 40% categorized together, followed by the next 30%, etc.) [See Appendix H]. The impulsive sex distribution was additionally platykurtic because recoding failed to separate responses into clean percentage categories. As this was a medium-sized sample, meaning greater than 50 participants but fewer than 300, an absolute Z-value over 3.29 (alpha level of 0.05) served as the indicator of a non-normal distribution (Kim, 2013). Skewness and kurtosis were

determined not due to random chance (Cramer, 2002). See Tables 4 and 5 for the descriptive statistics of these variables.

Table 4

*Descriptive Statistics of Continuous GMSR Variables*

	<i>n</i>	<i>M</i>	<i>SD</i>	<i>α</i>	<i>Min</i>	<i>Max</i>	<i>Skew</i>	<i>Kurtosis</i>
Nonaffirmation	263	18.65	5.08	.84	0	24	-1.29	1.32
Transphobia	262	15.04	8.80	.90	0	32	0.07	-0.97
Expectations	262	23.86	8.10	.90	0	36	-0.55	-0.07
Concealment	264	12.24	5.59	.83	0	20	-0.49	-0.67
Pride	263	19.00	7.13	.85	0	32	-0.40	-0.14
Connectedness	265	13.77	4.39	.79	0	20	-0.83	0.17

*Note.* Nonaffirmation = gender nonaffirmation; Transphobia = internalized transphobia; Expectations = negative expectations for the future; Concealment = gender identity concealment; Connectedness = community connectedness.

Table 5

*Descriptive Statistics of Continuous Outcome Variables*

	<i>n</i>	<i>M</i>	<i>SD</i>	<i>α</i>	<i>Min</i>	<i>Max</i>	<i>Skew</i>	<i>Kurtosis</i>
Depression	247	21.51	12.24	.92	0	42	0.02	-1.05
Anxiety	247	17.12	10.31	.81	0	42	0.39	-0.50
Alcohol	209	3.51	3.07	.72	0	15	1.66	2.45
Impulsive sex	179	3.64	3.46	.71	0	17	1.32	1.55
Uncommitted sex	177	8.42	6.89	.88	0	27	0.82	-0.16

*Note.* Depression = depression symptoms; Anxiety = anxiety symptoms; Alcohol = hazardous alcohol use; Uncommitted sex = sex with uncommitted partners.

Most continuous variables were moderately to strongly correlated in the expected direction with other continuous variables. These values are summarized in Table 6.

Unexpectedly, pride was positively correlated with gender nonaffirmation and sex with uncommitted partners. However, these correlations were not significant. Community connectedness was also positively correlated with both risky sex variables.

Table 6

*Correlations among Measures*

	2	3	4	5	6	7	8	9	10	11
1 Nonaffirmation	.25*	.29*	.12	.08	.14	.30*	.28*	.10	.17	.15
2 Transphobia	–	.36*	.36*	-.47*	-.26*	.33*	.22*	.19	.08	-.10
3 Expectations		–	.48*	-.23*	-.01	.23*	.28*	.16	.03	-.03
4 Concealment			–	-.33*	-.09	.23*	.21*	.17	.05	.07
5 Pride				–	.29*	-.18	-.04	-.18	-.01	.02
6 Connectedness					–	-.13	-.04	-.12	.67	.12
7 Depression						–	.56*	.16	.05	.09
8 Anxiety							–	.13	.01	.02
9 Alcohol								–	.22	.16
10 Impulsive sex									–	.51*
11 Uncommitted sex										–

*Note.* Victimization = gender-related victimization; Nonaffirmation = gender nonaffirmation; Transphobia = internalized transphobia; Expectations = negative expectations for the future; Concealment = gender identity concealment; Connectedness = community connectedness; Alcohol = hazardous alcohol use; Uncommitted sex = sex with uncommitted partners; Depression = depression symptoms; Anxiety = anxiety symptoms.

\* $p < .05$ , Holm corrected (Justin Gaetano, 2013).

Gender-related victimization was initially summed as a continuous variable. However, it was recoded as a dichotomous variable because although the majority of participants endorsed at least one gender-related victimization experience, more than half of them (53.8%) endorsed only one or two of these items. In most cases, victimization experiences related to being verbally teased or harassed because of one’s gender identity or expression. The vast majority of participants who endorsed experiencing some trauma met the cutoff for probable PTSD, and almost 60% of participants who endorsed using substances other than alcohol reported using to excess. Descriptive statistics for these categorical variables are included in Table 7.

Table 7

*Descriptive Statistics of Categorical Variables*

	<i>n</i>	<i>M</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>	<i>Cut-off</i>	<i>n</i> above cut-off (%)
Victimization	261	2.62	2.93	0	12	1	197 (75.5)
Probable PTSD	149	3.89	1.28	0	5	3	122 (81.3)
Probable drug abuse	143	3.03	1.51	0	8	3	83 (58.0)

*Note.* Victimization = gender-related victimization.

**Aim 1: Applicability of Gender Minority Stress and Resilience Model**

The first study aim was to examine how well the gender minority stress and resilience model applies to an undergraduate transgender and gender nonconforming sample. Hierarchical regressions determined if stigma experiences adversely affected health and if resilience factors weakened the relationship between stigma and psychological distress and engagement in health risk behaviors. Hierarchical linear regressions were utilized when outcome variables were continuous, and hierarchical logistic regressions were utilized when outcomes were dichotomous. Potential collinearity of mean-centered continuous predictor variables was examined before regression analyses were run, and no collinearity problems were suggested by

variance inflation factors or by condition indices and corresponding variance-decomposition proportions.

Distributions of residuals were non-normal and attempts to transform the data to correct for this non-normality were unsuccessful. According to Gelman and Hill (2007), normality of the errors in a regression analysis is an assumption of lesser import, in that the purpose of estimating the regression line can still be achieved. They suggest testing the normality of regression residuals becomes more crucial when the intended purpose of running the analysis is to predict individual data points (Gelman & Hill, 2007). Therefore, despite failing to meet the assumption of normality of errors, hierarchical regression analyses were run as proposed to test hypotheses 1 through 6. Bootstrapping was utilized to improve the accuracy of confidence interval estimation.

For hypotheses 1 through 3, predictors were entered in two steps. In step 1, distal stressors were entered. Then, in step 2, the proximal stressors were entered. The process was repeated with each outcome variable. Results are summarized in Tables 8 through 12.

First, two linear regressions were run to predict depression and anxiety symptoms. Results of both regression models supported that gender minority stress predicted psychological symptoms. At step 1, distal stressors significantly predicted depression symptoms,  $F(2, 238) = 15.31, p < .005, \Delta R^2 = .11$ . At step 2, the addition of proximal stressors significantly increased the variance in depression scores explained,  $F(3, 235) = 6.76, p < .005, \Delta R^2 = .07$ . Similarly, at step 1, distal stressors significantly predicted anxiety symptoms,  $F(2, 238) = 14.61, p < .005, \Delta R^2 = .11$ , and at step 2, proximal stressors significantly increased the variance in anxiety scores explained,  $F(5, 235) = 8.73, p < .005, \Delta R^2 = .05$ . Minority stress predicted 18% of the variance in depression symptoms and 16% of the variance in anxiety symptoms.

Table 8

*Minority Stress as a Predictor of Depression and Anxiety Symptoms*

Predictor	Psychological distress symptoms			
	Depression		Anxiety	
	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$
Step 1	.11**		.11**	
Victimization		.16*		.18*
Nonaffirmation		.28**		.26**
Step 2	.07**		.05*	
Transphobia		.22**		.07
Expectations		.03		.16*
Concealment		.09		.07
Total $R^2$	.18**		.16**	
<i>n</i>	241		241	

*Note.* Victimization = gender-related victimization; Nonaffirmation = gender nonaffirmation; Transphobia = internalized transphobia; Expectations = negative expectations for the future; Concealment = gender identity concealment.

\*\* $p < .005$ . \* $p < .05$ .

A hierarchical binary logistic regression was run to predict probable PTSD. At step 1, distal stressors significantly predicted probable PTSD,  $X^2(2, N = 242) = 40.16, p < .005$ . At this step, correct prediction of probable PTSD occurred 66.9% of the time. When proximal stressors were entered at step 2 correct prediction of probable PTSD increased to 67.4% and the overall model remained significant,  $X^2(5, N = 242) = 47.21, p < .005$ . However, adding proximal stressors into the model at step 2 did not lead to a significant reduction in prediction error  $X^2(3, N = 242) = 7.05, p = .07$ .

Table 9

*Minority Stress as a Predictor of Probable PTSD*

Predictor	<i>B</i>	<i>SE B</i>	<i>OR</i>	$X^2$	<i>df</i>	Overall % Correct
Step 1				40.16**	2	66.9
Victimization	-1.44**	0.36	0.24			
Nonaffirmation	0.13**	0.03	1.14			
Step 2				7.05	3	67.4

Transphobia	-0.01	0.02	0.99
Expectations	0.05*	0.02	1.06
Concealment	0.00	0.03	1.00
Model $X^2$	47.21**		
<i>n</i>	242		

*Note.* Victimization = gender-related victimization; Nonaffirmation = gender nonaffirmation; Transphobia = internalized transphobia; Expectations = negative expectations for the future; Concealment = gender identity concealment. Victimization history coded 0 for no and 1 for yes. Bootstrapping was used for *SE B* values.

\*\* $p < .005$ . \* $p < .05$ .

Next, minority stress was examined as a predictor of health risk behaviors, beginning with hazardous alcohol use. At step 1, distal stressors did not significantly predict hazardous alcohol use,  $F(2, 199) = 1.77, p = .17, \Delta R^2 = .02$ . Adding proximal stressors to the model at step 2 significantly increased the variance in hazardous alcohol use scores explained,  $F(3, 196) = 2.70, p = .047, \Delta R^2 = .04$ . Minority stress predicted 6% of the variance in hazardous alcohol use.

Table 10

*Minority Stress as a Predictor of Hazardous Alcohol Use*

Predictor	$\Delta R^2$	$\beta$
Step 1	0.02	
Victimization		0.08
Nonaffirmation		0.10
Step 2	0.04*	
Transphobia		0.13
Expectations		0.06
Concealment		0.08
Total $R^2$	0.06*	
<i>n</i>	202	

*Note.* Victimization = gender-related victimization; Nonaffirmation = gender nonaffirmation; Transphobia = internalized transphobia; Expectations = negative expectations for the future; Concealment = gender identity concealment.

\*\* $p < .005$ . \* $p < .05$ .

Binary logistic regression tested if minority stress predicted probable drug abuse. At step 1, distal stressors failed to significantly predict probable drug abuse,  $X^2(2, N = 256) = 3.67, p =$

.16. At this step, correct prediction of probable drug abuse occurred 68.8% of the time. When proximal stressors were entered at step 2 correct prediction of probable drug abuse did not significantly increase (68.4%), nor did the addition of proximal stressors into the model lead to a significant reduction in prediction error  $X^2(3, N = 256) = 3.66, p = .30$ . Overall, the model was not significant,  $X^2(5, N = 256) = 7.33, p = .20$ .

Table 11

*Minority Stress as a Predictor of Probable Drug Abuse*

Predictor	<i>B</i>	<i>SE B</i>	<i>OR</i>	$X^2$	<i>df</i>	Overall % Correct
Step 1				3.67	2	68.8
Victimization	-0.28	0.35	0.76			
Nonaffirmation	0.05	0.03	1.05			
Step 2				3.66	3	68.4
Transphobia	-0.00	0.02	0.10			
Expectations	0.04	0.02	1.04			
Concealment	-0.03	0.03	0.97			
Model $X^2$	7.33					
<i>n</i>	256					

*Note.* Victimization = gender-related victimization; Nonaffirmation = gender nonaffirmation; Transphobia = internalized transphobia; Expectations = negative expectations for the future; Concealment = gender identity concealment. Victimization history coded 0 for no and 1 for yes. Bootstrapping was used for *SE B* values.

Next, minority stress variables were examined as predictors of risky sexual behavior. At step 1, distal stressors did not predict impulsive sex,  $F(2, 173) = 2.86, p = .06, \Delta R^2 = .03$ , nor did proximal stressors at step 2 significantly increase the variance in impulsive sex scores explained  $F(3, 170) = 0.36, p = .78, \Delta R^2 = .01$ . Distal stressors did not significantly predict sex with uncommitted partners,  $F(2, 171) = 2.26, p = .11, \Delta R^2 = .03$ . At step 2, proximal stressors significantly increased the variance in sex with uncommitted partner scores explained,  $F(3, 168) = 2.91, p = .04, \Delta R^2 = .05$ . Minority stress accounted for 7% of the variance in uncommitted sex.

Table 12

*Minority Stress as a Predictor of Risky Sex*

Predictor	Risky sexual behaviors			
	Impulsive sex		Uncommitted sex	
	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$
Step 1	.03		.03	
Victimization		.05		.07
Nonaffirmation		.17		.15
Step 2	.01		.05*	
Transphobia		.03		-.20*
Expectations		-.08		-.10
Concealment		.06		.17
Total $R^2$	.04		.07*	
<i>n</i>	176		174	

*Note.* Victimization = gender-related victimization; Nonaffirmation = gender nonaffirmation; Transphobia = internalized transphobia; Expectations = negative expectations for the future; Concealment = gender identity concealment.

\*  $p < .05$ .

For hypotheses 4 through 6, which stated minority stress and resilience factors would interact such that resilience would significantly weaken the relationship between minority stress and psychological distress or health risk behaviors, predictors were entered in three steps for each outcome variable. In step 1, distal or proximal stressors were entered. Then, in step 2, resilience factors were entered. In the final step, interaction terms between each type of minority stress and resilience factor were entered. Tables 13 through 18, presented below, summarize results.

Two linear regressions were run to test if minority stress and resilience factors interacted to predict depression symptoms. The first regression examined the interactions between distal stress and resilience, and the second examined the interactions of proximal stress and resilience. At step 1 of the first regression, distal stressors significantly predicted depression,  $F(2, 240) = 16.16, p < .005, \Delta R^2 = .12$ . At step 2, adding resilience factors into the model significantly

increased the variance in depression scores explained,  $F(2, 238) = 12.67, p < .005, \Delta R^2 = .06$ . At step 3, interactions between distal stressors and resilience factors did not lead to a significantly increased variance in depression explained,  $F(4, 234) = 6.66, p = .58, \Delta R^2 = .01$ .

At step 1 of the second regression, proximal stressors significantly predicted depression,  $F(3, 241) = 11.67, p < .005, \Delta R^2 = .13$ . At step 2, adding resilience factors into the model did not significantly increase the variance in depression scores explained,  $F(2, 239) = 7.20, p = .58, \Delta R^2 = .00$ . Similarly, at step 3, interactions between distal stressors and resilience factors did not lead to a significantly increased variance in depression explained,  $F(6, 233) = 3.86, p = .38, \Delta R^2 = .02$ . Interestingly, the interaction between internalized transphobia and pride arose as a significant predictor in this regression, and according to post-hoc probing, depression symptoms tended to be higher at higher levels of internalized transphobia when pride was low. See Table 18 for a summary of these results and Figure 2 for a visual representation of the simple slopes under the conditions of high and low pride.

Linear regressions were then run to predict anxiety symptoms. As with depression symptoms, the first regression examined the interactions between distal stress and resilience, and the second examined the interactions of proximal stress and resilience. At step 1, distal stressors significantly predicted anxiety,  $F(2, 240) = 15.22, p < .005, \Delta R^2 = .11$ , and at step 2, resilience factors failed to significantly increase the variance in anxiety scores explained,  $F(2, 238) = 8.06, p = .41, \Delta R^2 = .01$ . At step 3, interactions between distal stressors and resilience factors did not lead to a significantly increased variance in anxiety symptoms explained,  $F(4, 234) = 4.56, p = .38, \Delta R^2 = .02$ .

At step 1 of the second regression, proximal stressors significantly predicted anxiety symptoms,  $F(3, 241) = 8.44, p < .005, \Delta R^2 = .10$ . At step 2, adding resilience factors into the

model did not significantly increase the variance in anxiety scores explained,  $F(2, 239) = 5.93$ ,  $p = .13$ ,  $\Delta R^2 = .11$ . Similarly, at step 3, interactions between distal stressors and resilience factors did not lead to a significantly increased variance in anxiety explained,  $F(6, 233) = 3.65$ ,  $p = .13$ ,  $\Delta R^2 = .04$ .

Table 13

*Minority Stress and Resilience Interactions as Predictors of Depression and Anxiety Symptoms*

Distal stress				
Predictor	Psychological distress symptoms			
	Depression		Anxiety	
	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$
Step 1	.12**		.11**	
Victimization		.17*		.18**
Nonaffirmation		.28**		.26**
Step 2	.06**		.01	
Pride		-.19**		-.07
Connectedness		-.11		-.04
Step 3	.01		.02	
Victim_pride		-.01		.22
Nonaffirm_pride		-.11		-.09
Victim_connect		.02		.12
Nonaffirm_connect		.04		-.02
Total $R^2$	.19**		.14**	
$n$	243		243	
Proximal stress				
Predictor	Psychological distress symptoms			
	Depression		Anxiety	
	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$
Step 1	.13**		.10**	
Transphobia		.25**		.10
Expectations		.09		.09*
Concealment		.10		.10
Step 2	.00		.02	
Pride		.02		.14*
Connectedness		-.07		-.03
Step 3	.02		.04	
Phobia_pride		-.15*		-.14

Expect_pride		-.10	.13
Conceal_pride		.02	-.06
Phobia_connect		.02	-.12
Expect_connect		-.03	.08
Conceal_connect		.01	.01
Total $R^2$		.15**	.15**
$n$		245	245

*Note.* Victimization = gender-related victimization; Nonaffirmation = gender nonaffirmation; Transphobia = internalized transphobia; Expectations = negative expectations for the future; Concealment = gender identity concealment; Connectedness = community connectedness; Victim\_pride = gender-related victimization x pride; Nonaffirm\_pride = gender nonaffirmation x pride; Victim\_connect = gender-related victimization x community connectedness; Nonaffirm\_connect = gender nonaffirmation x community connectedness; Phobia\_pride = internalized transphobia x pride; Expect\_pride = negative expectations for the future x pride; Conceal\_pride = gender identity concealment x pride; Phobia\_connect = internalized transphobia x community connectedness; Expect\_connect = negative expectations for the future x community connectedness; Conceal\_connect = gender identity concealment x community connectedness.

\*\* $p < .005$ . \* $p < .05$ .

Binary logistic regressions were run to predict probable PTSD. At step 1 of the first regression, distal stressors significantly predicted probable PTSD,  $X^2(2, N = 244) = 51.54, p < .005$ . At this step, correct prediction of probable PTSD occurred 67.2% of the time. Adding resilience factors into the model at step 2 did not lead to a significant reduction in prediction error,  $X^2(2, N = 244) = 5.36, p = .07$ , nor did entering interactions between distal stressors and resilience factors into the regression at step 3,  $X^2(4, N = 244) = 2.36, p = .67$ . Though the overall model remained significant at steps 2,  $X^2(4, N = 244) = 46.90, p < .005$  and 3,  $X^2(8, N = 244) = 46.26, p < .005$ , correct prediction of probable PTSD did not improve beyond 67.2%.

At step 1 of the second regression, proximal stressors significantly predicted probable PTSD,  $X^2(3, N = 246) = 18.20, p < .005$ . At this step, correct prediction of probable PTSD occurred 58.1% of the time. Adding resilience factors into the model at step 2 did not lead to a significant reduction in prediction error,  $X^2(2, N = 246) = 1.06, p = .59$ , nor did entering interactions between distal stressors and resilience factors into the regression at step 3,  $X^2(6, N =$

246) = 1.63,  $p = .95$ . However, the overall model remained significant at steps 2,  $X^2(5, N = 246) = 19.25, p < .005$  and 3,  $X^2(11, N = 246) = 20.88, p = .04$ .

