Violence and Mental Health in the Transgender Community

A dissertation presented to

the faculty of

the College of Arts and Sciences of Ohio University

In partial fulfillment

of the requirements for the degree

Doctor of Philosophy

Milo S. Wilson

December 2013

This dissertation titled

Violence and Mental Health in the Transgender Community

by

MILO S. WILSON

has been approved for

the Department of Psychology

and the College of Arts and Sciences by

Christine A. Gidycz

Professor Psychology

Robert Frank

Dean, College of Arts and Sciences

Abstract

WILSON, MILO S., Ph.D., December 2013, Clinical Psychology

Violence and Mental Health in the Transgender Community

Director of Dissertation: Christine A. Gidycz

Transgender individuals experience high rates of violence and minority stress. However, research examining violence, the psychological functioning associated with experiences of violence, and minority stress in the transgender community has been minimal. The objectives of this study were to provide a more nuanced characterization of transgender individuals' experiences of violence and psychological functioning in relation to those of cisgender individuals, and to understand transgender psychological functioning in the context of distal minority stress (violence) and proximal minority stress (stigma, identity concealment, and internalized transphobia). Participants included 342 (46%) transgender and 401 (54%) cisgender individuals who were 18 years of age or older. Participants completed self-report measures assessing demographic characteristics, violence (verbal, physical, and sexual), perceived gender identity-related stigma, identity concealment, and internalized transphobia, as well as depression, anxiety, PTSD symptomology, stress, self-harming thoughts and behaviors, alcohol use, and drug use. Results revealed that transgender and cisgender participants experienced similar prevalence rates and chronicity of violence across verbal, physical, and sexual violence. Transgender participants had higher scores across all symptom and self-harm measures. However, after controlling for significant covariates, gender did not have a significant effect on these outcome measures. Rather, sexual orientation and income emerged as

robust correlates of psychological functioning. Cisgender participants reported higher levels of alcohol use and there were no differences in drug use between the two groups. When examining only transgender victims of violence, transgender participants with poorer psychological functioning more often identified as a sexual minority, had more chronic experiences of verbal and physical violence, and had more internalized identity negativity. Implications for research, policy, and clinical practice will be discussed.

Acknowledgments

First, I would like to acknowledge my graduate advisor and dissertation chair, Christine Gidycz, Ph.D. for taking on a project in this topical area and guidance of this project, for her mentorship of my professional identity as an emerging psychologist and research skills, and for her support over the course of my graduate training. I would like to acknowledge my dissertation committee members, Julie Owens, Ph.D., Michelle Pride, Ph.D., Timothy Anderson, Ph.D., and Susan Burgess, Ph.D. for their role in this dissertation project and flexibility during its completion. I would like to acknowledge Susan Young, Ph.D. and Michelle Pride, Ph.D. for their mentorship and support of my developing identity as a queer, transgender, emerging psychologist. I would like to acknowledge my graduate colleagues at Ohio University, my fellow interns at VA Pittsburgh, and fellow committee members with the American Psychological Association of Graduate Students for their support and influence on my professional development. Last, but certainly not least, I would like to acknowledge my family and friends who have provided their unconditional love and support over the past seven years.

Table of Contents

Table of Tables

Table of Figures

Introduction

Transgender individuals include a range of people whose behavior, appearance, and/or identity cross, transcend, and/or do not conform to culturally defined norms for persons of their assigned birth sex (APA, 2009). Despite consistent reports of high rates of violence and psychological distress among transgender populations (e.g., Clements-Nolle, Marx, Guzman, & Katz, 2001; Grant, Mottet, Tanis, Harrison, Herman & Keisling, 2011; Xavier, Bobbin, Singer, & Budd, 2005), very few researchers have studied the relationship between experiences of violence, minority stress, and psychological functioning in transgender survivors of violence. As a result, this researcher examined the unique impact of distal minority stress (violence) and proximal minority stress (stigma, identity concealment, and internalized transphobia) on the psychological functioning of transgender individuals through the application of the Minority Stress Model (MSM; Meyer, 2003).

Violence in the Transgender Community

To set a context, researchers estimate that approximately 5%-10% of cisgender women (Coker, Davis, Arias, Desai, Sanderson, Brandt, & Smith, 2002; Mouton, Rodabough, Rovi, Brzyski, & Katerndahl, 2010) and 10% of cisgender men (Coker et al., 2002) report experiences of verbal abuse in the context of a relationship in their lifetime. Lifetime physical assault is reported by 7% to 12% of cisgender women and 10% to 19% of cisgender men (For a review, see Acierno, Resnick, & Kilpatrick, 1997). Eleven to 25% of cisgender females (e.g., Basile, Chen, Black, & Saltzman, 2007; Fisher, Cullen, & Turner, 2000; Koss, Gidycz, & Wisniewski, 1987; Tjaden & Thoennes, 2000) and 3%

to 4% of cisgender males (e.g., Elliott, Mok, & Briere, 2004; Tjaden & Thoennes, 2000) report experiencing a lifetime attempted or completed rape.