Table 14

*Minority Stress and Resilience Interactions as Predictors of Probable PTSD*

Distal stress						
Predictor	<i>B</i>	<i>SE B</i>	<i>OR</i>	$X^2$	<i>df</i>	Overall % Correct
Step 1				41.54**	2	67.2
Victimization	-1.45**	0.38	0.23			
Nonaffirmation	0.13**	0.03	1.14			
Step 2				5.36	2	67.2
Pride	-0.03	0.02	0.97			
Connectedness	-0.04	0.04	0.96			
Step 3				2.36	4	67.2
Victim_pride	0.03	0.09	1.03			
Nonaffirm_pride	-0.00	0.01	1.00			
Victim_connect	0.03	0.12	1.03			
Nonaffirm_connect	-0.01	0.01	0.99			
Model $X^2$	49.26**					
<i>n</i>	244					
Proximal stress						
Predictor	<i>B</i>	<i>SE B</i>	<i>OR</i>	$X^2$	<i>df</i>	Overall % Correct
Step 1				18.20**	3	58.1
Transphobia	-0.00	0.02	1.00			
Expectations	0.07**	0.02	1.07			
Concealment	0.01	0.03	1.01			
Step 2				1.06	2	61.0
Pride	0.00	0.02	1.00			
Connectedness	-0.03	0.03	0.97			
Step 3				1.63	6	60.2
Phobia_pride	-0.00	0.00	1.00			
Expect_pride	0.00	0.00	1.00			
Conceal_pride	-0.00	0.01	1.00			
Phobia_connect	0.00	0.01	1.00			
Expect_connect	-0.00	0.01	1.00			
Conceal_connect	0.01	0.01	1.01			

Model $X^2$	20.88*
$n$	246

*Note.* Victimization = gender-related victimization; Nonaffirmation = gender nonaffirmation; Transphobia = internalized transphobia; Expectations = negative expectations for the future; Concealment = gender identity concealment; Connectedness = community connectedness; Victim\_pride = gender-related victimization x pride; Nonaffirm\_pride = gender nonaffirmation x pride; Victim\_connect = gender-related victimization x community connectedness; Nonaffirm\_connect = gender nonaffirmation x community connectedness; Phobia\_pride = internalized transphobia x pride; Expect\_pride = negative expectations for the future x pride; Conceal\_pride = gender identity concealment x pride; Phobia\_connect = internalized transphobia x community connectedness; Expect\_connect = negative expectations for the future x community connectedness; Conceal\_connect = gender identity concealment x community connectedness.

Bootstrapping was used for *SE B* values.

\*\* $p < .005$ . \* $p < .05$ .

Next, linear regressions tested if the interactions between minority stress and resilience predicted hazardous alcohol use. Distal stressors did not significantly predict hazardous alcohol use at step 1,  $F(2, 201) = 1.65, p = .19, \Delta R^2 = .02$ . Adding resilience factors to the model at step 2 significantly increased the variance in hazardous alcohol use scores explained,  $F(2, 199) = 4.35, p = .01, \Delta R^2 = .04$  and led to an overall significant model,  $F(4, 199) = 3.03, p = .02$ . When interactions between distal stressors and resilience factors were entered in step 3 prediction error did not significantly improve,  $F(4, 195) = 0.94, p = .45, \Delta R^2 = .02$ , and the overall model was no longer significant,  $F(8, 195) = 1.98, p = .05$ .

Proximal stressors significantly predicted hazardous alcohol use at step 1,  $F(3, 202) = 3.70, p = .01, \Delta R^2 = .05$ . Though the overall model remained significant,  $F(5, 200) = 2.64, p = .03$ , adding resilience factors to the model at step 2 did not significantly increase the variance in hazardous alcohol use scores explained,  $F(2, 200) = 1.04, p = .36, \Delta R^2 = .06$ . When interactions between distal stressors and resilience factors were entered in step 3 prediction error did not significantly improve,  $F(6, 194) = 1.30, p = .26, \Delta R^2 = .04$ , and again, the overall model remained significant,  $F(11, 194) = 1.92, p = .04$ .

Table 15

*Minority Stress and Resilience Interactions as Predictors of Hazardous Alcohol Use*

Distal stress		
Predictor	$\Delta R^2$	$\beta$
Step 1	0.02	
Victimization		.07
Nonaffirmation		.10
Step 2	0.04	
Pride		-.16*
Connectedness		-.09
Step 3	0.02	
Victim_pride		.05
Nonaffirm_pride		-.04
Victim_connect		.23
Nonaffirm_connect		-.04
Total $R^2$	0.08	
$n$	204	
Proximal stress		
Predictor	$\Delta R^2$	$\beta$
Step 1	0.05*	
Transphobia		0.14
Expectations		0.09
Concealment		0.07
Step 2	0.01	
Pride		-0.10
Connectedness		-0.04
Step 3	0.04	
Phobia_pride		-.15
Expect_pride		.08
Conceal_pride		.05
Phobia_connect		-.13
Expect_connect		.11
Conceal_connect		-.00
Total $R^2$	0.10	
$n$	206	

*Note.* Victimization = gender-related victimization; Nonaffirmation = gender nonaffirmation; Transphobia = internalized transphobia; Expectations = negative expectations for the future; Concealment = gender identity concealment; Connectedness = community connectedness; Victim\_pride = gender-related victimization x pride; Nonaffirm\_pride = gender nonaffirmation x

pride; Victim\_connect = gender-related victimization x community connectedness; Nonaffirm\_connect = gender nonaffirmation x community connectedness; Phobia\_pride = internalized transphobia x pride; Expect\_pride = negative expectations for the future x pride; Conceal\_pride = gender identity concealment x pride; Phobia\_connect = internalized transphobia x community connectedness; Expect\_connect = negative expectations for the future x community connectedness; Conceal\_connect = gender identity concealment x community connectedness.

\*\* $p < .001$ . \* $p < .05$ .

Binary logistic regressions were run to predict probable drug abuse. At step 1 of the first regression, distal stressors failed to significantly predict probable drug abuse,  $X^2(2, N = 258) = 3.92, p = .14$ . Again, at step 2, adding resilience factors into the model did not lead to a significant reduction in prediction error,  $X^2(2, N = 258) = 0.52, p = .77$ , nor did entering interactions between distal stressors and resilience factors into the regression at step 3,  $X^2(4, N = 258) = 5.21, p = .27$ . Correct prediction of probable drug abuse was 69.0% at step 3, which was not a statistically significant improvement over membership predicted by the constant (68.6%) at step 0.

At step 1 of the second regression, proximal stressors did not significantly predict probable drug abuse,  $X^2(3, N = 260) = 5.57, p = .14$ . Adding resilience factors into the model at step 2 did not lead to a significant reduction in prediction error,  $X^2(2, N = 260) = 1.71, p = .43$ , nor did entering interactions between distal stressors and resilience factors into the regression at step 3,  $X^2(6, N = 260) = 10.60, p = .10$ . The overall model remained non-significant at all steps.

Table 16

*Minority Stress and Resilience Interactions as Predictors of Probable Drug Abuse*

Distal stress						
Predictor	<i>B</i>	<i>SE B</i>	<i>OR</i>	$\Delta X^2$	<i>df</i>	Overall % Correct
Step 1				3.92	2	68.6
Victimization	-0.28	0.33	0.76			
Nonaffirmation	0.05	0.03	1.05			

Step 2				0.52	2	68.6
Pride	0.01	0.02	1.01			
Connectedness	-0.01	0.04	0.99			
Step 3				5.21	4	69.0
Victim_pride	0.04	0.06	1.05			
Nonaffirm_pride	-0.01	0.01	0.99			
Victim_connect	0.10	0.08	1.11			
Nonaffirm_connect	-0.00	0.01	1.00			
Model $X^2$	9.64					
<i>n</i>	258					

Proximal stress						
Predictor	<i>B</i>	<i>SE B</i>	<i>OR</i>	$\Delta X^2$	<i>df</i>	Overall % Correct
Step 1				5.57	3	68.8
Transphobia	-0.00	0.02	1.00			
Expectations	0.05*	0.02	1.05			
Concealment	-0.03	0.03	0.98			
Step 2				1.71	2	68.8
Pride	0.03	0.02	1.03			
Connectedness	0.00	0.04	1.00			
Step 3				10.60	6	69.6
Phobia_pride	-0.01	0.00	1.00			
Expect_pride	0.01	0.00	1.01			
Conceal_pride	0.00	0.01	1.00			
Phobia_connect	0.01	0.01	1.01			
Expect_connect	-0.00	0.01	1.00			
Conceal_connect	0.00	0.01	1.00			
Model $X^2$	17.88					
<i>n</i>	260					

*Note.* Victimization = gender-related victimization; Nonaffirmation = gender nonaffirmation; Transphobia = internalized transphobia; Expectations = negative expectations for the future; Concealment = gender identity concealment; Connectedness = community connectedness; Victim\_pride = gender-related victimization x pride; Nonaffirm\_pride = gender nonaffirmation x pride; Victim\_connect = gender-related victimization x community connectedness; Nonaffirm\_connect = gender nonaffirmation x community connectedness; Phobia\_pride = internalized transphobia x pride; Expect\_pride = negative expectations for the future x pride; Conceal\_pride = gender identity concealment x pride; Phobia\_connect = internalized transphobia x community connectedness; Expect\_connect = negative expectations for the future x community connectedness; Conceal\_connect = gender identity concealment x community connectedness.

Bootstrapping was used for *SE B* values.

\*  $p < .05$ .

Two linear regressions were run to test if minority stress and resilience factors interacted to predict impulsive sex. The first regression examined the interactions between distal stress and resilience, and the second examined the interactions of proximal stress and resilience. Step 1 of the first regression failed to predict impulsive sex,  $F(2, 174) = 2.92, p = .06, \Delta R^2 = .03$ , and steps 2 and 3 failed to significantly increase the variance in impulsive sex scores explained,  $F(2, 172) = 0.04, p = .97, \Delta R^2 = .00$ ;  $F(4, 168) = 1.65, p = .58, \Delta R^2 = .04$ . Likewise, proximal stressors failed to significantly predict impulsive sex,  $F(3, 174) = 0.39, p = .76, \Delta R^2 = .01$ . Furthermore, adding resilience factors into the model did not significantly increase the variance in impulsive sex scores explained,  $F(2, 172) = 0.34, p = .71, \Delta R^2 = .00$ , and interactions between distal stressors and resilience factors added at step 3 did not lead to a significantly increased variance in impulsive sex explained,  $F(4, 166) = 0.91, p = .49, \Delta R^2 = .03$ .

Two linear regressions then tested if interactions between minority stress and resilience factors predicted sex with uncommitted partners. At step 1 of the first regression, distal stressors failed to significantly predict sex with uncommitted partners,  $F(2, 172) = 2.47, p = .09, \Delta R^2 = .03$ , and steps 2 and 3 also failed to significantly increase the variance in sex with uncommitted partners scores explained,  $F(2, 170) = 1.36, p = .26, \Delta R^2 = .02$ ;  $F(4, 166) = 1.31, p = .27, \Delta R^2 = .03$ . At step 1 of the second regression, proximal stressors again failed to significantly predict sex with uncommitted partners,  $F(3, 172) = 2.13, p = .10, \Delta R^2 = .04$ . Additionally, adding resilience factors into the model did not significantly increase the variance in sex with uncommitted partners scores explained,  $F(2, 170) = 0.67, p = .51, \Delta R^2 = .01$ , nor did adding interactions between distal stressors and resilience factors into the model at step 3 lead to a significantly increased variance in sex with uncommitted partners explained,  $F(6, 164) = 0.69, p = .66, \Delta R^2 = .02$ .

Table 17

*Minority Stress and Resilience Interactions as Predictors of Risky Sex*

Distal stress				
Predictor	Risky sexual behaviors			
	Impulsive sex		Uncommitted sex	
	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$
Step 1	.03		.03	
Victimization		.05		.07
Nonaffirmation		.17*		.15*
Step 2	.00		.02	
Pride		-.02		-.01
Connectedness		-.01		.13
Step 3	.04		.03	
Victim_pride		-.15		.21
Nonaffirm_pride		-.11		-.13
Victim_connect		.17		.10
Nonaffirm_connect		-.10		-.05
Total $R^2$	.07		.07	
$n$	177		175	
Proximal stress				
Predictor	Risky sexual behaviors			
	Impulsive sex		Uncommitted sex	
	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$
Step 1	.01		.04	
Transphobia		.06		-.17*
Expectations		.00		-.05
Concealment		.03		.17
Step 2	.00		.01	
Pride		.04		-.00
Connectedness		.05		.09
Step 3	.03		.02	
Phobia_pride		.11		-.08
Expect_pride		-.05		.13
Conceal_pride		-.07		.04
Phobia_connect		-.12		-.08
Expect_connect		-.00		.09
Conceal_connect		.17		-.01
Total $R^2$	.04		.07	
$n$	178		176	

*Note.* Victimization = gender-related victimization; Nonaffirmation = gender nonaffirmation; Transphobia = internalized transphobia; Expectations = negative expectations for the future; Concealment = gender identity concealment; Connectedness = community connectedness; Victim\_pride = gender-related victimization x pride; Nonaffirm\_pride = gender nonaffirmation x pride; Victim\_connect = gender-related victimization x community connectedness; Nonaffirm\_connect = gender nonaffirmation x community connectedness; Phobia\_pride = internalized transphobia x pride; Expect\_pride = negative expectations for the future x pride; Conceal\_pride = gender identity concealment x pride; Phobia\_connect = internalized transphobia x community connectedness; Expect\_connect = negative expectations for the future x community connectedness; Conceal\_connect = gender identity concealment x community connectedness.

\* $p < .05$ .

Table 18

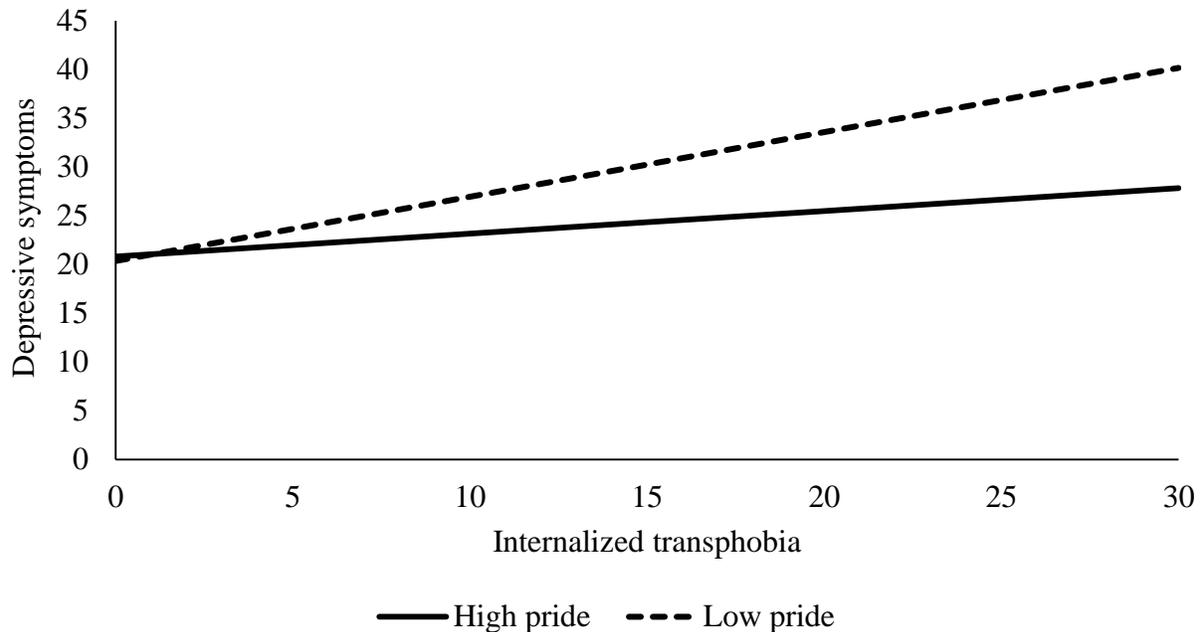
*Simple Slopes of Internalized Transphobia and Pride Interaction as a Predictor of Depressive Symptoms*

Predictor	High Pride		
	<i>b</i>	$\beta$	Bootstrapped 95% CI
Constant	20.82**		[18.85, 22.90]
Transphobia	0.23	.17	[0.01, 0.44]
High pride	0.03	.02	[-0.22, 0.27]
Phobia_highpride	-0.03*	-.24	[-0.05, -0.01]
$R^2$	0.14**		
$F$	13.03**		
$n$	245		
Predictor	Low Pride		
	<i>b</i>	$\beta$	Bootstrapped 95% CI
Constant	20.37**		[17.69, 23.20]
Transphobia	0.66**	.48	[0.42, 0.89]
Low pride	0.03	.02	[-0.24, 0.29]
Phobia_lowpride	-0.03*	-.22	[-0.05, -0.01]
$R^2$	0.14**		
$F$	13.03**		
$n$	245		

*Note.* Transphobia = internalized transphobia; High pride = pride – 1SD of mean-centered pride; Phobia\_highpride = internalized transphobia x High pride; Low pride = pride – (-1SD of mean-centered pride); Phobia\_lowpride = internalized transphobia x Low pride.

\*\* $p < .005$ . \* $p < .05$ .

**Figure 2.** Effects of Internalized Transphobia on Depressive Symptoms



*Figure 2.* Line graph illustrating post-hoc probing for the interaction of internalized transphobia and pride in predicting depressive symptoms. As shown above, when pride is low internalized transphobia has a greater effect on increasing depressive symptoms than when pride is high.

### **Aims 2 and 3: Sexual Scripts**

Those participants who provided any sexual script information ( $n = 169$ ) were similar to those who did not, with one exception. Individuals who had used drugs in the past year were more likely to provide a sexual script,  $X^2(1, N = 265) = 4.51, p = .03, 70.0\%$  v.  $57.0\%$ . There were no significant differences in demographics (biological sex, racial/ethnic group, school year, sexual preference, gender identity, and relationship status), trauma history, probable PTSD, hazardous drinking, living in one's affirmed gender all or mostly all the time, and history of mental illness among participants who provided a script and those who did not. Roughly two thirds of participants who provided sexual scripts ( $66.3\%, n = 112$ ) reported that their script was an accurate reflection of their own sexual experiences, while  $12.4\% (n = 21)$  reported that it was not. A small portion of script writers ( $7.1\%, n = 12$ ) disclosed having very limited sexual

experiences and thus being unable to say if the sexual script resembled what may be a “typical” sexual experience for themselves or a transgender or gender nonconforming college student. The rest did not provide a response to this prompt.

All 169 sexual scripts were coded by a team of three coders, which included the author and two trained research assistants. First, we reviewed the scripts to formulate initial impressions of potential themes and identify relevant script elements. These script elements were then discussed with the faculty advisor, and a combined list of 80 script elements was created. The scripts were reread with these elements in mind to ensure that all script elements were meaningful, that no notable script elements were overlooked, and to begin grouping these script elements by theme. The coders discussed the saliency of the identified script elements and grouped them into six categories, or themes (well-planned casual sexual encounter, ongoing sexual relationship, unplanned casual encounter, active concealment of gender identity, gender identity revealed during the sexual encounter, and openness about gender identity). Five cases generally representative of the majority of scripts were chosen for element and thematic coding by all three coders for practice. After reviewing coding for these five cases together and establishing that each coder understood the thematic meanings similarly, the entire set of cases to be coded were split into thirds, such that each coder would eventually code two thirds of the provided scripts and that half of each coder’s cases would independently overlap with each of the other coder’s assigned cases.

All coders practiced coding the first five scripts of each third of the entire set of scripts for refinement of thematic understanding. Following this round of practice coding, a gender dysphoria theme was added, and existing themes were adjusted slightly. Well-planned casual sexual encounter was changed to negotiated one-time casual sexual encounter, and unplanned

casual sexual encounter was changed to one-time unplanned casual sexual encounter. Additionally, ongoing sexual relationship was divided into two themes: ongoing romantic relationship and repeated casual sexual encounter. Active concealment of gender identity was retained as a theme, but gender identity revealed during the sexual encounter and openness with gender identity were consolidated into a single theme (disclosure of gender identity). With these refined themes (negotiated one-time casual encounter, ongoing romantic relationship, repeated casual encounter, unplanned one-time casual encounter, active concealment of gender identity, disclosure of gender identity, and gender dysphoria), the first 10 cases of each third of cases were then coded by assigned coder pairs.

At this stage, overall coder agreement reached 93.0%, so the entire set of scripts was coded as assigned. Upon completion of this stage of coding, the coders reviewed the scripts again to ensure the coding appropriately captured all overriding themes. The coders agreed the addition of themes related to stigma and resilience would better capture the breadth of data provided within the sexual scripts, and the following themes were added and coded: enacted stigma, self-stigma, trauma history, open communication of body parts and sexual boundaries, and participation in a nontraditional sexual community). Any differences in coding between coders were discussed until full agreement was reached or a final decision was made by the dissertation chair. Table 19 describes each sexual script theme.

Table 19

*Sexual Script Themes*

Theme	Description	% (n)
Ongoing romantic relationship	Sex within a committed relationship	29.0 (49)
Negotiated one-time casual encounter	Single planned meeting for the purpose of sex	24.9 (42)
Unplanned one-time casual encounter	Single sexual encounter with no planning and no relationship expectations	11.2 (19)
Repeated casual encounter	Sex more than once with no expectations of romantic commitment	8.9 (15)
Enacted stigma	Discrimination, past rejection, nonaffirmation, or gender-related related victimization described	16.6 (28)
Trauma history	Mention of abuse, assault, rape, or PTSD, though not necessarily related to gender	6.5 (11)
Self-stigma	Rejection or negative encounter expected or internalized transphobia indicated	27.2 (46)
Gender dysphoria	Allusion to being triggered during a sexual encounter or discomfort with one's body	32.5 (55)
Active concealment of gender identity	Hiding one's gender identity from sexual partners	7.1 (12)
Open communication of body parts/sexual boundaries	Open discussion of consent and sexual boundary setting	56.8 (96)
Disclosure of gender identity	Individual describes being "out" to their partner	56.2 (95)
Participation in a nontraditional sex community	Describes belonging to some sex-positive community	14.2 (24)

**Nature of sexual relationships.** The most common type of sexual relationship described was that between two people that know each other very well within an established romantic relationship. Just over half of participants (51.0%,  $n = 25$ ) providing this type of script reported either partner or both partners initiating the encounter, and remaining scripts offered a mix of the gender nonconforming person or the partner initiating. In a handful of cases (12.2%,  $n = 6$ ), the initiator was specifically given a masculine designation (e.g., “the more masculine one,” “he,” “him,” etc.) and in one case, a female one (“her”). Most often, the encounter was said to take place in a bedroom at home (93.9%,  $n = 46$ ), and alcohol or substance use was endorsed about a quarter of the time (24.5%,  $n = 12$ ). Those participants who provided a sexual script describing an ongoing romantic relationship were significantly more likely to endorse positive feelings, such as trust, love, comfort and safety, associated with a sexual encounter than those participants who did not provide a script with this theme,  $X^2(1, N = 169) = 4.83, p = .03, 75.5\%$  vs. 24.5%. Emotional closeness defined these scripts more so than any other detail, as demonstrated by the three excerpts below.

“Foreplay with love, passion and kissing to start. Then slow and passionate sex and then after sex cuddling and laying my head on his chest and listening to his heartbeat while he holds me and runs his fingers through my hair, making me feel safe, as I slowly fall asleep in his arms.” (21-year-old, White, transgender individual)

“... A sexual encounter would probably start with emotional intimacy, kissing and cuddling, and a discussion of what we like or don't like. Especially things that might be triggering or damaging.” (20-year-old, White, transgender individual)

“No set routine. The experience should be more spontaneous and experimental. Each partner should know what they want walking into the situation. If in a relationship, the experience should be focused on mutual closeness, and not orgasm itself.” (21-year-old, White, genderfluid individual)

The second most common type of sexual relationship described was a one-time encounter that was negotiated between two or more people not in a romantic relationship. These scripts depicted a prior expectation of sex and some planning of the encounter, such as prior flirting or messaging and clear discussion of sexual interests or boundaries. These scripts described meeting complete strangers for sex through apps or website listings, as well as knowing them as acquaintances or friends. No clear initiator was identified 38.1% ( $n = 16$ ) of the time. In 28.6% ( $n = 12$ ) of cases, script writers identified themselves or the “trans” person as the initiator. In 14.3% ( $n = 6$ ) of cases, the initiator was specified as “cis” and in 11.9% ( $n = 5$ ) cases, the initiator was specified as “the other person.” Though the most common place for the sexual encounter was a private space (83.3%,  $n = 35$ ), like a bedroom, these scripts also included other more public locations, such as in a club, a park, or an adult bookstore. Almost half of these script writers stated that alcohol was never used (45.2%,  $n = 18$ ), and when participants reported any alcohol use (38.1%,  $n = 16$ ), the use was often clarified as being limited to a small amount or infrequent in these situations. The use of marijuana was reported in 26.0% (11) of these scripts. Three examples of one-time negotiated encounters, often referred to as hook-ups, follow.

“I personally only participate in hookup culture, I never have sexual contact with people I know. So often times, sexual encounters will start with me posting an ad on the ‘casual encounters’ section of Craigslist. I’ll get a lot of emails in response, often very ‘fetish-y’ in feel. I respond to some, occasionally we’ll exchange other forms of communication, typically Kik messenger. We message and figure out a time to hookup. The man comes to my home or I meet him somewhere, and we have sex. He leaves when he finishes and we rarely speak again.” (21-year-old, White, self-assigned male individual)

“I personally hook up semi often on Grindr and my process is pretty similar each time. I don’t usually have much luck with messaging first so most of the time I’m responding to messages. I always make sure they understand what trans ftm means, and then we chat a little about what we like sexually. I always make it clear what I’m not willing to do. I also always ask and make sure they are ok with using condoms. Then I arrange the actual meet up. Usually that’s a pretty to the point process. We meet, small talk for a little bit and then make out and then sex. I’m always nervous at first and then relax as I get into it. I’m usually not worried about too much stuff since I’ve worked it out beforehand. The

few sexual experiences I've had that were not brokered out beforehand were slower, we talked more during and asked about comfort levels with things. Like areas not to touch and such. Both of those experiences were with trans people however so I felt more comfortable and safe.” (22-year-old, White and Latino, nonbinary individual)

“Well. I would expect this transgender or gnc person would either find this partner from within the lgbt community or from tinder/grinder/some hookup app or site. I'd expect them to have told this partner about being trans if they're already out. Hopefully everyone would go over what they're comfortable with during sex.” (23-year-old, multiethnic, transgender individual)

Unplanned one-time casual encounters, similar to negotiated one-time casual encounters, implied no explicit relationship expectations. They differed in that no preparations for meeting to engage in sex were described. Partners were generally not well known, most often described as acquaintances or strangers (78.9%,  $n = 15$ ). The initiator was either party 42.1% ( $n = 8$ ) of the time, the transgender or gender nonconforming person 21.1% ( $n = 4$ ) of the time, and a “cis” partner 15.8% ( $n = 3$ ) of the time. Remaining scripts identified the initiator as “them,” making it unclear who the identified individual was. Encounters of this type were reported to take place in a private location in all but one script (other script listed “anywhere” as location). The set up for these encounters involved a party atmosphere (31.6%,  $n = 6$ ) and alcohol or other substance use (68.4%,  $n = 13$ ) notably more often than the other types of scripts already described. Two examples of unplanned one-time casual encounters are provided below.

“It’s hard to say what we are doing beforehand, but there’s likely some amount of drugs or alcohol in our systems. Things would be going well and we’d have some degree of privacy. Then depending on who I’m with we’d do the deed/s, hopefully cuddle for a bit afterward and then go our seperate [sic] ways.” (20-year-old, White, self-assigned female, individual)

“X is a stand in for the gender nonconforming or trans person. Y is there partner. X goes to a social event with friends, perhaps it is a gay-themed event or party. At the party, X and Y both hang out with their friends, at least one of them drinks, and they have fun. They are relaxed and feel welcome. X and Y talk to each other in a group and then start to talk to each other alone. They have an engaging conversation. They probably bring up queer shit as a topic of conversation and talk about it. X comes out to Y, if Y does not know yet. Y is super chill about it and easily engages in talking about queer stuff. Many

of the friends decide it is time to go to bars and the party is over. X's and Y's friends both come up to the pair and ask if they want to come with and what their plan for the night is. Both X and Y make a plan to go home together and they will text their friends later in the night. X and Y leave the party together and go to Y's apartment. They talk in the common area for a while and then go to Y's bed. Y and X both lay down and continue talking. Y and X look into each other eyes and Y initiates a kiss. X and Y make out. As they make out, X asks if they can take off Y's shirt or other clothing. Y approves. Y asks the same of X; X says no to most of the clothing. X leads Y to touch X over X's clothes. They continue hooking up and never have sex. After a mutually pleasurable experience, they both lie on the bed and talk again. X texts their friends and says they are sleeping over at Y's apartment. X and Y cuddle.” (18-year-old, White, genderqueer individual)

The least common type of sexual relationship described was that between ongoing sexual partners not currently involved in a romantic relationship. In a few cases ( $n = 4$ ), the writers of these scripts specifically referred to a sexual partner as a “fuck buddy,” “play partner,” or a “friend with benefits.” Again, the majority of these encounters (80.0%,  $n = 12$ ) lacked a clear initiator, and all were described as taking place in a private location, such as someone’s home or bedroom. Alcohol or marijuana use was described about a quarter of the time (26.7%,  $n = 4$ ).

Below, see an example of a script including the ongoing sexual partners theme.

“I can only speak for myself as a Chinese man-aligned genderfluid person who's closeted some of the time, but for me, before and during are similar to the way that anyone else would have a sexual encounter and lead up to it (unless I tell them about myself and they reject me for it). After the encounter I never expect the person to want to take things further than just friends-with-benefits; I'm never more to them than just a fuck buddy -- and this tends to almost ALWAYS apply if they know about me. If they don't know about me there's a chance they might want to date me, but if they think I'm a girl then I'm definitely unwilling to date them....” (21-year-old, Asian, genderfluid individual)

**Gender stigma, trauma, and dysphoria.** Some sexual scripts suggested the sexual experiences of transgender and gender nonconforming individuals are markedly influenced by histories of enacted stigma, including externalized discrimination, past rejections, nonaffirmation experiences, and gender-related victimizations. The nature of sexual relationship most often overlapping with this script theme was negotiated one-time casual encounter (35.7%,  $n = 10$ ). Script providers who included the enacted stigma theme were significantly more likely to report

negative feelings (e.g., guilt, shame, emptiness, etc.) following sex than those who did not,  $X^2(1, N = 169) = 23.37, p < .001, 53.6\%$  vs.  $13.5\%$ , as well as less likely to report positive feelings following sex,  $X^2(1, N = 169) = 10.50, p < .01, 68.1\%$  vs.  $35.7\%$ . Stories of being dismissed, stereotyped, misgendered, and objectified were particularly prominent, as demonstrated by the next three examples.

“I feel that most gender nonconforming students are met with ridicule and dismissal by potential sexual partners. This feels very invalidating and can be especially harmful over time. Transmisogyny makes things particularly difficult and scary for trans women.” (23-year-old, White, genderqueer individual)

“Cisgender partners express they understand and respect you but still accidentally make transphobic comments or feel weirded out. It's difficult to find a partner who wants a serious relationship, that involves sex, who respects my gender as male. I'm a transgender male and I dislike that straight men and lesbian women flirt with me. I dislike the transphobia that straight women and gay men sometimes express. I am bisexual and due to my own bisexual bias and experience with straight and gay people, I prefer to only date bisexuals/pansexuals. I don't have the "spoons" to deal with cisnormativity.” (18-year-old, White and Middle-Eastern self-assigned male individual)

“Men only see me as a sex object. Even before transition I was never seen besides anything but for them to fuck. It was only until I started having women fuck and love me did I feel like a complete human being.” (19-year-old, White, transgender individual)

Though less common than other themes, some scripts specifically mentioned a trauma history. In these cases, interpersonal victimization was indicated but not necessarily explicitly related to gender. Participants providing these scripts were significantly more likely to endorse negative emotions following sex,  $X^2(1, N = 169) = 4.70, p = .03, 45.5\%$  vs.  $18.4\%$ . In fact, these scripts implied that a history of abuse or assault would adversely affect enjoyment of the sexual experience, as shown in the next two examples.

“When I hear typical I think of a het/cis relationship. I have personally never had a consensual [sic] sexual experience but I would picture it as uncomfortable.” (19-year-old, White, transgender individual)

“.... I've also found that many trans\* and nb people have experienced some form of sexual injustice, so that also might be an issue. Flashbacks, anxiety, and guilt are

common feelings that may crop up even if the current encounter is consensual, as a result of such experiences. Otherwise, I would think it's just a healthy exploration of bodies and seeking out pleasure like any other sexual encounter. Afterwards, the negative feelings might remain. I think this stuff gets better as time goes on though, and while I'm pessimistic about the sexual encounters of young people I'm fairly optimistic about encounters that happen between more experienced folk.” (21-year-old, White, genderfluid individual)

Over a quarter (27.2%) of the scripts included a self-stigma theme, wherein script writers depicted expectations of rejections by potential sex partners or negative sexual encounters or internalized transphobia in the forms of shame, denial of gender identity or embarrassment regarding their gender status. The nature of sexual relationship most often overlapping with this script theme was ongoing romantic (35.7%,  $n = 17$ ), though negotiated one-time casual encounter was also relatively common (30.4%,  $n = 14$ ). Similar to scripts depicting external stigma, these script writers were also significantly more likely to report negative feelings following sex than those who did not,  $X^2(1, N = 169) = 11.15, p = .001, 37.0\%$  vs.  $13.8\%$ , as well as less likely to report positive feelings following sex,  $X^2(1, N = 169) = 6.00, p = .01, 68.3\%$  vs.  $47.8\%$ . The following three scripts exemplify the self-stigma theme.

“Before: constant worry about being misgendered during the encounter, worry about being rejected once the gender identity is explained....

“During: slight panic about being misgendered/panic due to being misgendered through dirty talk, overanalyzing the behaviors of the partner to see if they are treating you as your assigned sex or if they seem to be taking care to remember to be delicate regarding your gender identity (or if that's even important in the moment)....” (20-year-old, White, agender individual)

“Before: I would expect a trans college student to feel nervous, especially if they are not out to the person they want to have sex with. I would imagine they would want to come out first, which may take time due to the extreme anxiety. If the person is already out to their sexual partner, and the partner accepts them, they still may be nervous about showing their body to their partner. Many trans students I know hate being seen nude in any fashion, so the idea of that would be a big obstacle in getting to the sexual activity. I know I mentioned being out to the partner and them being okay with it, but others that are not okay with it may still engage in sex. This just means the person is more self-conscious....

“During: If this is the first time having sex with that partner and the genitals are atypical for the partners orientation (i.e. a lesbian having sex with a girl with a penis) it may be awkward and uncomfortable. Otherwise, I don't think there is a typical ‘during’.

“After: Depending how it went, the trans student will be ashamed and anxious or relieved about being able to have sex with their partner.” (19-year-old, Latin and Native American, genderqueer individual)

“As a trans person I know I would be more nervous and self-conscious than the average person in a sexual experience because I would be worried about the other person seeing me as weird and comparing the differences of my body to the body of a cisgender person. I think the other person would be confused on how to proceed since they see me as different and more incapable of experiencing sexual pleasure. I think once that initial awkwardness subsides after proceeding with the experience it would be more comfortable and normal.” (19-year-old, White, transgender individual)

Closely related to self-stigma, but even more prevalent, gender dysphoria appeared as a theme in approximately one third (32.5%) of scripts. Scripts coded for dysphoria often mentioned being “triggered” during an encounter because of the mismatch between sex characteristics or one’s sex-assigned role and gender identity. Additionally, scripts including this theme used experiences of dysphoria to influence preferred sexual acts or whether or not to engage in sex at all. Pleasuring one’s partner appeared a common tactic to draw attention away from one’s own body. In some cases, these scripts specifically discussed hiding body parts to minimize dysphoria. Almost half (47.3%,  $n = 26$ ) of scripts with this theme also included elements of self-stigma, and the most commonly occurring relationships in these scripts echoed those depicted within scripts including the self-stigma theme (ongoing romantic = 32.7%,  $n = 18$ ; negotiated one-time casual encounter = 30.9%,  $n = 17$ ). Again, negative emotions following a sexual encounter in scripts including the gender dysphoria theme occurred significantly more often than in scripts without the gender dysphoria theme,  $X^2(1, N = 169) = 5.91, p = .02, 30.9\%$  vs. 14.9%. See the following four examples of scripts of this type.

“... During sex I sometimes call it off due to dysphoria, and after sex I usually clean up as fast as possible so I can cover my body.” (20-year-old, White, nonbinary individual)

“... My experience is people with a nonconforming gender identity tend to focus more towards foreplay and less towards intimate action between genitals. With a supportive partner the best you can do is try to guess something they would enjoy and ask if you can do that. Such as a male to female transgender offering anal sex or a blowjob because that is what they are comfortable with. We try to subtly lead our partner to doing things that makes us more comfortable like playing with nipples instead of genitals.” (21-year-old, White, transgender individual)

“In my experience at least, since I am the transgender party involved in the act, it is typical that I avoid using my penis as much as possible. It makes me feel disgusting and I do not want attention brought to it. I will often forgo my own pleasure and only pleasure my partner.” (20-year-old, White, self-assigned female individual)

“It was difficult to even want to have sex because of my birth gender being female and me passing as a man. With my other transman partner we find it difficult to even want to have sex or do anything sexual with our clothes off because of the dysphoria that we both experience so we just don't have sex anymore.” (18-year-old, White, self-assigned male individual)

At times, script writers described active concealment of gender identity. These scripts did not necessarily discuss hiding one's body, but rather making the decision not to share one's gender identity with sexual partners. The purpose of concealment was not always clear, though in some cases, the concealment appeared a matter of convenience. All but one of the scripts containing the active concealment theme also contained the self-stigma theme, reinforcing the idea that hiding one's gender identity may closely relate to negative expectations or internalized transphobia. The least common type of relationship occurring within these scripts was the ongoing romantic relationship (16.7%,  $n = 2$ ), and positive feelings following a sexual encounter appeared significantly less often in scripts that included active concealment than those scripts that did not,  $X^2(1, N = 169) = 4.77, p = .03, 33.3\%$  vs.  $65.0\%$ . Scripts with this theme mainly depicted sexual acts as unsatisfying for the transgender or gender nonconforming person. Two examples of the active concealment of gender identity theme follow.

“...Because I am demigirl my gender is kinda [sic] secret and I can get away with not explaining it and being comfortable, but some days I feel very masc, and that's when I just let my partner know and just having their support is enough for me.” (19-year-old, White, demigirl)

“Mostly I am kinda [sic] bored because I've just been with girls, but what I really want is to have sex like a girl. Mostly I have sex for their pleasure rather than my own.” (22-year-old, White, nonbinary individual)

One script presented quite eloquently the nuanced dilemma that a transgender or gender nonconforming person faces when the desire for physical affection arises but conflicts with the realities of stigma. The script writer presents potential consequences of choosing either to disclose or not disclose one's gender identity. Furthermore, they contextualize the consequences of this choice through the lens of gender dysphoria, helping the reader to understand why someone may choose to disclose their gender identity or actively conceal it.

“When you're trans, sex is dangerous. Sex is the ultimate act of vulnerability. You could be killed for showing someone the truth of your body. So you approach it with caution. You try to pick partners you trust, partners less likely to harm you. If that doesn't work out, you expand your options. You're only human after all. You want to feel connected to someone every now and again. Sometimes desire outweighs safety. Sometimes you hate yourself. Either way, you find someone. At the gay bar, on tinder, at a party off campus. And you have to decide whether or not you're going to tell them. Whether it's easier to just skip the conversation. You shouldn't have to explain your entire life story every time you want to be touched. But if you don't explain it, things have the potential to go very wrong. Do they misgender you during sex, use the wrong pronouns, call out a dead name in the throes of passion? Can you deal with that? Does it take you out of the moment? If you're binding, do you let them peel your binder off of you with the rest of your clothes? Do you ask, quietly, to keep it on? Can you come [sic] if you're dysphoric? Can you come [sic] if they think you're a girl, think you're something that you're not? What about when the act of sex itself causes dysphoria? When you don't want them to touch you like that, not there, not that body part that you were never meant to have in the first place? Would saying something kill the mood? Would saying something end up killing you?”(21-year-old, White, genderqueer individual)

**Open communication, gender identity disclosure, and participation in a nontraditional sex community.** The most popular theme depicted in sexual scripts related to open communication. More specifically, script writers described talking to potential sexual

partners about consent, body parts, and sexual boundaries, in an effort to make the sexual experience fulfilling for all involved parties. Some script writers differentiated sexual experiences involving transgender or gender nonconforming individuals from those with cisgender persons by highlighting the amount of communication that takes place before and during a sexual encounter. Themes of enacted stigma (12.5%,  $n = 12$ ) and self-stigma (25.0%,  $n = 24$ ) occurred in a minority of these scripts. Most commonly occurring types of relationships included negotiated one-time casual encounter (32.3%,  $n = 31$ ) and ongoing romantic (30.2%,  $n = 29$ ). Scripts including the open communication theme resulted in both significantly more positive emotions following sex,  $X^2(1, N = 169) = 25.71, p < .001, 79.2\%$  vs. 41.1% and significantly less negative emotions following sex,  $X^2(1, N = 169) = 5.98, p = .01, 13.5\%$  vs. 28.8% compared to those scripts without the open communication theme. The next four examples include the open communication theme.

“A typical sexual encounter with a TGNC college student would involve a discussion about boundaries and trust, acknowledgement of dysphoria, triggers, and the like, discussion of STI status, to include my own (HSV1 positive), and discussion of shared interests, such as those related to BDSM or other forms of ‘sexual fetishes.’” (19-year-old, White, self-assigned female individual)

“Everything should be explicitly consensual with the option to leave at any moment for any reason. Both parties should be asked how they want their body parts to be referred to as and how they use them to be used. Sex should be about bonding and having fun not about orgasm.” (22-year-old, White, genderqueer individual)

“Before anything happens, it's important to make sure you know what body parts your partner is consenting to you touching (or sex toys). Also, know what to call the body parts, as many folks have different preferences. I'd also say to designate a safe word. During there should be ongoing consent, and protection should be used, and STI status/birth control discussed.” (22-year-old, White, nonbinary individual)

“When engaging in sex with another trans person, I expect (and often experience) a lot more openness than I get with cis partners. There's much more talking and communication before, during and after about limits, likes and dislikes, terminology (what do you want me to call this) etc. Before, there's a lot of talk of what we know we do and don't like, what we're willing to try, what we're not willing to try, things that may

cause dysphoria, etc. During, there's more communication as we go—if someone doesn't like something that's happening, those feelings are communicated and listened to. After, there's talk about what we did and didn't like, what we can try to make next time better, etc. Usually, experiences turn out better because of this.” (20-year-old, White, genderqueer individual)

Almost as popular as the open communication theme, many scripts included some mention of gender identity disclosure. In these scripts, a discussion of gender identity occurred either prior to a sexual encounter or during it. The key defining feature of this theme was that the transgender or gender nonconforming person had clearly revealed their gender identity to the sexual partner(s). Just as with the open communication theme, stigma arose less often in scripts including this theme (enacted stigma = 23.2%,  $n = 22$ ; self-stigma = 32.6%,  $n = 31$ ). The most common types of relationships among these scripts were negotiated one-time casual encounter (32.6%,  $n = 31$ ) and ongoing romantic (28.4%,  $n = 27$ ). Positive emotions following sex were also significantly more likely present in scripts with this theme than those without it,  $X^2(1, N = 169) = 5.65, p = .02, 70.5\%$  vs.  $52.7\%$ . Approximately three quarters of scripts with this theme (74.7%,  $n = 71$ ) also contained the open communication theme, demonstrating the close ties between them. Three examples of the gender disclosure theme follow.

“Usually, the people I hook up with are straight or bisexual women. They're always informed of my gender identity prior to sex, so there's no surprises. Usually, [we] hang out for a little while, chat and then start having sex.” (19-year-old, White, self-assigned male individual)

“I am currently involved in a relationship with a cis-gendered female. I am out to her as a trans man. We start off with the usual foreplay, cuddling, kissing, fondling. I do not let her touch my breasts as I am uncomfortable with my chest. She is still getting used to my likes/dislikes regarding sex because she likes my breasts and is very much interested in the female anatomy. She is upset that there are things she can't do to me that she wants to and still getting used to changes. After foreplay, I usually use a dildo on her and then give oral. Then, she gives me oral, with very minimal penetration, as I dislike too much penetration.” (21-year-old, multiethnic, nonbinary individual)

“Going off of my own experiences: I used a dating app to find a gay cisgender male date. In my profile, I disclosed that I was transgender, but did not specify the details of my

transition. During the end of the date, I brought up an experience involving my transition in order to confirm that my date had read my profile and knew that I was transgender. He responded positively and I felt safe. I decided to see him again later that week. We began making out and he started touching my genitals over my pants. This caused some anxiety for me because other people acknowledging my female genitals is a startling reminder that, as a post-transition man, I am still transgender. I was worried that he would be disgusted or disappointed by my genitals or body. He noticed my discomfort and asked if it was okay. I said it was. Once we were in his bedroom and undressed, he asked if I was okay with vaginal penetration and intercourse. I replied affirmatively. Before he penetrated me, he looked at my spread vulva and I felt extremely embarrassed. We began having sex in missionary position, but it made me feel feminine and submissive. I asked if I could ride him instead, which made me feel more in control and masculine. After we had sex, I held him. Holding a man affirms my identity as a gay man. It makes me feel strong and protective. I still felt insecure about not having a penis, and about allowing him to see my naked body. However, he was very complimentary about how strong and handsome I was, which made me feel better. I don't know what the 'typical' experience would be here, but I doubt mine was atypical." (18-year-old, White, self-assigned male individual)

The final theme included in these scripts was participation in a nontraditional sex community. These scripts reflected some form of community connectedness for the transgender or gender nonconforming person, whether that was within an LGBTQ+ friend group, a polyamorous relationship, or a kink or BDSM community. Few scripts including the participation in a nontraditional sex community also included stigma themes (enacted stigma = 8.3%,  $n = 2$ ; self-stigma = 12.5%,  $n = 3$ ). Open communication (87.5%,  $n = 21$ ) and gender identity disclosure (83.3%,  $n = 20$ ) occurred within most of them. Nature of the relationship was least often an unplanned one-time casual encounter (20.8%,  $n = 5$ ), suggesting that those involved in the sexual encounter likely knew each other already or met for the purpose of engaging in sexual activity. A little more than half these scripts described substance use involved in the sexual encounter (54.2%,  $n = 13$ ). Often, these scripts spoke of sex positivity, and the concept of sex positivity was reinforced by the fact that positive emotions following sex were more likely to appear in scripts with this theme than without it,  $X^2(1, N = 169) = 10.02, p < .01$ ,

91.7% vs. 57.9%. The next three scripts illustrate the participation in a nontraditional sex community theme.

“Typically I don't have sex, but a lot of my friends in my friend group who are LGBT have casual encounters or are polyamorous. There tends to be a lot of oral sex and kinks such as choking at least in theory, as I haven't seen them do it but I've heard much about it. Protection really isn't a consideration unless one person has a penis and the other has a vagina that they were born with. Penetration-wise it's mostly with fingers or with a phallic substitute of some sort. A lot of biting and neck sucking, as the fan fiction a lot of my age group reads has a lot to do with kinky sex. There may or may not be cuddling afterwards, but there is most certainly eating and or smoking marijuana.” (25-year-old, White, agender individual)

“Smoking weed before, during, and after sex. Sex includes open communication, oral, light bdsm (breathplay, spanking, bondage, hair pulling), oral, use of fingers and dildo for vaginas, butt plugs, and nipple play. I trust my partner that I have sex with because he also shares the same gender identity as me and is someone I can have open communication with. He is also one of my partners. Before/During/After sex I feel safe knowing that I also have a say in how our sexual experiences play out.” (22-year-old, White, transgender individual)

“I can't tell you about a typical sexual experience for any trans or gender nonconforming person because we're all different. I can tell you about a typical sexual experience for me. It usually takes place at my house and starts as hanging out and cuddling. One or more parties will become turned on and one or more parties will initiate sexual activity. There's always a lot of hand action and usually making out and oral sex as well, sometimes other acts including kink. I usually feel good and comfortable throughout because I am comfortable with the people I have sex with. Currently that's 2 people and both of them are trans, so we all understand that dysphoria can pop up. After we usually cuddle some more and sleep or part ways.” (20-year-old, White, nonbinary individual)

## CHAPTER IV: DISCUSSION

Partially exploratory in design, the current mixed method study sought to test the gender minority stress and resilience model, as proposed by Testa and colleagues (2015), with an exclusively undergraduate sample of students who identify as transgender or gender nonconforming. The study also sought to examine how the sexual scripts of these undergraduates may be influenced by minority stress and resilience factors as well as heterosexual cisgender sexual scripts. Despite solid evidence that transgender and gender nonconforming individuals experience more stigma, violence, and discrimination, as well as worse psychological health and poorer functioning, than both their cisgender and LGB peers, relatively little is known about their resilience, the health risk behaviors in which they engage, and their sexual scripting.

The extant literature suggests that enacted stigma experiences occur on individual and structural levels and unfold throughout the entire life-course. Those transgender individuals who make it to college must navigate identity development while adjusting to the pressures of increased academic rigor, gained independence, and forming new platonic and intimate relationships. Little is understood about the sexual behaviors, health, and beliefs of gender nonconforming undergraduates. This is the first study to include both psychological outcomes and health risk behaviors in a rigorous test of the gender minority stress and resilience model, as proposed by Testa and colleagues (2015), with transgender and gender nonconforming undergraduates. Additionally, it is the first to investigate the overlap between gender minority stress and resilience theory and sexual scripting with an undergraduate and gender nonconforming population. While quantitative results supported negative psychological consequences of minority stress, resilience factors did not appear to offer much protection against these negative consequences. Sexual scripts, however, seemed to reveal both minority

stress and resilience factors as strong influencers of sexuality. In the nature of sexual relationships, sexual scripting overlapped and deviated from the heteronormative scripts of cisgender undergraduates in a number of ways.

### **Sample Characteristics Compared to Previous Studies**

The sample in this study is unique compared to other research in that participants were neither a mixed cohort of cisgender LGBTQ and transgender undergraduates nor a mixed cohort of transgender adults of various age groups and educational levels. When compared with the Woodford and colleagues (2018) study of minority stress and resilience among LGBTQ undergraduates, which is close in purpose and sample size (transgender  $n = 214$ ) to this one, transgender participant demographics diverged somewhat though not necessarily greatly. For example, the mean age of participants within this study was a few years younger (20.2 vs. 22.8). Additionally, the current sample included a higher percentage of participants who identified as White (89.1% v. 72.4%), and a much higher percentage who also identified as some other race or ethnicity (40.5% v. 18.75%). Whereas within the Woodford and colleagues study (2018) the most prominently reported gender identity was genderqueer (37.9%) and a transgender identity was reported by 14.0%, these rates were reversed in the present study (transgender = 26.4%; genderqueer = 14.0%). Notably, the most commonly reported gender identity in this study was nonbinary (29.4%), however it is unclear if Woodford and colleagues (2018) allowed for the nonbinary specifier at all. In both studies, sexual orientation was most often reported as bisexual or pansexual, though in the present study participants reported markedly more varied sexual orientations. If Woodford and colleagues (2018) collected sexual orientation information by forced choice and included fewer options, this could help explain the difference in reported sexual orientation.

The differences in age and race/ethnicity between these two studies could relate to inclusion criteria and recruitment differences. For the current study, any person not actively enrolled in an undergraduate institution was excluded, but Woodford and colleagues (2018) allowed participation as long as individuals had been enrolled in college the previous year. As far as racial differences, the Woodford and colleagues' (2018) study largely recruited at a conference in the Midwest, where racial diversity may have been limited. Contrarily, the current study's advertising contained the image of a gender nonconforming individual whose race and gender identity were unclear and recruited nationally using social media. As far as differences in gender identity and sexual orientation, these particular demographic items were open-ended in the current study. Participants provided their own specifiers, revealing a multitude of chosen identities utilizing various terms. This demonstrated variability harkens back to the findings of Rankin and Beemyn (2012), who asserted college students are identifying gender in a growing number of terms. Possibly, this growing number of terms for gender accounts for the nonbinary identity being more popular than six years ago.

A notably high percentage of participants (75.0%) reported a history of diagnosed mental illness, which exceeded the rate of transgender undergraduates diagnosed with mental illness presented by Goldberg and colleagues (58%; 2019). Goldberg and colleagues also noted, however, that up to 85% transgender undergraduates struggle with mental health difficulties. Participants in both studies reported anxiety and depressive disorders as the most prevalent mental health diagnoses. In keeping with other research on the mental health of transgender undergraduates (Oswalt & Lederer, 2017; Stolzenberg & Hughes, 2017; Woodford et al., 2018), depressive and anxiety symptoms occurred at high rates within the current study. Similarly, of the 56.6% of participants who reported a trauma history, most exhibited probable PTSD (81.3%).

This finding aligns with suggestions provided by earlier research that transgender and gender nonconforming individuals face more risk for developing PTSD than cisgender individuals (Reisner, Biello et al., 2016; Reisner, White Hughto et al., 2016).

Participants, for the most part, refrained from hazardous alcohol use. While 80% currently drank, only around 20% endorsed hazardous alcohol use, which falls below that found among cisgender college students (Miles et al., 2001). This finding supports the notion by Coulter and colleagues (2015) that transgender and gender nonconforming undergraduates do not necessarily engage in more hazardous alcohol use. Likely more problematic than alcohol use is other substance use among this group. Over half of the participants reported past year illicit substance use (54.0%), and probable drug abuse occurred about 60% of the time among those who used drugs other than alcohol. This rate of probable drug use exceeds by six times that found among cisgender college students and further reinforces the notion that problematic substance use disproportionately affects transgender individuals (De Pedro et al., 2017; Martin, 2013; Reisner, Greytak et al., 2015).

Notably, while sexual behavior with uncommitted partners occurred more frequently among this sample than in other college student samples, impulsive sexual behaviors occurred less frequently (Turchik et al., 2015). The first of these findings is not totally surprising given sexual minority students have demonstrated higher rates of engagement in sex with uncommitted partners compared to heterosexual students (Turchik et al., 2015). The second finding may relate to transgender and gender nonconforming students having to decide whether or not to disclose their gender identity to potential sexual partners. Transgender and gender nonconforming students appear to engage in sexual activities with more partners than other college students, in that twice the percentage of participants in the current sample had five or more partners in the

past six months (7.2 v. 3.6). Perhaps, this reflects engagement in polyamorous relationships, as well as use of hook-up apps and online advertising on sites like Craigslist to find partners who would be accepting of the individual's gender identity. Substance use before and during sex substantially exceeded rates reported by other college students (60.7% vs. 44.6%). However, alcohol use was not widely depicted in sexual scripts, and hazardous alcohol use occurred at a lower rate than among cisgender peers. Though not the norm, a minority of script writers who described engaging in repeated casual sexual encounters also described using substances as part of drug and party culture involving sex. As Rood and colleagues (2016) assert, transgender individuals tend to consume alcohol when anticipating rejection, and thus participants may use alcohol prior to sexual encounters in anticipation of possible sexual rejection. Further, these results support those of Wilson and colleagues (2009) who found high rates of substance use by transgender youth during sex.

### **The Impact of Gender Minority Stress on Psychological Health and Health Risk Behaviors**

Previous research demonstrates that distal and minority stress factors, such as gender-related discrimination and internalized transphobia, significantly relate to psychological distress. In particular, researchers have established minority stress positively correlates with depression, as well as anxiety (e.g., Bockting et al., 2013; Testa et al., 2015). Though the literature remains more limited, enacted stigma experiences among transgender adults have also been associated with probable PTSD (Reisner, White Hughto et al., 2016). As proposed by hypothesis 1 and aligned with previous work, distal stressors predicted both depression and anxiety symptoms, and the addition of proximal stressors improved upon the prediction of these symptoms, thus supporting these aspects of the GMSR model.

While distal stress predicted probable PTSD, proximal stress factors failed to improve upon this prediction. In most cases, distal stressors represent Criterion A traumas, so this finding is not surprising and reinforces the earlier work of Reisner, White Hughto, and colleagues (2016). This seems to support that Criterion A traumas lead to PTSD, rather than chronic stressors associated with being a gender minority. As has been demonstrated in the sexual minority literature (Dworkin et al., 2018), proximal stress may affect severity of PTSD among those who have experienced traumas, instead of leading directly to the development of PTSD. As the current study used a screening measure for PTSD, we were unable to evaluate this possibility.

Researchers have established links between interpersonal victimization and alcohol and other substance use among transgender youth (Reisner, Greytak et al., 2015), as well as between felt stigma and alcohol use among transgender adults (Rood et al. 2016). Therefore, hypothesis 2 tested if minority stress predicted hazardous alcohol use and probable drug abuse. Distal minority stress did not predict alcohol consumption, but proximal stressors did. As proximal stressors include felt stigma experiences, these results align with the findings of Rood and colleagues (2016). This suggests that alcohol could primarily serve as a way to cope with negative cognitions and experiences of gender-related stress. It is also possible that the distal stressors dropped for the current study due to poor internal consistency, including gender-related discrimination or rejection, may predict hazardous alcohol use. In fact, when all subscales were run in a hierarchical regression, distal stressors predicted hazardous alcohol use at step 1,  $F(4, 196) = 2.46, p = .047, \Delta R^2 = .05$ , and at step 2, the addition of proximal stressors significantly increased the variance in hazardous alcohol use scores explained,  $F(7, 196) = 2.69, p = .04, \Delta R^2$

= .04. Thus, future studies should seek to develop internally consistent measures of distal stressors for use in this population to evaluate the impact of distal stressors on alcohol use.

None of the minority stress factors predicted probable drug abuse, which diverged from the findings of Reisner, Greytak, and colleagues (2015). Ceiling effects may explain the failure to uncover any such predictive effects in the current study, as participants reported both high rates of victimization (81.3%) and frequent drug use (75.5%). Within this group, drug use may relate more to peer norms or some other factor rather than being used as a coping strategy. It is also possible that minority stress is related to drug use severity, but I only examined if probable drug abuse was present or not in the current study.

Primarily based upon evidence that transgender groups other than college students (e.g., homeless youth, transgender sex workers, etc.) tend to engage in risky sexual behaviors (e.g., Herbst et al., 2008; James et al., 2016), hypothesis 3 stated minority stress would increase risky sexual behaviors. Results failed to support a link between minority stress and engagement in impulsive sex. Likewise, distal stressors failed to predict sex with uncommitted partners. The addition of proximal stressors to the minority stress model did significantly predict sex with uncommitted partners, though not necessarily in the expected direction. Transphobia and negative expectations for the future each demonstrated negative associations with sex with uncommitted partners, possibly reflecting a reluctance to engage in sex acts with persons unaware of one's gender identity due to fears of rejection. Further, distal and proximal stress may relate to sexual avoidance among transgender emerging adults. Script writers in this study both discussed caution when engaging in sexual behaviors as well as the avoidance of sexual behaviors, altogether. Indeed, approximately 10% of participants described their sexual

orientation as asexual, and scholars of asexuality have highlighted a notable overlap between asexuality and the transgender identity (Deluzio Chasin, 2011; Gupta, 2018).

### **The Impact of Resilience on the Effects of Minority Stress**

The GMSR model proposes that pride and community connectedness should protect against minority stress, such that resilience factors minimize negative outcomes (Testa et al., 2015). Prior research examining the effects of resilience remains mostly correlational, demonstrating inverse relationships between resilience factors and depression, anxiety, and suicidality (e.g., Brennan et al., 2017; Testa et al., 2015). Two studies have tested the moderating roles of resilience, which offered mixed support for the GMSR model. Chodzen and colleagues (2019) found that community connectedness did not lower the likelihood of depression or anxiety among transgender youth, whereas Woodford and colleagues (2018) found pride moderated the relationship between gender-related victimization and depression among transgender college students.

Hypotheses 4 through 6 stated minority stress and resilience factors would interact to significantly weaken the relationship between minority stress and both psychological distress and health risk behaviors, which largely went unsupported. Only one exception to this general pattern emerged. Pride moderated the relationship between internalized transphobia and depression, such that depression symptoms more strongly related to internalized transphobia when pride was low.

As Chodzen and colleagues (2019) found, community connectedness within the present sample did not significantly moderate negative outcomes. Unlike the findings of Woodford and colleagues (2018), however, pride failed to significantly moderate the relationship between victimization and depression. Measurement differences may account for this inconsistency. Whereas in the current study, the GMSR Pride subscale assessed pride in one's transgender

identity, Woodford and colleagues (2018) measured pride in the larger LGBTQ community with two Likert-scaled items: "I'm proud to be LGBTQ" and "I believe being LGBTQ is an important part of me." Given that the GMSR Pride subscale contains 8 items specific to transgender identity, these two measures focused on differing facets of pride.

Interestingly, those factors found to significantly interact with each other were among the very few continuous variables within the present study to exhibit a normal distribution. In fact, negative expectations for the future and gender nonaffirmation occurred at very high frequencies, resulting in moderate to severe negative skews. Similarly, 76.0% of the sample reported gender-related victimization. Thus, the lack of significant results supporting resilience factors as protective against negative outcomes may relate to the pervasiveness of minority stress in this population. Otherwise, the decisions made in this study to drop two of the distal minority stress scale scores due to poor internal consistency and convert another to a dichotomous variable ultimately resulted in a loss of data, reducing the ability to explore resilience as a moderator of the association between distal stressors and negative health outcomes

As part of a broader issue which likely led to the lack of support found for resiliency in the current study, the GMSR measure was not normed or developed for an undergraduate population specifically, so it may not capture their experiences as well. Indeed, two of the scales were dropped from analysis because of poor internal consistency. Transgender college students may present with other resilience factors not represented by the GMSR measure, such as involvement in social justice efforts, experiencing affirming mentorship, or enjoying strong familial support (Goldberg, 2018). Otherwise, though GMSR defines pride and community connectedness by transgender specific terms, gender nonconforming undergraduates may place less importance on transgender identity than on some other identity status (e.g., LGB, race,

political alignment), general social support, or on affiliation to other community groups (e.g., BDSM, LGBTQ+). Actually, in a number of sexual scripts provided, participation in a nontraditional sex community, not belonging to a transgender community specifically, arose as a likely resilience factor. Additionally, other research has noted that some transgender individuals consider their racial identity or disability status as more salient than their gender identity (Goldberg, 2018). When transgender community may be lacking, such as at small colleges or if the undergraduate institution is located in a small college town, transgender students may seek a sense of belonging through online social networks or draw resilience from other aspects of the campus community (Goldberg, 2018).

### **The Influence of Minority Stress and Resilience on Sexual Scripting**

Minority stress and resilience factors appeared to heavily influence the sexual scripting of transgender and gender nonconforming students in this study, in accordance with sexual script theory (Simon & Gagnon, 1986). Two themes specifically supported the notions that societal attitudes and experiences from the past inform scripting at the cultural and interpersonal levels: enacted stigma and trauma history. In addition, three themes supported that beliefs about oneself and expectations of others influence scripting and behaviors at the intrapsychic level: gender dysphoria, self-stigma, and active concealment of gender identity.

About 23% of sexual scripts included themes of enacted stigma or trauma. Stories of being dismissed, stereotyped, misgendered, and objectified defined those scripts containing the enacted stigma theme, whereas depictions of abuse and assault defined scripts containing the trauma theme. Writers of scripts with either of these themes described sex as an uncomfortable experience, eliciting anxious, shameful, and otherwise negative emotions. These findings echo previous ones on other stigmatized groups, including HIV positive individuals and women, that

demonstrated harassment and past experiences of abuse reduce sexual satisfaction (e.g., Meston, Rellini, & Heiman, 2006; Scheim & Bauer, 2019).

More common than themes of enacted stigma and trauma, themes of self-stigma and gender dysphoria represented negatively valenced intrapsychic processes that take place leading up to and during sexual encounters. The self-stigma theme, which a little over a quarter of script writers described, communicated sentiments of internalized transphobia and expectations of rejection by potential sex partners. The gender dysphoria theme arose in almost a third of scripts and depicted episodes of acute body dissatisfaction that would result in the interruption, termination, or prevention of sexual encounters. Though both of these themes connoted discomfort, the focus of scripts with the self-stigma theme focused primarily on feelings of self-consciousness, whereas those with the gender dysphoria theme centered on avoiding certain types of sexual contact or the act of sex, itself. In alignment with the scenarios illustrated by those scripts containing the self-stigma and gender dysphoria themes, Scheim and Bauer (2019) have found in previous research that trans-related sexual body image worries relate to lower sexual satisfaction and sexual inactivity.

Though seemingly closely related to self-stigma due to a notable overlap, the active concealment of gender identity theme presented with much less frequency than the themes already mentioned (7.1%). This theme involved a reluctance to disclose one's gender identity, and despite script writers' refrain from revealing the explicit purpose of choosing not to disclose, keeping one's gender identity hidden seemed to suggest shame and/or the presence of some feared adverse outcome. In other research with transgender individuals, body satisfaction and gender affirmation by others have increased sexual fulfillment (Fox Tree-McGrath et al., 2018; Nikkelen & Kreukels, 2018). Thus, it would follow that individuals who lack acceptance of their

own bodies and who keep secret their true identities at the expense of potential acceptance by others would experience sexual discontent.

Four script themes emerged that seemed to bolster resilience and increase sex positivity among transgender and gender nonconforming undergraduates in this study. Those included being involved in an ongoing romantic relationship, open communication during sexual encounters, disclosure of one's gender identity to sexual partners, and participation in a nontraditional sex community. While the GMSR model does not incorporate resilience factors comparable to the first three of these themes, community connectedness and participation in a nontraditional sex community resemble each other in that both denote a sense of belonging.

The ongoing romantic relationship sexual script theme occurred in 29.0% of the scripts. Script writers including this theme illustrated sex as an act of intimacy that promotes positive feelings such as love and trust. Though not considered a resilience factor within the GMSR model, other work supports that romantic involvement protects against depression and anxiety within the transgender community (e.g., Gamarel, et al., 2018; Meier, Sharp, Michonski, Babcock, & Fitzgerald, 2013).

Also associated with positive feelings related to sex, open communication in the current study appeared in more than half of the scripts (56.8%). The open communication theme portrayed purposeful discussions between sexual partners regarding consent, body parts, and sexual boundaries. According to research with long-term couples, open communication, including sexual communication, improves both sexual satisfaction and overall relationship satisfaction (e.g., Frederick, Lever, Gillespie, & Garcia, 2017; Gillespie, 2017; Montesi, Fauber, Gordon, & Heimberg, 2011). In a similar fashion, this theme in the current study indicated an effortful approach to enhance the sexual experience for all parties involved.

Another popular script theme, disclosure of one's gender identity, heavily aligned with the concept of open communication. In 56.2% of scripts, writers described the transgender or gender nonconforming individual having at some point disclosed their gender identity to their sexual partner. This disclosure appeared indicative of comfort with one's gender identity, sexuality, and relationships. According to sexual minority studies, engaging in same-sex behaviors before coming out increases sexual risk, resulting in more casual sexual partners, higher frequencies of unprotected sex, less connection to the LGBT community, and greater psychological distress (e.g., Meyer & Dean, 1998; Rosario, Hunter, Maguen, Gwadz, & Smith, 2001). Therefore, whereas low felt and internalized stigma likely paves the way for assertive communication and healthy sexuality, greater felt and internalized stigma probably subverts asserting one's sexual needs in a way that is self-protective and limits community connectedness.

Though occurring in less than 15% of the scripts, the participation in a nontraditional sex community theme arose as an important indicator of resilience. Closest to the community connectedness resilience factor identified by Testa and colleagues (2015), transgender and gender nonconforming individuals whose scripts contained this theme described the formation of sexual relationships via involvement in LGBTQ+ communities, BDSM/kink groups, and within the context of polyamory. Scholars note that open communication and boundary setting embody core principles of respect, honesty, and mutuality within BDMS/kink communities, as well as in polyamorous relationships (Anapol, 2010; Faccio, Casini, & Cipolletta 2014; Kattari, 2015). Thus, it would follow that such relational arrangements would naturally provide space for identity disclosure, boundary setting, and discussion of preferences. Further, it makes sense that scripts that included participation in a nontraditional sex community theme rarely also contained a stigma theme. In fact, Kattari (2015) found that sexual and gender minority people with

disabilities who participate in kink and polyamorous culture find enhanced communication and disclosure opportunities through negotiation, which promote sexual assertiveness and fulfillment. On a more general level, multiple studies have shown that individuals who participate in the BDSM/kink lifestyle suffer less anxiety, fewer sexual difficulties, report better personal wellbeing and more interest in sex, and face no increased risk of sexual coercion compared to individuals not involved in the lifestyle (Faccio et al., 2014; Richters, De Visser, Rissel, Grulich, & Smith, 2008; Wismeijer & Assen, 2013).

### **Comparing the Sexual Scripts of Cisgender Heterosexual Undergraduates to Transgender and Gender Nonconforming Undergraduates**

Transgender and gender nonconforming undergraduates provided sexual scripts that in some ways replicated those of their cisgender heterosexual peers and in some ways deviated from them. Though transgender and gender nonconforming undergraduates often described similar types of sexual relationships (e.g., within the context of a romantic relationship, casually hooking up, etc.) and meeting sexual partners by many of the same methods (e.g. through friends, at a party, etc.), notable differences also arose. While some scripts indicated an adherence to traditional gender roles, for the most part, script writers refrained from identifying clear sexual initiators/aggressors and gatekeepers. Furthermore, open communication appeared as a highly crucial component of the sexual encounter, unlike within the scripts of cisgender peers. In fact, a number of script writers depicted greater openness between two or more gender nonconforming sexual partners as opposed to sexual encounters involving a cisgender person. Though embedded within the context of a couple specific types of scripts (repeated casual sexual encounters and participation in a nontraditional sex community), alcohol certainly held less significance in the majority of sexual scripts in comparison to what would be expected within the

sexual scripts of cisgender, heterosexual college students. On the other hand, a minority of script writers described connecting with potential sexual partners by somewhat more risky means than cisgender students might employ, such as by advertising on Craigslist. Finally, though among cisgender undergraduates emotional responses following a sexual encounter may relate in part to gender socialization (e.g., male partner = pride, female partner = shame), positive and negative feelings as reported by script writers in the current study seemed to better reflect stigma and resilience than gender identity.

As a reminder, undergraduate cisgender heterosexual sexual scripts continue to reinforce traditional sex roles that posit men as sexual initiators and women as sexual gatekeepers, even within the context of the casual hook up culture (Paul & Hayes, 2002). Further, these scripts tend to unfold in the following manner: two college students meet at a bar or party where alcohol is prevalent, minimal communication is exchanged, a sexual encounter takes place, and afterward, the male sexual partner experiences pride in his sexual conquest while the female partner experiences shame for her failure to forestall the sexual encounter until achieving a committed relationship (Paul & Hayes, 2002).

According to the scripts in the current study, transgender and gender nonconforming students most often engage in sex within the context of an ongoing, committed relationship (29.0%). Also popular, a quarter of script writers described arranging sex as a negotiated one-time sexual encounter. Much less frequently, script writers described unplanned one-time casual sex (11.2%) and repeated casual sex (8.9%). Independent of how script writers portrayed sexual partners meeting, they discussed open communication in more than half the scripts they provided. By highlighting communication as a means to ensure safety and to prevent potential triggering, script writers substantiated its importance. They showed transgender and gender

nonconforming individuals as both relaying their sexual boundaries to their partners and requesting consent from them, with script writers only deviating from this tendency to portray open communication when stigma thwarted trust.

Mutual negotiation of the act of sex appeared highly valued in the current study. The ongoing relationship theme most frequently revealed this behavior, although scripts with other relationship themes did as well. Even when relational commitment was not expected, sexual partners still performed some brokering of consent and expectations. In this way, the current study's sexual scripts largely resembled the dating scripts of lesbian women, as presented by Klinkenberg and Rose (1994). According to script writers in both studies, shared orchestration of encounters, as well as post-encounter emotional check-ins, contribute to fulfilling sexual/dating experiences. Perhaps surprising, though most participants in the current study reported sex assigned at birth as female, participants assigned male at birth also depicted these elements in their scripts, thus demonstrating the high value placed on shared planning and mutual feedback, independent of birth sex or gender identity.

Initiation of sexual contact, according to script writers in the current study, generally relates more to comfort with one's identity and physicality than to gender roles. Despite a minority of scripts that designated a more masculine partner as the sexual initiator, and in one case, a more feminine one, script writers most commonly identified the transgender or gender nonconforming person as the initiator, followed by a cisgender partner or the "other" person involved in the sexual encounter with the transgender or gender nonconforming person. These initiation preferences could speak to confidence in one's sexuality, or they may reflect a rejection of socialized norms assigned because of biological sex at birth. Alternatively, noting that the majority of participants involved in this study were assigned female at birth, transgender sexual

initiation could actually reflect an assertion of traditional heterosexual male sexual roles and thus adherence to traditional sexual norms. Certainly, in cases when transgender persons prefer to prescribe to the gender binary, they may more strongly reinforce gender roles, such as Schrock and Reid (2006) found.

It should be noted that gender affirmation during sex seemed to present itself in ways other than through the initiation of sex. In many cases, script writers spoke of choosing certain sexual acts over others, so as not reinforce their assigned sex at birth. For instance, more masculine individuals seemed to prefer penetrating their partners instead of receiving penetration. Further, more female aligned individuals expressed greater enjoyment of nipple play. Similarly, but to a lesser extent, script writers described appreciating verbal and nonverbal messaging that emphasized one's felt identity. As an example, one script writer who identifies as a gay man and was assigned female at birth discussed feeling affirmed when a sexual partner commented on how "handsome" and "strong" he is.

Wilson (2009) suggested that even when lesbian women adopt a more strict gender expression in their outward appearances, their sexual scripts deviate notably from traditional stereotypes thereby providing greater sexual pleasure. I would argue that the sexual scripts offered in the current study represent two distinct groups—those who find freedom in the rejection of norms and those who continue to adhere to social norms and struggle with acceptance of their gender identity. In particular, those who have connected with some nontraditional sex community seem to exhibit greater sex positivity and more openness to exploring their sexual interests in ways that promote communication and negotiation compared to their cisgender peers. However, those who remain unconnected face greater stigma and

reduced accessibility to safe sexual partners. Furthermore, they present as more closeted and less able to communicate their needs and wishes to potential partners.

### **Limitations**

The findings of the current study should be interpreted with multiple limitations in mind. Because this study involved transgender and gender nonconforming undergraduates exclusively, the results do not likely represent the larger transgender population nor would replication be probable within a community sample. Without a doubt, the transgender undergraduate population is unique in presentation. Those who are transgender and in college have already exhibited high resilience in making it to the undergraduate educational level, and furthermore, they face stigma-related challenges within the context of a relatively contained institutional environment. Prior research has demonstrated that about 20% of transgender and gender nonconforming individuals do not attend college because of dropping out of school due to severe gender-related mistreatment (James et al., 2016). In this way, young adults who attend college and identify as transgender or gender nonconforming, like the current sample, and those young adults who do not attend college and identify as transgender or gender nonconforming are vastly different. Those who do not attend college may present as more stigmatized, as well as more closeted, and at higher risk for poorer outcomes. As noted earlier, most participants identified themselves as White and assigned female at birth. Though certainly exposed to experiences of stigma and oppression, these intersecting identities realistically afforded privileges to the participants involved in this study which a notable portion of the broader transgender and gender nonconforming community likely have not enjoyed. It is well-documented that individuals assigned male at birth who experience gender dysphoria face more violence than those assigned

female at birth. Further, transgender individuals of color also face increased stigma, and the more minority identities a transgender person carries, the more pronounced their marginalization.

Given that the survey in the current study was anonymous, I was unable to verify that the information provided by participants was accurate. Additionally, though I made attempts to limit survey completion by participants not meeting inclusion criteria and eliminate unlikely responses, participants were ultimately self-selected and may not actually be representative of the transgender undergraduate population. In keeping with this idea, a large proportion of participants reported mental illness, which was higher than rates found in prior research (Goldberg et al., 2019). Moreover, participants appeared to respond either on the extreme of total security in their gender identity with few negative effects from stigma experiences and high resilience or on the opposite extreme of ongoing difficulties with gender identity, stigma experiences with tremendously negative effects, and minimal resilience factors to protect against stigma.

The number of biologically born female students who responded to the current study was approximately four times the size of the response group who was assigned male at birth. According to Rankin and Beemyn (2012), more FTM transgender individuals are out in college than MTF, sometimes at the rate of 10 to 1. Therefore, this high prevalence of biologically born female students in the current study may simply reflect a higher proportion of biologically born female transgender college students. However, it could also reflect greater outness of gender nonconformity among biologically born female individuals or more societal acceptance. In fact, when biologically born male individuals come to identify as MTF women, they may lose social power, whereas the biologically born FTM transgender individual may gain it (Nagoshi, Brzuzy, & Terrell, 2012). Certainly, Western tradition, in which the American educational system is

housed, prescribes roles and privileges based upon a gender binary. Within this binary, masculinity is rewarded with power and dominance, while femininity is associated with nurturance and reduced agency (Bornstein, 1994; Norton & Herek, 2013). Realistically, privileges can shift as a person transitions into their felt gender identity (Mizock & Hopwood, 2016). This shifting of privileges is complicated, however, by that fact that most transgender individuals view both gender identity and sexuality as fluid (Nagoshi et al., 2012). Perhaps, this can help explain the vast number of gender identity and sexual orientation subgroups that emerged within the current study. Unfortunately, given this fluidity, identities may remain ever-changing, and under such circumstances, it is impossible to tell if each of these subgroups within the transgender undergraduate population experience gender minority stress and resilience in similar ways or expressly different ones. Quite possible, as alluded to by some of the sexual scripts, is that those transgender individuals who are able to express more of their felt gender identity without visibly violating social norms suffer less stigma and thus, enjoy better psychological health and more satisfaction in their sexual relationships.

Because the current study utilized a cross-sectional design instead of a longitudinal one, responses can only provide a snapshot view of current functioning as opposed to a perspective of trajectory over time. Additionally, there exists a pronounced lack of transgender-specific measures normed and validated for the undergraduate population. On the GMSR measure, internal consistency was unacceptable on two subscales and the Victimization subscale had to be recoded to better fit the responses provided, each of which resulted in some loss of data. While for the most part, running analyses with the original scales provided the same or statistically similar results, this was not so for hazardous drinking, which has been noted earlier in this section during discussion of the quantitative findings. Moreover, I relied heavily on screeners for

outcome measurement to reduce respondent burden, but screening measures present their own shortcomings. Namely, screeners are not as accurate as full-blown diagnostic measures, and they present challenges for imputation of missing data. When missing data occurs and case-wise deletion is implemented in statistical analysis, information loss inevitably occurs. Finally, though regression analyses are relatively robust, non-normal residual distributions increase statistical error, and even when corrected for by bootstrapping, results are based upon drawing repeatedly from a potentially non-representative sample.

### **Future Directions**

Bearing these limitations in mind, this study lays the groundwork for a number potential future directions in research on the gender minority stress and resilience experiences of transgender and gender nonconforming undergraduates. For one, results support that development of more tailored model for transgender and gender nonconforming students is markedly warranted. Though script writers described enacted stigma in their written accounts of sexual encounters, gender-related discrimination and rejection items on the GMSR did not widely resonate with them. Further, other resilience factors not included within the GMSR measure were provided within these scripts. Thus, future studies should explore how transgender and gender nonconforming undergraduates interpret events as discriminatory or rejecting and investigate additional avenues of resilience among this population.

Comparing transgender and gender nonconforming undergraduates to matched transgender and gender nonconforming peers not enrolled in college could highlight some of the unique obstacles each group faces, as well as the strengths they may share. Additionally, examining transgender and gender nonconforming undergraduates' mental health, health risk behaviors, and sexual functioning over time could provide an idea as to whether negative

outcomes increase as stigma does or if increased resilience shows a growing protective effect. In the current study, I did not measure differences between those who ascribe to a gender binary versus those who do not. In the future, examining these differences, as well as the overlapping stigma effects inherent in intersectionality, could lead to an increased understanding of why gender minority stigma may affect certain transgender and gender nonconforming individuals more so than others. Lastly, looking ahead, future studies may improve upon the current one by directly comparing sexual scripts of cisgender and transgender college students from the same cohort.

### **Implications**

Results of this dissertation provide opportunities for rethinking how transgender and gender nonconforming undergraduates are viewed. Historically, information on this distinctive group has been lost within the work on larger LGBTQ populations or based upon assumptive generalizations inferred from high-risk subsets of the larger transgender population (Graham et al., 2011; Moradi et al., 2016). Though rates of mental illness, probable drug abuse, and sex with uncommitted partners were high in comparison to the reported rates of cisgender peers, hazardous drinking and rates of impulsive sex acts were lower. In addition, participants in the current study reported high levels of communication in their sexual relationships, as well as sex positivity when aligned with a nontraditional sex community. Altogether, these findings offer initial alternative evidence of better functioning than perhaps suggested by the extant literature.

Acknowledging that mental illness and substance use may disproportionately affect transgender and gender nonconforming undergraduates, these students are likely to seek mental healthcare on campus (Goldberg, 2018). An astute clinician would be well-justified in screening for a number of other difficulties, too, though when working with clients who identify in these

ways. Whereas most providers would likely ask about trauma history, mood, and substance use already, they may be less likely to gather information on body dysmorphia, disordered eating, and physical health. However, as reported by many individuals in the current study, body concerns are often paramount in affecting confidence in navigating social relationships and the world around them. Furthermore, transgender and gender nonconforming individuals may face certain heightened health risks. For example, combining hormone therapy and heavy alcohol consumption substantially heightens risk of liver damage. Additionally, meeting strangers online for sex and mixing substance use, including alcohol, with sex can increase risk of sexual victimization. Thus, not only should the intake process involve exploration of stigma, mental health, and coping experiences, but also clinicians should strongly consider how these domains interact with each other and physical well-being when performing case conceptualization.

Unfortunately, transgender and gender nonconforming undergraduates report experiences of invalidation and over-emphasis on their transgender identity on the part of mental health providers as a driver of psychological difficulties (Goldberg et al., 2019). It is crucial providers develop a knowledge of how to deliver clinical interventions in modes that are gender-affirming. A good start to doing so would involve familiarizing oneself with the WPATH Standards of Care (Coleman et al., 2012), as well as referring to transgender and gender nonconforming clients in congruence with their identified genders. Taking these initial steps would communicate an effort in attaining a nuanced understanding of gender minority stress and resilience in the context of health, rather than relying wholly upon transgender clients to provide education on transgender issues, thereby increasing the likelihood of achieving treatment success (Goldberg, 2018).

In terms of specific treatments, these may vary according to diagnosis. When patients present with either depression or anxiety, which is most likely, clinicians should gather

information on experienced victimization and nonaffirmation, as well as negative expectations for the future, internalized transphobia, and gender identity concealment, to best contextualize how these stressors have adversely influenced symptoms. In the case of depression, specifically, clinicians may also want to focus on building pride to minimize the amplifying effects of transphobia on symptoms. When treating PTSD, an evidence-based approach would be indicated, as the internal experience of the transgender identity seems to wield less influence over traumatic symptomology than the experience of a Criterion A trauma, itself. For those transgender and gender nonconforming patients who report negative cognitions related to expected rejection and internalized transphobia, clinicians may want to focus on developing coping skills, in that these clients, in particular, likely face an increased risk of hazardous drinking. As far as how best to treat other problematic substance use, little can be gleaned from the current study. Until more is understood regarding the development of problematic substance use within this population, a traditional treatment approach incorporating risk reduction or abstinence may prove the best option. In any case, based upon the findings of De Pedro and colleagues (2017), focusing attention toward substance use prevention in this population instead of on substance abuse treatment probably makes the most sense.

From a student programming perspective, general sex education should borrow from the strengths of the transgender and gender nonconforming undergraduate community. Clearly, transgender and gender nonconforming students emphasize respect and open communication when engaging in sex. A sense of trust is established and negotiations are discussed before encounters take place. Essentially, while transgender and gender nonconforming students may participate in sex in this manner as an effort in self-protection, there is no reason cisgender students cannot adopt similar communication techniques. By doing so, cisgender students may

not only develop enhanced sexual satisfaction and reduced sexual health risks, but also fall victim to fewer of the gendered social consequences of engaging in sexual behaviors.

In terms of tailoring sex education to the transgender and gender nonconforming undergraduate population, programming should perhaps embrace a heavy focus on safety. For one, according to their responses on the SRS, transgender and gender nonconforming students more often couple substance use with sex, and they are also more likely to engage in sex with uncommitted partners. Though both cisgender and transgender students can engage in hook up culture via dating apps, gender nonconforming students appear to more often meet strangers outside of their peer group through online advertising. On the one hand, seeking sexual partners in this way probably reduces opportunities for stigmatization by peers. On the other, it likely also places gender nonconforming students at increased risk for potential danger at the hands of sexual predators or individuals who wish to do them harm due to their gender identities. As noted within the current study's sexual scripts, sexual violence against this group occurs at a notably high frequency. Additionally, though a few script writers spoke of sexual partners discussing sexually transmitted infection (STI) status and safer sex methods, most did not. Therefore, any sexual health education targeted to transgender and gender nonconforming students should incorporate information on methods for STI and pregnancy prevention.

At least one online sexual health intervention has been developed for LGBT individuals, which could potentially be employed to address the lack of sex education programming relevant to transgender and gender nonconforming students prior to or during their first year of college. Over five modules, the Queer Sex Ed (QSE) program addresses coming out self-efficacy, how to connect with the LGBT community, how to form and sustain healthy relationships, sexual functioning, communication skills, and sexual assertiveness (Mustanski, Greene, Ryan, &

Whitton, 2015). Two hundred and two LGBT youth ages 16 to 20 who completed the QSE demonstrated positive outcomes over several weeks. Among others, positive outcomes included improved knowledge of sexual health, greater sexual assertiveness, increased feelings of connectedness to the LGBT community, reduced internalized stigma, and enhanced communication skills. Though not necessarily a perfect fit for transgender college students because of its development for a younger population and its major focus on sexual minority status, this intervention may still offer a preliminary foundation for a targeted sex education program appealing to transgender individuals. With supplementation related to creating an online presence safely and the inclusion of substance use risk reduction strategies, such programming likely would, better than any other existing approach, address the sex education needs of transgender college students.

While transgender and gender nonconforming students face injustice on the interpersonal level, they also do on a more macro level in the forms of institutional policies, lack of adequate resources, and a discriminatory or nonaffirming campus climate (Beemyn et al., 2005; Goldberg, 2018). Policies prevent students from having educational documentation represent their gender identity, they are excluded from sex-segregated activities and spaces, nondiscrimination statements fail to include protections for them, and violations against their dignity go unenforced. Additionally, transgender undergraduates experience nonaffirmation in the classroom by professors, incompetence on the part of medical and mental health professionals, inadequate student healthcare coverage, and lack of trans-friendly housing options. Arguably, one of the most overt offenses this group faces within the college setting is on the part of LGBT student groups and resource centers. Essentially, transgender undergraduates all too often experience invisibility when attempting to access these resources because they are overshadowed

by the concerns of cisgender sexual minority students (Goldberg & Kuvalanka, 2018; Marine & Nicolazzo, 2014).

As Goldberg (2018) suggests, transgender and gender nonconforming undergraduates could likely experience huge benefits from access to transgender-specific student groups or resource centers. Not only would such entities provide safe spaces for transgender students to meet like-minded peers, but they could also provide an avenue for these students to exchange relevant information, such as knowledge of body contouring equipment and trans-friendly providers. Transgender-specific spaces could not only help build community connection among transgender and gender nonconforming students, they could also potentially reduce the need to seek relationships outside of the undergraduate peer group. In consequence, the safety of sexually active transgender students could increase. Furthermore, as the transgender and gender nonconforming student body becomes more visible, reduced fear and misunderstanding of those who identify by gender minority terms could follow.

Though the transgender and gender nonconforming undergraduate population continues to grow, our knowledge of this unique group remains rudimentary. In order to comprehend the difficulties they face, we must examine their experiences of minority stress and resilience. Moreover, we must come to understand how these experiences influence how they view and approach the world around them. The current study has made movement toward this goal by testing the gender minority stress and resilience model with an exclusively transgender and gender nonconforming undergraduate sample and by qualitatively analyzing their sexual scripts against those of cisgender peers. While questions remain regarding the effects of minority stress and resilience on this population, this work paves the way for future research on minority stress and resilience, as well as on sexual scripting. Furthermore, the findings can help to inform

gender-affirming clinical interventions, sex education programming, and college resource development that benefit the transgender and gender nonconforming student body.

## REFERENCES

- American Psychiatric Association [APA]. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Arlington, VA: American Psychiatric Publishing.
- Anapol, D. (2010). *Polyamory in the 21st century: Love and intimacy with multiple partners*. Lanham, MA: Rowman & Littlefield Publishers.
- Bai, Y., Copeland, W. E., Adams, Z., Lerner, M., King, J. A., Szopinski, S., ... & Hudziak, J. (2019). The University of Vermont Wellness environment: Feasibility and initial results of a college undergraduate health-promoting program. *Child and Adolescent Psychiatric Clinics, 28*, 247-265.
- Becasen, J. S., Denard, C. L., Mullins, M. M., Higa, D. H., & Sipe, T. A. (2019). Estimating the prevalence of HIV and sexual behaviors among the US transgender population: A systematic review and meta-analysis, 2006-2017. *American Journal of Public Health, 109*, e1-e8. <https://doi.org/10.2105/AJPH.2018.304727>
- Beemyn, B., Curtis, B., Davis, M., & Tubbs, N. J. (2005). Transgender issues on college campuses. *New Directions for Student Services, 111*, 49-60.
- Bilodeau, B. L., & Renn, K. A. (2005). Analysis of LGBT identity development models and implications for practice. *New Directions for Student Services, 2005*, 25-39. doi:10.1002/ss.171
- Bockting, W. O. (2008). Psychotherapy and the real-life experience: From gender dichotomy to gender diversity. *Sexologies, 17*, 211–224. doi:10.1016/j.sexol.2008.08.001
- Bockting, W., Huang, C., Ding, H., Robinson, B., & Rosser, B. R. S. (2005). Are transgender persons at higher risk for HIV than other sexual minorities? A comparison of HIV prevalence and risks. *International Journal of Transgenderism, 8*, 123-131. doi:10.1300/J485v08n02\_11
- Bockting, W. O., Miner, M. H., Swinburne Romine, R. E., Hamilton, A., & Coleman, E. (2013). Stigma, mental health, and resilience in an online sample of the U.S. transgender population. *American Journal of Public Health, 103*, 943–951. doi:10.2105/AJPH.2013.301241
- Bohn, M. J., Babor, T. F., & Kranzler, H. R. (1991). Validity of the Drug Abuse Screening Test (DAST-10) in inpatient substance abusers [Monograph]. *Problems of Drug Dependence, 119*, 233–235.
- Bornstein, K. (1994). *Gender outlaw: On men, women and the rest of us*. New York, NY: Routledge.
- Bradshaw, C., Kahn, A. S., & Saville, B. K. (2010). To hook up or date: Which gender

- benefits?. *Sex Roles*, 62, 661-669. doi:10.1007/s11199-010-9765-7
- Brennan, S. L., Irwin, J., Drincic, A., Amoura, N. J., Randall, A., & Smith-Sallans, M. (2017). Relationship among gender-related stress, resilience factors, and mental health in a midwestern U.S. transgender and gender-nonconforming population. *International Journal of Transgenderism*, 18, 433-445. doi:10.1080/15532739.2017.1365034
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3, 77-101. doi:10.1191/1478088706qp063oa
- Bulmer, M. G. (1979). Statistical inference. *Principles of Statistics*. New York, NY: Dover.
- Cantor, D., Fisher, B., Chibnall, S., Townsend, R., Lee, H., Bruce, C., & Thomas, G. (2015). *Report on the AAU campus climate survey on sexual assault and sexual misconduct*. Washington, DC: Association of American Universities.
- Catalano, D. C. J. (2015). "Trans enough?": The pressures trans men negotiate in higher education. *TSQ: Transgender Studies Quarterly*, 2, 411-430. <https://doi.org/10.1215/23289252-2926399>
- Chodzen, G., Hidalgo, M. A., Chen, D., & Garofalo, R. (2019). Minority stress factors associated with depression and anxiety among transgender and gender-nonconforming youth. *Journal of Adolescent Health*, 64, 467-471. doi:10.1016/j.jadohealth.2018.07.006
- Clements-Nolle, K., Marx, R., Guzman, R., & Katz, M. (2001). HIV prevalence, risk behaviors, health care use, and mental health status of transgender persons: Implications for public health intervention. *American Journal of Public Health*, 91, 915-921. doi:10.2105/AJPH.91.6.915
- Cocco, K. M., & Carey, K. B. (1998). Psychometric properties of the drug abuse screening test in psychiatric outpatients. *Psychological Assessment*, 10, 408-414. doi:10.1037/1040-3590.10.4.408
- Coleman, E., Bockting, W., Botzer, M., Cohen-Kettenis, P., DeCuypere, G., Feldman, J., . . . Zucker, K. (2012). Standards of care for the health of transsexual, transgender, and gender nonconforming people, version 7. *International Journal of Transgenderism*, 13, 165-232. doi:10.1080/15532739.2011.700873
- Coulter, R. W., Blosnich, J. R., Bukowski, L. A., Herrick, A., Siconolfi, D. E., & Stall, R. D. (2015). Differences in alcohol use and alcohol-related problems between transgender- and nontransgender-identified young adults. *Drug and Alcohol Dependence*, 154, 251-259. doi:10.1016/j.drugalcdep.2015.07.006
- Cramer, D. (2002). *Basic statistics for social research: Step-by-step calculations & computer techniques using minitab*. London: Routledge.

- DeLuzio Chasin, C. (2011). Theoretical issues in the study of asexuality. *Archives of Sexual Behavior, 40*, 713-723. doi:10.1007/s10508-011-9757-x
- De Pedro, K. T., Gilreath, T. D., Jackson, C., & Esqueda, M. C. (2017). Substance use among transgender students in California public middle and high schools. *Journal of School Health, 87*, 303-309. doi:10.1111/josh.12499
- Dugan, J. P., Kusel, M. L., & Simounet, D. M. (2012). Transgender college students: An exploratory study of perceptions, engagement, and educational outcomes. *Journal of College Student Development, 53*, 719-736. doi:10.1353/csd.2012.0067
- Dworkin, E. R., Gilmore, A. K., Bedard-Gilligan, M., Lehavot, K., Guttmannova, K., & Kaysen, D. (2018). Predicting PTSD severity from experiences of trauma and heterosexism in lesbian and bisexual women: A longitudinal study of cognitive mediators. *Journal of Counseling Psychology, 65*, 324-333. doi:10.1037/cou0000287
- Eagan, M. K., Stolzenberg, E. B., Zimmerman, H. B., Aragon, M. C., Whang Sayson, H., & Rios-Aguilar, C. (2016). *The American freshman: National norms Fall 2016*. Los Angeles, CA: Higher Education Research Institute (HERI). Retrieved from: <https://www.heri.ucla.edu/monographs/TheAmericanFreshman2016.pdf>
- Edwards, K. M., & Sylaska, K. M. (2013). The perpetration of intimate partner violence among LGBTQ college youth. *Journal of Youth Adolescence, 42*, 1721-1731. doi:10.1007/s10964-012-9880-6
- Faccio, E., Casini, C., & Cipolletta, S. (2014). Forbidden games: the construction of sexuality and sexual pleasure by BDSM 'players'. *Culture, Health & Sexuality, 16*, 752-764. doi:10.1080/13691058.2014.909531.
- Factor, R., & Rothblum, E. (2008). Exploring gender identity and community among three groups of transgender individuals in the United States: MTFs, FTMs, and genderqueers. *Health Sociology Review, 17*, 235-253. Retrieved from <http://search.proquest.com.jproxy.lib.ecu.edu/docview/203159467?accountid=10639>
- Fox Tree-McGrath, C. A., Puckett, J. A., Reisner, S. L., & Pantalone, D. W. (2018). Sexuality and gender affirmation in transgender men who have sex with cisgender men. *International Journal of Transgenderism, 19*, 389-400. doi:10.1080/15532739.2018.1463584
- Frederick, D. A., Lever, J., Gillespie, B. J., & Garcia, J. R. (2017). What keeps passion alive? Sexual satisfaction is associated with sexual communication, mood setting, sexual variety, oral sex, orgasm, and sex frequency in a national US study. *The Journal of Sex Research, 54*, 186-201. <https://doi.org/10.1080/00224499.2015.1137854>
- Fredriksen-Goldsen, K. I., Cook-Daniels, L., Kim, H. J., Erosheva, E. A., Emlen, C. A., Hoy-

- Ellis, C. P., ... & Muraco, A. (2013). Physical and mental health of transgender older adults: An at-risk and underserved population. *The Gerontologist*, *54*, 488-500. <https://doi.org/10.1093/geront/gnt021>
- French, M. T., Roebuck, M. C., McGeary, K. A., Chitwood, D. D., & McCoy, C. B. (2001). Using the drug abuse screening test (DAST-10) to analyze health services utilization and cost for substance users in a community-based setting. *Substance Use & Misuse*, *36*, 927-943. doi:10.1081/JA-100104096
- Gaetano J. (2013). Holm-Bonferroni sequential correction: An EXCEL calculator (1.2) [Microsoft Excel workbook]. Retrieved from [https://www.researchgate.net/publication/242331583\\_Holm-Bonferroni\\_Sequential\\_Correction\\_An\\_EXCEL\\_Calculator\\_-\\_Ver.\\_1.2](https://www.researchgate.net/publication/242331583_Holm-Bonferroni_Sequential_Correction_An_EXCEL_Calculator_-_Ver._1.2) . doi:10.13140/RG.2.1.3920.0481
- Gamarel, K. E., Sevelius, J. M., Reisner, S. L., Coats, C. S., Nemoto, T., & Operario, D. (2018). Commitment, interpersonal stigma, and mental health in romantic relationships between transgender women and cisgender male partners. *Journal of Social and Personal Relationships*, *36*, 2180–2201. <https://doi.org/10.1177/0265407518785768>
- Gamarel, K. E., Reisner, S. L., Parsons, J. T., & Golub, S. A. (2012). Association between socioeconomic position discrimination and psychological distress: Findings from a community-based sample of gay and bisexual men in New York City. *American Journal of Public Health*, *102*, 2094-2101. doi:10.2105/AJPH.2012.300668
- Gelman, A., & Hill, J. (2007). *Data analysis using regression and multilevel/hierarchical models*. New York, NY: Cambridge University Press.
- Gillespie, B. J. (2017). Sexual synchronicity and communication among partnered older adults. *Journal of Sex & Marital Therapy*, *43*, 441-455. <https://doi.org/10.1080/0092623X.2016.1182826>
- Goldberg, A. E. (2018). *Transgender students in higher education*. Los Angeles: The Williams Institute, UCLA School of Law. Retrieved from <https://williamsinstitute.law.ucla.edu/wp-content/uploads/1808-Trans-Higher-Ed.pdf>
- Goldberg, A. E., & Kavalanka, K. A. (2018). Navigating identity development and community belonging when "there are only two boxes to check": An exploratory study of nonbinary trans college students. *Journal of LGBT Youth*, *15*, 106-131. doi:10.1080/19361653.2018.1429979
- Goldberg, A. E., Kavalanka, K. A., Budge, S., Benz, M., & Smith, J. Z. (2019). Healthcare experiences of transgender binary and nonbinary university students. *The Counseling Psychologist*. <https://doi.org/10.1177/0011000019827568>
- Gould, D. (2004). Counseling services: Counseling issues with transgender and gender variant

- students. In L. Strimpel, K. Mayeda, & R. Sanlo (Eds.), *Transactions: Transgender issues in Student Affairs*. Unpublished manuscript.
- Graham, R., Berkowitz, B., Blum, R., Bockting, W., Bradford, J., de Vries, B., ... & Makadon, H. (2011). *The health of lesbian, gay, bisexual, and transgender people: Building a foundation for better understanding*. Washington, DC: Institute of Medicine.
- Grant, J. M., Mottet, L., Tanis, J. E., Harrison, J., Herman, J., & Keisling M. (2011). *Injustice at every turn: A report of the National Transgender Discrimination Survey*. Washington, DC: National Center for Transgender Equality.
- Grossman, A. H., D'augelli, A. R., & Frank, J. A. (2011). Aspects of psychological resilience among transgender youth. *Journal of LGBT Youth*, 8, 103-115. Retrieved from <https://doi.org/10.1080/19361653.2011.541347>
- Grossman, A. H., D'Augelli, A. R., Howell, T. J., & Hubbard, S. (2005). Parent' reactions to transgender youth' gender nonconforming expression and identity. *Journal of Gay & Lesbian Social Services*, 18, 3-16. doi:10.1300/J041v18n01\_02
- Grossman, A. H., Park, J. Y., & Russell, S. T. (2016). Transgender youth and suicidal behaviors: Applying the interpersonal psychological theory of suicide. *Journal of Gay & Lesbian Mental Health*, 20, 329-349. doi:10.1080/19359705.2016.1207581
- Gupta, K. (2018). Gendering asexuality and asexualizing gender: A qualitative study exploring the intersections between gender and asexuality. *Sexualities*. Retrieved from <https://doi.org/10.1177/1363460718790890>
- Hair Jr, J. F., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2017). *A primer on partial least squares structural equation modeling (PLS-SEM) (2<sup>nd</sup> ed.)*. Thousand Oaks, CA: Sage Publications.
- Hatzenbuehler, M. L., Nolen-Hoeksema, S., & Erickson, S. J. (2008). Minority stress predictors of HIV risk behavior, substance use, and depressive symptoms: Results from a prospective study of bereaved gay men. *Health Psychology*, 27, 455-462. doi:10.1037/0278-6133.27.4.455
- Hendricks, M. L., & Testa, R. J. (2012). A conceptual framework for clinical work with transgender and gender nonconforming clients: An adaption of the Minority Stress Model. *Professional Psychology: Research and Practice*, 43, 460-467. doi:10.1037/a0029597
- Herbst, J. H., Jacobs, E. D., Finlayson, T. J., McKleroy, V. S., Neumann, M. S., Crepaz, N., & HIV/AIDS Prevention Research Synthesis Team. (2008). Estimating HIV prevalence and risk behaviors of transgender persons in the United States: A systematic review. *AIDS and Behavior*, 12, 1-17. doi:10.1007/s10461-007-9299-3

- Herek, G. M. (2007). Confronting sexual stigma and prejudice: Theory and practice. *Journal of Social Issues, 63*, 905-925. doi:10.1111/j.1540-4560.2007.00544.x
- Holmbeck, G. N. (2002). Post-hoc probing of significant moderational and mediational effects in studies of pediatric populations. *Journal of Pediatric Psychology, 27*, 87-96. doi:10.1093/jpepsy/27.1.87
- James, S. E., Herman, J. L., Rankin, S., Keisling, M., Mottet, L., & Anafi, M. (2016). *Executive summary of the report of the 2015 U.S. transgender survey*. Washington, DC: National Center for Transgender Equality.
- Kattari, S. K. (2015). "Getting it": Identity and sexual communication for sexual and gender minorities with physical disabilities. *Sexuality & Culture, 19*, 882-899.
- Kenagy, G. P. (2005). Transgender health: Findings from two needs assessment studies in Philadelphia. *Health and Social Work, 30*, 19-26. doi:10.1093/hsw/30.1.19
- Kim, H. Y. (2013). Statistical notes for clinical researchers: assessing normal distribution (2) using skewness and kurtosis. *Restorative Dentistry & Endodontics, 38*, 52-54.
- Kim, J. L., Lynn Sorsoli, C., Collins, K., Zylbergold, B. A., Schooler, D., & Tolman, D. L. (2007). From sex to sexuality: Exposing the heterosexual script on primetime network television. *Journal of Sex Research, 44*, 145-157. doi:10.1080/00224490701263660
- Klein, C., & Gorzalka, B. B. (2009). Continuing Medical Education: Sexual Functioning in Transsexuals Following Hormone Therapy and Genital Surgery: A Review (CME). *The Journal of Sexual Medicine, 6*, 2922-2939.
- Klinkenberg, D. & Rose, S. (1994). Dating scripts of gay men and lesbians. *Journal of Homosexuality, 26*, 23-35. doi:10.1300/J082v26n04\_02
- Kosciw, J. G., Greytak, E. A., Giga, N. M., Villenas, C., & Danischewski, D. J. (2016). *The 2015 national school climate survey: The experiences of lesbian, gay, bisexual and transgender youth in our nation's schools*. New York, NY: GLSEN.
- Kosenko, K., Rintamaki, L., Raney, S., & Maness, K. (2013). Transgender patient perceptions of stigma in health care contexts. *Medical Care, 51*, 819-822. doi:10.1097/MLR.0b013e31829fa90d
- Lambda Legal & the Consortium of Higher Education LGBT Resource Professionals. (2016). Transgender college students. In *Transgender rights toolkit: A legal guide for transgender people and their advocates* (pp. 39-44). New York, NY: Lambda Legal.
- Lawrence, A. A. (2005). Sexuality before and after male-to-female sex reassignment surgery. *Archives of Sexual Behavior, 34*, 147-166. doi:10.1007/s10508-005-1793-y

- Lawrence, A. A. (2010). Sexual orientation versus age of onset as bases for typologies (subtypes) for gender identity disorder in adolescents and adults. *Archives of Sexual Behavior, 39*, 514–545. doi:10.1007/s10508-009-9594-3
- Lehavot, K., & Simoni, J. M. (2011). The impact of minority stress on mental health and substance use among sexual minority women. *Journal of Consulting and Clinical Psychology, 79*, 159-170. doi:10.1037/a0022839
- Littleton, H. L., & Axsom, D. (2003). Rape and seduction scripts of university students: Implications for rape attributions and unacknowledged rape. *Sex Roles, 49*, 465-475. doi:10.1023/A:1025824505185
- Littleton, H., Kumpula, M., & Orcutt, H. (2011). Posttraumatic symptoms following a campus shooting: The role of psychosocial resource loss. *Violence and Victims, 26*, 461-476. doi:10.1891/0886-6708.26.4.461
- Lombardi, E., & Davis, S. M. (2006). Transgender health issues. In D. F. Morrow & L. Messinger (Eds.), *Sexual orientation and gender expression in social work practice: Working with gay, lesbian, bisexual, and transgender people* (pp. 343-363). New York, NY: Columbia University Press.
- Lombardi, E. L., Wilchins, R. A., Priesing, D., & Malouf, D. (2001). Gender violence: Transgender experiences with violence and discrimination. *Journal of Homosexuality, 42*, 89-101. doi:10.1300/J082v42n01\_05
- Lovibond, S. H., & Lovibond, P. F. (1995a). *Manual for the Depression Anxiety Stress Scales* (2nd ed.). Sydney: Psychology Foundation of Australia.
- Lovibond, P. F., & Lovibond, S. H. (1995b). The structure of negative emotional states: Comparison of the Depression Anxiety Stress Scales (DASS) with the Beck Depression and Anxiety Inventories. *Behaviour Research and Therapy, 33*, 335-343. doi:10.1016/0005-7967(94)00075-U
- Makadon, H. J., Mayer, K. H., Potter, J., & Goldhammer, H. (Eds.). (2015). *The Fenway guide to lesbian, gay, bisexual and transgender health*. Philadelphia, PA: ACP Press.
- Marine, S., & Nicolazzo, Z. (2014). Names that matter: Exploring the tensions of campus LGBTQ centers and trans inclusion. *Journal of Diversity in Higher Education, 7*, 265-81. doi:10.1037/a0037990
- Martin, C. (2013). *The influence of negative educational experiences on health behaviors among gender nonconforming American Indian/Alaska native people* (Doctoral dissertation). Retrieved from Colorado State University, ProQuest Dissertations Publishing. (3593406)
- Mathy, R. M. (2002). A nonclinical comparison of transgender identity and sexual orientation: A framework for multicultural competence. *Journal of Psychology & Human Sexuality, 13*,

31-54. doi:10.1300/J056v13n01\_02

- Mathy, R. M. (2003). Transgender identity and suicidality in a nonclinical sample: Sexual orientation, psychiatric history, and compulsive behaviors. *Journal of Psychology & Human Sexuality, 14*, 47-65. doi:10.1300/J056v14n04\_03
- McCabe, S. E., Boyd, C. J., Cranford, J. A., Morales, M., & Slayden, J. (2006). A modified version of the drug abuse screening test among undergraduate students. *Journal of Substance Abuse Treatment, 31*, 297-303. doi:10.1016/j.jsat.2006.04.010
- Meier, S. C., Sharp, C., Michonski, J., Babcock, J. C., & Fitzgerald, K. (2013). Romantic relationships of female-to-male trans men: A descriptive study. *International Journal of Transgenderism, 14*, 75-85. <https://doi.org/10.1080/15532739.2013.791651>
- Meston, C. M., Rellini, A. H., & Heiman, J. R. (2006). Women's history of sexual abuse, their sexuality, and sexual self-schemas. *Journal of Consulting and Clinical Psychology, 74*, 229-236. <http://dx.doi.org/10.1037/0022-006X.74.2.229>
- Meyer, I. H. (2003). Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: Conceptual issues and research evidence. *Psychological Bulletin, 129*, 674-697. doi:10.1037/0033-2909.129.5.674
- Meyer, I. H., & Dean, L. (1998). Internalized homophobia, intimacy, and sexual behavior among gay and bisexual men. *Psychological Perspectives on Lesbian and Gay Issues, 4*, 160-186.
- Miles, H., Winstock, A., & Strang, J. (2001). Identifying young people who drink too much: The clinical utility of the five-item Alcohol Use Disorders Identification Test (AUDIT). *Drug and Alcohol Review, 20*, 9-18. doi:10.1080/09595230123211
- Mizock, L., & Hopwood, R. (2016). Conflation and interdependence in the intersection of gender and sexuality among transgender individuals. *Psychology of Sexual Orientation and Gender Diversity, 3*, 93-103. doi:10.1037/sgd0000157
- Mizock, L., & Mueser, K. T. (2014). Employment, mental health, internalized stigma, and coping with transphobia among transgender individuals. *Psychology of Sexual Orientation and Gender Diversity, 1*, 146-158. doi:10.1037/sgd0000029
- Mohr, J. J., & Fassinger, R. E. (2000). Measuring dimensions of lesbian and gay male experience. *Measurement and Evaluation in Counseling and Development, 33*, 66-90.
- Montesi, J. L., Fauber, R. L., Gordon, E. A., & Heimberg, R. G. (2011). The specific importance of communicating about sex to couples' sexual and overall relationship satisfaction. *Journal of Social and Personal Relationships, 28*, 591-609. <https://doi.org/10.1177/0265407510386833>

- Moradi, B., Tebbe, E. A., Brewster, M. E., Budge, S. L., Lenzen, A., Ege, E., . . . Flores, M. J. (2016). A content analysis of literature on trans people and issues: 2002–2012. *The Counseling Psychologist, 44*, 960-995. doi:10.1177/0011000015609044
- Mustanski, B., Greene, G. J., Ryan, D., & Whitton, S. W. (2015). Feasibility, acceptability, and initial efficacy of an online sexual health promotion program for LGBT youth: The queer sex ed intervention. *The Journal of Sex Research, 52*, 220-230. doi:10.1080/00224499.2013.867924
- Nagoshi, J. L., Brzuzy, S., & Terrell, H. K. (2012). Deconstructing the complex perceptions of gender roles, gender identity, and sexual orientation among transgender individuals. *Feminism & Psychology, 22*, 45–422. doi:10.1177/0959353512461929
- National Conference of State Legislatures. (2017). 2017 State legislation. In “*Bathroom bill*” legislative tracking. Retrieved from <http://www.ncsl.org/research/education/-bathroom-bill-legislative-tracking635951130.aspx>
- Nemoto, T., Operario, D., & Keatley, J. (2005). Health and social services for male-to-female transgender persons of color in San Francisco. *International Journal of Transgenderism, 8*, 5-19. doi:10.1300/J485v08n02\_02
- Newcomb, M. E., & Mustanski, B. (2010). Internalized homophobia and internalizing mental health problems: A meta-analytic review. *Clinical Psychology Review, 30*, 1019-1029. doi:10.1016/j.cpr.2010.07.003
- Nikkelen, S. W., & Kreukels, B. P. (2018). Sexual experiences in transgender people: the role of desire for gender-confirming interventions, psychological well-being, and body satisfaction. *Journal of Sex & Marital Therapy, 44*, 370-381.
- Norton, A. T., & Herek, G. M. (2013). Heterosexuals’ attitudes toward transgender people: Findings from a national probability sample of U.S. adults. *Sex Roles, 68*, 738–753. doi:10.1007/s11199-011-0110-6
- Nuttbrock, L., Hwahng, S., Bockting, W., Rosenblum, A., Mason, M., Macri, M., & Becker, J. (2010). Psychiatric impact of gender-related abuse across the life course of male-to female transgender persons. *Journal of Sex Research, 47*, 12-23. doi:10.1080/00224490903062258
- Olson K. R., Key A. C., & Eaton N. R. (2015). Gender cognition in transgender children. *Psychological Science, 26*, 467–474. doi:10.1177/0956797614568156
- Owen, J., & Fincham, F. D. (2011). Young adults’ emotional reactions after hooking up encounters. *Archives of Sexual Behavior, 40*, 321-330. doi:10.1007/s10508-010-9652-x
- Oswalt, S., & Lederer, A. (2017). Beyond depression and suicide: The mental health of transgender college students. *Social Sciences, 6*, 20. doi:10.3390/socsci6010020

- Paul, E.L., & Hayes, K.A. (2002). The casualties of “casual” sex: A qualitative exploration of the phenomenology of college students’ hookups. *Journal of Social and Personal Relationships, 19*, 639-661. doi:10.1177/0265407502195006
- Piccinelli, M., Tessari, E., Bortolomasi, M., Piasere, O., Semenzin, M., Garzotto, N., & Tansella, M. (1997). Efficacy of the Alcohol Use Disorders Identification Test as a screening tool for hazardous alcohol intake and related disorders in primary care: A validity study. *British Medical Journal, 314*, 420-424. doi:10.1136/bmj.314.7078.420
- Prins, A., Bovin, M. J., Smolenski, D. J., Mark, B. P., Kimerling, R., Jenkins-Guarnieri, M. A., ... Tiet, Q. Q. (2016). The Primary Care PTSD Screen for DSM-5 (PC-PTSD-5): Development and evaluation within a veteran primary care sample. *Journal of General Internal Medicine, 31*, 1206-1211. doi:10.1007/s11606-016-3703-5
- Rankin, S., & Beemyn, G. (2012). Beyond a binary: The lives of gender-nonconforming youth. *About Campus, 17*, 2-10. doi:10.1002/abc.21086
- Rankin, S., Weber, G., Blumenfeld, W., & Frazer, S. (2010). *2010 state of higher education for lesbian, gay, bisexual & transgender people*. Charlotte, NC: Campus Pride.
- Reisner, S. L., Biello, K. B., White Hughto, J. M., Kuhns, L., Mayer, K. H., Garofalo, R., & Mimiaga, M. J. (2016). Psychiatric diagnoses and comorbidities in a diverse, multicity cohort of young transgender women: Baseline findings from project LifeSkills. *JAMA Pediatrics, 170*, 481-486. doi:10.1001/jamapediatrics.2016.0067
- Reisner, S. L., Greytak, E. A., Parsons, J. T., & Ybarra, M. L. (2015). Gender minority social stress in adolescence: Disparities in adolescent bullying and substance use by gender identity. *Journal Sex Research, 52*, 243–256. doi:10.1080/00224499.2014.886321
- Reisner, S. L., Veters, R., White, J. M., Cohen, E. L., LeClerc, M., Zaslow, S., ... Mimiaga, M. J. (2015). Laboratory-confirmed HIV and sexually transmitted infection seropositivity and risk behavior among sexually active transgender patients at an adolescent and young adult urban community health center. *AIDS Care, 27*, 1031-1036. doi:10.1080/09540121.2015.1020750
- Reisner, S. L., White Hughto, J. M., Gamarel, K. E., Keuroghlian, A. S., Mizock, L., & Pachankis, J. E. (2016). Discriminatory experiences associated with posttraumatic stress disorder symptoms among transgender adults. *Journal of Counseling Psychology, 63*, 509–519. doi:10.1037/cou0000143
- Richters, J., De Visser, R. O., Rissel, C. E., Grulich, A. E., & Smith, A. (2008). Demographic and psychosocial features of participants in bondage and discipline, “sadoomasochism” or dominance and submission (BDSM): Data from a national survey. *The Journal of Sexual Medicine, 5*, 1660–1668. doi:10.1111/j.1743-6109.2008.00795.x.

- Rood, B. A., Reisner, S. L., Surace, F. I., Puckett, J. A., Maroney, M. R., & Pantalone, D. W. (2016). Expecting rejection: Understanding the minority stress experiences of transgender and gender-nonconforming individuals. *Transgender Health, 1*, 151-164. <http://dx.doi.org.jproxy.lib.ecu.edu/10.1089/trgh.2016.0012>
- Rosario, M., Hunter, J., Maguen, S., Gwadz, M., & Smith, R. (2001). The coming-out process and its adaptational and health-related associations among gay, lesbian, and bisexual youths: Stipulation and exploration of a model. *American Journal of Community Psychology, 29*, 133-160.
- Scheim, A. I., & Bauer, G. R. (2019). Sexual inactivity among transfeminine persons: A Canadian respondent-driven sampling survey. *The Journal of Sex Research, 56*, 264-271. <https://doi.org/10.1080/00224499.2017.1399334>
- Schrock, D. P., & Reid, L. L. (2006). Transsexuals' sexual stories. *Archives of Sexual Behavior, 35*, 75-86. doi:10.1007/s10508-006-8996-8
- Seelman, K. L. (2016). Transgender adults' access to college bathrooms and housing and the relationship to suicidality. *Journal of Homosexuality, 63*, 1378-1399. doi:10.1080/00918369.2016.1157998
- Shiffman, M., VanderLaan, D. P., Wood, H., Hughes, S. K., Owen-Anderson, A., Lumley, M. M., ... Zucker, K. J. (2016). Behavioral and emotional problems as a function of peer relationships in adolescents with gender dysphoria: A comparison with clinical and nonclinical controls. *Psychology of Sexual Orientation and Gender Diversity, 3*, 27-36. doi:10.1037/sgd0000152
- Shulman, G. P., Holt, N. R., Hope, D. A., MocarSKI, R., Eyer, J., & Woodruff, N. (2017). A Review of contemporary assessment tools for use with transgender and gender nonconforming adults. *Psychology of Sexual Orientation and Gender Diversity, 4*, 304-313. doi:10.1037/sgd0000233
- Simon, W., & Gagnon, J. H. (1986). Sexual scripts: Permanence and change. *Archives of Sexual Behavior, 15*, 97-120. 10.1007/BF01542219
- Singh, A. A., Hays, D. G., & Watson, L. S. (2011). Strength in the face of adversity: Resilience strategies of transgender individuals. *Journal of Counseling & Development, 89*, 20-27. doi:10.1002/j.1556-6678.2011.tb00057.x
- Soper, D. (2017). [Free statistics calculators: Version 4.0]. *Calculator: A-priori sample size for multiple regression*. Retrieved from <http://www.danielsoper.com/statcalc/calculator.aspx?id=1>
- Stolzenberg, E. B., & Hughes, B. (2017). The experiences of incoming transgender college

- Students: New data on gender identity. *Association of American Colleges & Universities*, 103. Retrieved from [https://www.aacu.org/liberaleducation/2017/spring/stolzenberg\\_hughes](https://www.aacu.org/liberaleducation/2017/spring/stolzenberg_hughes)
- Swanbrow Becker, M. A., Nemeth Roberts, S. F., Ritts, S. M., Branagan, W. T., Warner, A. R., & Clark, S. L. (2017). Supporting transgender college students: Implications for clinical intervention and campus prevention. *Journal of College Student Psychotherapy*, 31, 155-176. <https://doi.org/10.1080/87568225.2016.1253441>
- Testa, R. J., Habarth, J., Peta, J., Balsam, K., & Bockting, W. (2015). Development of the Gender Minority Stress and Resilience Measure. *Psychology of Sexual Orientation and Gender Diversity*, 2, 65–77. doi:10.1037/sgd0000081
- Testa, R. J., Michaels, M. S., Bliss, W., Rogers, M. L., Balsam, K. F., & Joiner, T. (2017). Suicidal ideation in transgender people: Gender minority stress and interpersonal theory factors. *Journal of Abnormal Psychology*, 126, 125-136. doi:10.1037/abn0000234
- Testa, R. J., Sciacca, L. M., Wang, F., Hendricks, M. L., Goldblum, P., Bradford, J., & Bongar, B. (2012). Effects of violence on transgender people. *Professional Psychology, Research and Practice*, 43, 452-459. doi:10.1037/a0029604
- Trans Student Educational Resources [TSER]. (2017). *LGBTQ+ definitions*. Retrieved from <http://www.transstudent.org/definitions>
- Turchik, J. A., & Garske, J. P. (2009). Measurement of sexual risk taking among college students. *Archives of Sexual Behavior*, 38, 936-948. doi:10.1007/s10508-008-9388-z
- Turchik, J. A., Walsh, K., & Marcus, D. K. (2015). Confirmatory validation of the factor structure and reliability of the sexual risk survey in A large multiuniversity sample of U.S. students. *International Journal of Sexual Health*, 27, 93-105. doi:10.1080/19317611.2014.944295
- Wilson, B. (2009). Black lesbian gender and sexual culture: Celebration and resistance. *Culture, Health, & Sexuality*, 3, 297-313. doi:10.1080/13691050802676876
- Wilson, E. C., Garofalo, R., Harris, R. D., Herrick, A., Martinez, M., Martinez, J., & Belzer, M. (2009). Transgender female youth and sex work: HIV risk and a comparison of life factors related to engagement in sex work. *AIDS and Behavior*, 13, 902-13. <http://dx.doi.org.jproxy.lib.ecu.edu/10.1007/s10461-008-9508-8>
- Wismeijer, A. A., & Assen, M. A. (2013). Psychological characteristics of BDSM practitioners. *The Journal of Sexual Medicine*, 10, 1943–1952. doi:10.1111/jsm.12192.
- Woodford, M. R., Joslin, J., Pitcher, E. N., & Renn, K. A. (2017). A mixed methods inquiry into

trans\* environmental microaggressions on college campuses: Experiences and outcomes. *Journal of Ethnic & Cultural Diversity in Social Work*, 26, 95-111. <https://doi.org/10.1080/15313204.2016.1263817>

Woodford, M. R., Weber, G., Nicolazzo, Z., Hunt, R., Kulick, A., Coleman, T., . . . Renn, K. A. (2018). Depression and attempted suicide among LGBTQ college students: Fostering resilience to the effects of heterosexism and cisgenderism on campus. *Journal of College Student Development*, 59, 421-438. doi:10.1353/csd.2018.0040

Xavier, J. M., Bobbin, M., Singer, B., & Budd, E. (2005). A needs assessment of transgendered people of color living in washington, DC. *International Journal of Transgenderism*, 8, 31-47. doi:10.1300/J485v08n02\_04

## APPENDIX A: IRB APPROVAL

### EAST CAROLINA UNIVERSITY

#### University & Medical Center Institutional Review Board

4N-64 Brody Medical Sciences Building · Mail Stop 682

600 Moye Boulevard · Greenville, NC 27834

Office **252-744-2914** · Fax **252-744-2284** · [www.ecu.edu/ORIC/irb](http://www.ecu.edu/ORIC/irb)

Notification of Initial Approval: Expedited

From: Social/Behavioral IRB

To: [Melissa Decker](#)

CC: [Heather Littleton](#)

Date: 10/23/2017

Re: [UMCIRB 17-002061](#)

Sexual Health of Transgender College Students

I am pleased to inform you that your Expedited Application was approved. Approval of the study and any consent form(s) is for the period of 10/22/2017 to 10/21/2018. The research study is eligible for review under expedited category # 7. The Chairperson (or designee) deemed this study no more than minimal risk.

Changes to this approved research may not be initiated without UMCIRB review except when necessary to eliminate an apparent immediate hazard to the participant. All unanticipated problems involving risks to participants and others must be promptly reported to the UMCIRB. The investigator must submit a continuing review/closure application to the UMCIRB prior to the date of study expiration. The Investigator must adhere to all reporting requirements for this study.

Approved consent documents with the IRB approval date stamped on the document should be used to consent participants (consent documents with the IRB approval date stamp are found under the Documents tab in the study workspace).

The approval includes the following items:

Name	Description
Demographic Questions	Surveys and Questionnaires
Depression Anxiety Stress Scales	Surveys and Questionnaires
Dissertation Proposal	Study Protocol or Grant Application
Flyer	Recruitment Documents/Scripts
Informed Consent	Consent Forms
Outness Inventory	Surveys and Questionnaires
Primary Care PTSD Screen for DSM-5	Surveys and Questionnaires
Protocol	Additional Items
Sexual Experience Survey Items	Surveys and Questionnaires
Sexual Risk Survey Items	Surveys and Questionnaires
Sexual Script Prompts	Surveys and Questionnaires
Social Media Message Appeal	Recruitment Documents/Scripts
The 5 Item Alcohol Use Disorder Identification Test	Surveys and Questionnaires
The Drug Abuse Screening Test	Surveys and Questionnaires
The Gender Minority Stress and Resilience Measure	Surveys and Questionnaires

The Chairperson (or designee) does not have a potential for conflict of interest on this study.

## APPENDIX B: FACEBOOK STUDY ADVERTISEMENT

# Transgender or gender nonconforming and in college?

**Participants like you are needed for a research study on experiences with social support and sexual relationships.**

### What can I expect?

For this study, you will be asked to complete an online, anonymous survey. You can expect to answer questions about yourself and your experiences. You will also be asked to describe your beliefs about how sexual encounters unfold.

After completing the survey, you may enter a raffle to win 1 of 10 \$25 gift cards.

### Am I eligible to participate?

To participate, you must be at least 18 years old, transgender or gender nonconforming, and a current undergraduate at a U.S. college or university.

***Participation is voluntary and confidential.***



### How do I get involved?

To get started, follow this link:  
[https://ecu.az1.qualtrics.com/SE/?SID=SV\\_aXip42PMRykvSqF&Q\\_JFE=0](https://ecu.az1.qualtrics.com/SE/?SID=SV_aXip42PMRykvSqF&Q_JFE=0)

This research study is being conducted by the Department of Psychology at East Carolina University. *The project has been approved by ECU's Institutional Review Board.* Heather L. Littleton, Ph.D. is the faculty advisor and project sponsor. If you have any questions, please, contact the principal investigator, Melissa Decker, at [deckerm13@students.ecu.edu](mailto:deckerm13@students.ecu.edu) or 252-737-2774. You can also contact Dr. Heather Littleton at 252-328-6488.

## **APPENDIX C: APPEAL TO ADVERTISE**

Hi! My name is Melissa Decker. I am a doctoral student in the Clinical Health Psychology program at East Carolina University. As a member of the LGBTQ+ community, it concerns me that though the transgender and gender nonconforming undergraduate population is growing, such students are often overshadowed in research by their sexual minority peers. I think it is crucial for transgender and gender nonconforming voices to be heard.

For my dissertation, I am conducting an anonymous and confidential online survey focused on the experiences of transgender and gender nonconforming college students with social support and sexual relationships. I will be asking about both positive and negative experiences, as well as about reactions to stress. I will additionally ask participants to describe their beliefs about how sexual encounters unfold. I am hoping the findings of this study can help to improve campus LGBTQ+ resources, health services, and educational programming on LGBTQ+ sexual health. This study has been approved by the Institutional Review Board at East Carolina University.

I am asking transgender and gender nonconforming individuals, who are at least 18 years of age and currently enrolled in a U.S. college or university, to complete a one-time survey. I am hoping to enroll 200 participants and would be grateful for any help you are willing to offer!

With your permission, I would like to advertise my research study on your site. I have attached a flyer about the study to this message for your review. Please, feel free to contact me if you have any questions or concerns. I look forward to hearing from you!

## APPENDIX D: PAGES ADVERTISING THE STUDY

### Resource Centers and Service Organizations:

- ECU (East Carolina University) LGBT Resource Office
- TRANSpiration
- TransFam at ASU (Arizona State University)
- Brown University Queer Alliance
- Gender and Sexuality Center at the University of Texas, Austin
- St. Cloud State University LGBT Resource Center

### Class Pages:

- California State University (Cal State), Northridge
  - 2019
- Florida International University (FIU)
  - 2020
  - 2021
- Florida State University (FSU)
  - 2018
  - 2020
  - 2021
- Iowa State University (ISU)
  - 2019
  - 2020
  - 2022
- Michigan State University (MSU)
  - 2020
  - 2022
- Ohio State University (OSU)
  - 2020
  - 2021
  - 2022
- Pennsylvania State University (Penn State)
  - 2021
- Purdue University
  - 2019
- Rutgers University (RU)
  - 2020
  - 2021
- Texas State University (Texas State)
  - 2020
- University of Arizona (UA)
  - 2019
- University of California, Berkeley (UC Berkeley)
  - 2019
  - 2020

- 2022
- University of California, Davis (UC Davis)
  - 2021
  - 2022
- University of California, Los Angeles (UCLA)
  - 2018
  - 2021
- University of Central Florida (UCF)
  - 2019
  - 2020
- University of Minnesota (UMN)
  - 2021
  - 2022
- University of Illinois (UI) at Urbana-Champaign
  - 2022
- University of South Florida (USF)
  - 2021
  - 2022
- University of Wisconsin-Madison (UW Madison)
  - 2021
  - 2022
- University of Washington (UW)
  - 2022

## APPENDIX E: INFORMED CONSENT

East Carolina University



### **Informed Consent to Participate in Research**

Information to consider before taking part in research that has no more than minimal risk.

Title of Research Study: Adjustment and sexual health of transgender and gender nonconforming college students

Principal Investigator: Melissa Decker  
Faculty Sponsor: Heather L. Littleton, Ph.D.  
Department of Psychology  
East Carolina University  
Telephone #: Dr. Littleton - (252) 328-6488

---

Researchers at East Carolina University (ECU) study issues related to society, health problems, environmental problems, behavior problems and the human condition. To do this, we need the help of volunteers who are willing to take part in research.

#### **Why am I being invited to take part in this research?**

The purpose of this research is to understand transgender and gender nonconforming U.S. college students' experiences with social support and sexual relationships. You are being invited to take part in this research because you are a college student who identifies as a gender other than what you were assigned at birth. The decision to take part in this research is yours to make. By doing this research, we hope to learn how stress may influence your health and beliefs about sexual relationships.

If you volunteer to take part in this research, you will be one of about 200 people to do so.

#### **Are there reasons I should not take part in this research?**

I understand I should not volunteer for this study if I am under 18 years of age, not currently enrolled in college in the United States, or if I identify as the same gender assigned me at birth. I also should not participate in this study if I have already done so.

#### **What other choices do I have if I do not take part in this research?**

You can choose not to participate.

#### **Where is the research going to take place and how long will it last?**

The research will be conducted online. You will need to have Internet access to complete a one-time online survey. The total amount of time you will be asked to volunteer for this study is approximately 45 minutes.

#### **What will I be asked to do?**

You will be asked to do the following:

- Fill out a demographic questionnaire.
- Fill out surveys assessing your experiences with stress related to gender identity, substance use, sexual behaviors, unwanted sexual experiences and psychological distress.
- Describe a typical sexual experience involving a person who does not identify as the gender they were assigned at birth.

### **What might I experience if I take part in the research?**

We don't know of any risks (the chance of harm) associated with this research. Any risks that may occur with this research are no more than what you would experience in everyday life. We don't know if you will benefit from taking part in this study. There may not be any personal benefit to you but the information gained by doing this research may help others in the future.

If you find participating in this research to be personally upsetting or would like to learn more about the topics discussed in this research, the following resources are available to you.

#### *National Helpline*

1-800-662-HELP (4357)

<https://www.samhsa.gov/find-help/national-helpline>

SAMHSA's (Substance Abuse and Mental Health Services Administration) National Helpline is a free, confidential, and 24 hour information service for individuals and family members seeking help for substance use or mental illness. The hotline provides referrals to local treatment resources.

#### *LGBT National Youth Talkline*

1-800-246-PRIDE (7743)

<http://www.glbthotline.org/>

The LGBT National Help Center offers free and confidential peer counseling and information on local resources for lesbian, gay, bisexual, transgender and questioning youth up to age 25.

#### *National Sexual Assault Hotline*

1-800-656-HOPE (4673)

<https://www.rainn.org/>

RAINN (Rape, Abuse & Incest National Network) operates the National Sexual Assault Hotline by partnering with local sexual assault service providers across the country. It is the nation's largest anti-sexual violence organization.

#### *National Suicide Prevention Lifeline*

1-800-273-TALK (8255)

<https://suicidepreventionlifeline.org/>

The National Suicide Prevention Lifeline is a network of local crisis centers that offer free and confidential emotional support to people considering suicide or who are in emotional distress. The hotline is available 24 hours a day, 7 days a week.

#### *The National Domestic Violence Hotline*

1-800-799-SAFE (7233)

<http://www.thehotline.org/help/>

The National Domestic Violence hotline offers free, confidential and immediate support by trained volunteers via phone and online chat to victims of family and dating abuse.

#### *Trevor Lifeline*

1-866-4-U-TREVOR (866-488-7386)

<http://www.thetrevorproject.org/pages/get-help-now>

The Trevor Project runs the nation's only 24/7 crisis intervention and suicide prevention hotline for lesbian, gay, bisexual, transgender and questioning people ages 13 to 24.

A list of college LGBT (lesbian, gay, bisexual, transgender) resource centers may also be found at the following web address: <http://www.collegeequalityindex.org/list-colleges-lgbt-center>

**Will I be paid for taking part in this research?**

We will not be able to pay you for the time you volunteer while being in this study. If you complete the study, you will be able to enter a drawing for one of 10 \$25 Walmart gift cards.

**Will it cost me to take part in this research?**

It will not cost you any money to be part of the research.

**Who will know that I took part in this research and learn personal information about me?**

Because this research is anonymous, no one should know you took part in this research. However, the following groups/individuals may gain access to your anonymous data:

- The University & Medical Center Institutional Review Board (UMCIRB) and its staff, who have responsibility for overseeing your welfare during this research, and other ECU staff who oversee this research.

**How will you keep the information you collect about me secure? How long will you keep it?**

No identifying information will be collected as part of this study (name, email address). Study information will be kept on a password protected computer and secure server for at least six years following completion of the study. You may choose to provide your contact information for entry into the gift card raffle. This contact information will be collected by a second survey and not linked to the information you provided for the study.

**What if I decide I don't want to continue in this research?**

You can stop at any time after it has already started. There will be no consequences if you stop and you will not be criticized. You will not lose any benefits that you normally receive.

**Who should I contact if I have questions?**

The people conducting this study will be able to answer any questions concerning this research, now or in the future. You may contact the Principal Investigator at 252-373-4434 (Monday through Friday, between 9:00am and 5:00pm Eastern time zone). You can also contact the Faculty Sponsor, Dr. Heather Littleton, at 252-328-6488 (Monday through Friday, between 9:00am and 5:00 pm Eastern time zone).

If you have questions about your rights as someone taking part in research, you may call the Office of Research Integrity & Compliance (ORIC) at phone number 252-744-2914 (days, 8:00 am-5:00 pm Eastern time zone). If you would like to report a complaint or concern about this research study, you may call the Director of the ORIC, at 252-744-1971.

**I have decided I want to take part in this research. What should I do now?**

The person obtaining informed consent will ask you to read the following and if you agree, you should click on "I consent to participate in this research":

- I have read all of the above information.
- I have had an opportunity to ask questions about things in this research I did not understand and have received satisfactory answers.
- I know that I can stop taking part in this study at any time.
- By consenting to this study, I am not giving up any of my rights.
- I can print a copy of this consent document, and it is mine to keep.

I consent to participate in this research.

## APPENDIX F: DEMOGRAPHICS

Please, answer the following questions about yourself.

What was your biological sex assigned at birth?

- Female
- Male
- Intersex

What is your gender identity? \_\_\_\_\_

What steps have you taken to transition? Please, mark all that apply.

I typically use/answer to pronouns that fit my gender identity, but are different than those assigned me at birth.

I typically use/answer to a name that fits my gender identity, but is different than the name assigned me at birth.

I have or am in the process of legally changing my name and/or documentation to reflect my gender identity, which is different than assigned me at birth.

I typically dress in clothing, style my hair, or otherwise groom myself (i.e., electrolysis, do not shave, wear make-up, etc.) in ways that express my gender identity.

I typically modify the contours of my body to achieve the gender expression I desire (i.e., padding, binding, packing, or tucking).

I take or have taken puberty blockers.

I take or have taken hormones.

I have had top surgery (i.e., breast implants or chest contouring).

I have had bottom surgery (i.e., genital surgery).

I have had some other surgery to express my gender identity (e.g., face contouring).

I have not taken any of these steps.

I have done something else. (What else have you done? \_\_\_\_\_)

How old are you? \_\_\_\_ years

Tell us what you consider yourself. Please, mark all that apply.

- |   |   |
|---|---|
| <input type="checkbox"/> White (Caucasian/ European or European American) | <input type="checkbox"/> Caribbean Islander |
| <input type="checkbox"/> Asian or Asian American                          | <input type="checkbox"/> Pacific Islander   |
| <input type="checkbox"/> Latino/a or Latin American                       | <input type="checkbox"/> Multi-ethnic       |
| <input type="checkbox"/> Black or African American                        |   |
| <input type="checkbox"/> Middle Eastern or North African                  | <input type="checkbox"/> Other              |
| <input type="checkbox"/> Native American/ Alaskan Native/ Native Hawaiian |   |

What is your current academic standing?

- |                                    |   |                                |
|------------------------------------|---|--------------------------------|
| <input type="checkbox"/> Freshman  | <input type="checkbox"/> Senior           | <input type="checkbox"/> Other |
| <input type="checkbox"/> Sophomore | <input type="checkbox"/> Masters student  |                                |
| <input type="checkbox"/> Junior    | <input type="checkbox"/> Doctoral student |                                |

What is your current G.P.A.? (If this is your first semester in college, what was your high school G.P.A. at graduation?) \_\_\_\_\_

What is your sexual orientation? \_\_\_\_\_

What is your relationship status?

\_\_\_\_ Single

\_\_\_\_ In an exclusive relationship

\_\_\_\_ Married/cohabitating

\_\_\_\_ Divorced/widowed

\_\_\_\_ In a relationship that is not exclusive

\_\_\_\_ Other (Please, describe. \_\_\_\_\_)

Have you ever been diagnosed with a mental illness by a medical or mental health professional (i.e., physician, nurse practitioner, therapist, psychiatrist, psychologist)?

\_\_\_\_ Yes (What was your mental health diagnosis? \_\_\_\_\_)

\_\_\_\_ No

## **APPENDIX G: SEXUAL SCRIPT FOLLOW-UP PROMPTS**

*Thinking about the typical sexual encounter you just described, please, answer the following questions.*

Who is involved in the sexual encounter?

How well do the parties know one another?

Who initiates the sexual encounter?

Is the sexual encounter planned?

Where does the sexual encounter take place?

Is alcohol involved? Are other substances involved?

How much communication occurs during the encounter?

How does each person feel during the encounter?

How does each person feel after the encounter?

How typical is this description of your own sexual interactions?

## APPENDIX H: SEXUAL RISK SURVEY RECODING

1. How many partners have you engaged in sexual behavior with but not had sex with?

$n = 135$

Coded Value	Response range	%	Cumulative %
1	1	52.6	52.6
2	2	20.7	73.3
3	3-4	19.3	92.6
4	5-18	7.2	100.0

2. How many times have you left a social event with someone you just met?

$n = 24$

Coded Value	Response range	%	Cumulative %
1	1	66.7	66.7
2	2	20.8	87.5
3	5	8.3	95.8
4	12	4.2	100.0

3. How many times have you “hooked up” but not had sex with someone you didn’t know or didn’t know well?

$n = 52$

Coded Value	Response range	%	Cumulative %
1	1	53.8	53.8
2	2-3	26.9	80.8
3	5-10	15.3	96.2
4	12-17	3.8	100.0

4. How many times have you gone out to bars/parties/social events with the intent of “hooking up” and engaging in sexual behavior but not having sex with someone?

$n = 37$

Coded Value	Response range	%	Cumulative %
1	1	32.4	32.4
2	2-3	43.2	75.7

3	4-5	16.2	91.9
4	1-50	8.1	100.0

5. How many times have you gone out to bars/parties/social events with the intent of “hooking up” and having sex with someone?

$n = 27$

Coded Value	Response range	%	Cumulative %
1	1-2	55.6	55.6
2	3	22.2	77.8
3	4-5	14.8	92.6
4	6-10	7.4	100.0

6. How many times have you had an unexpected and unanticipated sexual experience?

$n = 89$

Coded Value	Response range	%	Cumulative %
1	1	47.2	47.2
2	2	24.7	71.9
3	3-10	22.5	94.4
4	12-100	5.5	100.0

7. How many times have you had a sexual encounter you engaged in willingly but later regretted?

$n = 64$

Coded Value	Response range	%	Cumulative %
1	1	34.4	34.4
2	2	29.7	64.1
3	3-4	23.5	87.5
4	6-20	12.5	100.0

8. How many partners have you had sex with?

$n = 177$

Coded Value	Response range	%	Cumulative %
-------------	----------------	---	--------------

1	1	33.3	33.3
2	2-4	31.0	64.4
3	5-10	23.2	87.6
4	11-32	12.6	100.0

9. How many times have you engaged in sex without some form of latex protection (i.e., condom, dental dam)?

$n = 140$

Coded Value	Response range	%	Cumulative %
1	1-5	38.5	38.5
2	6-20	35.6	74.3
3	24-50	17.2	91.4
4	100-200	8.5	100.0

10. How many people have you had sex with that you know but are not involved in any sort of relationship with (i.e., “friends with benefits”, “fuck buddies”)?

$n = 104$

Coded Value	Response range	%	Cumulative %
1	1	31.7	31.7
2	2-3	40.4	72.1
3	4-7	18.2	90.4
4	8-12	9.6	100.0

11. How many times have you had sex with someone you don't know well or just met?

$n = 84$

Coded Value	Response range	%	Cumulative %
1	1	35.7	35.7
2	2-3	28.6	64.3
3	4-10	26.2	90.5
4	11-25	8.4	100.0

12. How many times have you or your partner used alcohol or drugs before or during sex?

$n = 110$

Coded Value	Response range	%	Cumulative %
1	1-4	40.0	40.0
2	5-10	31.8	71.8
3	15-45	17.2	89.1
4	50-200	10.9	100.0

13. How many times have you had sex with a new partner before discussing sexual history, IV drug use, disease status and other current sexual partners?

*n* = 77

Coded Value	Response range	%	Cumulative %
1	1	35.1	35.1
2	2-4	36.4	71.4
3	5-17	19.5	90.9
4	20-100	9.1	100.0

14. How many times (that you know of) have you had sex with someone who has had many sexual partners?

*n* = 108

Coded Value	Response range	%	Cumulative %
1	1	36.1	36.1
2	2-4	34.3	70.4
3	5-17	20.5	90.7
4	20-100	9.3	100.0

15. How many partners (that you know of) have you had sex with who had been sexually active before you were with them but had not been tested for STIs/HIV?

*n* = 67

Coded Value	Response range	%	Cumulative %
1	1	43.3	43.3
2	2-3	28.4	71.6
3	4-8	19.5	91.0
4	10-32	9.0	100.0

16. How many partners have you had sex with that you didn't trust?

*n* = 57

Coded Value	Response range	%	Cumulative %
1	1	49.1	49.1
2	2-3	26.3	75.4
3	4-8	14.2	89.5
4	10-24	10.7	100.0

17. How many times (that you know of) have you had sex with someone who was also engaging in sex with others during the same time period?

*n* = 81

Coded Value	Response range	%	Cumulative %
1	1	39.5	39.5
2	2-3	29.7	69.1
3	4-9	19.6	88.9
4	10-45	10.9	100.0