In contrast, researchers examining specific types of violence among transgender populations report that as many as 26% to 83% of transgender individuals encounter lifetime verbal violence (e.g., Clements-Nolle, Marx, & Katz, 2006; Dang, 2007; Lombardi et al., 2001; Xavier, 2000), 16%-60% report lifetime experiences of physical violence (e.g., Clements-Nolle et al., 2006; Kenagy & Bostwick, 2005; Lombardi et al., 2001; Xavier, 2000), and 10% to 66% report lifetime experiences of sexual violence. Several reports document that as many as 45% to 66% of transgender participants have experienced forced sex in their lifetime (e.g., Clements-Nolle et al., 2006; FORGE, 2005; Kenagy & Bostwick, 2005). This illustrates that rates of violence in some areas tend to be much higher among transgender populations than among cisgender populations. Additionally, research indicates that much of the violence targeting transgender individuals is bias-related and motivated by hate regarding gender identity or gender expression (e.g., FORGE, 2005; Grant et al., 2011; Xavier et al., 2007).

Psychological Functioning of Cisgender and Transgender Victims of Violence

The consequences of interpersonal violence can be far reaching. Research investigating interpersonal violence in cisgender, heterosexual populations has documented sequelae including depression, posttraumatic stress disorder (PTSD), anxiety, physical health and somatic concerns, increased suicidal ideation/suicide attempts, substance abuse, low self-esteem, increased dissociation and avoidance tendencies, and an increase in general distress (e.g., Basile, Arias, Desai, & Thompson,

2004; Campbell, Greeson, Bybee, & Raja, 2008; Iverson, Dick, McLaughlin, Smith, Bell, Gerber et al., 2012; Rees, Silove, Chevy, Ivancic, Steel, & Cremer et al., 2011; Smith, Shipherd, Schuster, Vogt, King, & King, 2011). More specifically, research examining trauma-exposed populations indicates that 10% of cismen and 20% of ciswomen develop PTSD, with an additional 48% of cismen and 49% of ciswomen developing comorbid major depressive disorder (Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995).

Despite continued reports of violence in the transgender community, transgender individuals' reactions to violence and the psychological sequelae associated with violence have been significantly understudied. Studies of the general transgender population have indicated that transgender people experience a range of mental health concerns, including depression, anxiety, PTSD, substance abuse, self-harming thoughts and behaviors, and more severe forms of psychopathology, at rates that often exceed those found in the general population (e.g., Clements-Nolle, Marx, Guzman, & Katz, 2001; Hepp, Kraemer, Schnyder, Miller, & Delsignore, 2005; Nemoto & Keatley, 2002; Xavier et al., 2005). However, these experiences are rarely studied within the context of violence and discrimination. Only one study to date has systematically studied the psychological symptom profiles associated with a wide range of trauma exposure, including car accidents, natural disasters, physical and sexual assault, in transgender individuals. In this cross-sectional study of trauma exposure among transgender women, 17.8% of those who experienced a potentially traumatic event endorsed clinically significant symptoms of PTSD and 64% reported clinically significant symptoms of depression (Shipherd, Maguen, Skidmore, Abramovitz, 2011). Notably, the rate of PTSD symptomology

reported among transgender women in this study was higher than that reported among trauma-exposed cisgender men but slightly lower than that reported among trauma-exposed cisgender women. The rate of depression was higher in this transgender sample than those reported among trauma-exposed cisgender men and women. Given the lack of research examining the psychological functioning among trauma-exposed transgender populations, continued research will be needed to determine if these trends persist.

Minority Stress and Mental Health

Research conducted among other minority populations, including people of color, sexual minorities, and people of lower socioeconomic status, provides insight into why transgender individuals may experience high rates of mental health symptomology in some areas of psychological functioning. The Minority Stress Model (MSM; see Figure 1, Appendix C, pg. 101; Meyer, 2003) conceptualizes the increased mental health symptomology reported in minority populations in terms of different types of stress experiences. The MSM classifies stressors into three distinct types that contribute uniquely to mental health: general stressors that are common to all individuals (e.g., job loss or death of a loved one), distal minority stress (e.g., prejudice events, discrimination, and violence), and proximal minority stress (e.g., expectations of rejection due to one's identity, identity concealment, and internalized stigma). Based on the MSM, minority populations experience higher levels of mental health symptomology because they have added levels of unique stress experiences related to their minority identity. Therefore, it is possible that the high rates of mental health symptomology reported among transgender populations can be accounted for by high rates of all three types of stressors in the MSM.

Existing research on transgender populations documents elevated rates of job loss, poverty, and unemployment (general stressors; e.g., Grant et al., 2011), violence (distal minority stress; e.g., Xavier, Honnold, & Bradford, 2007), and expectations of rejection, identity concealment, and internalized transphobia (proximal minority stress; e.g., Bockting, Miner, Swinburne, Hamilton, & Coleman, 2013; Grant et al., 2011; Hendricks & Testa, 2012). Indeed, research indicates that almost three-quarters of transgender individuals have attempted to avoid discrimination by hiding their gender or gender transition (Grant et al., 2011) and that increased social stigma among transgender individuals is associated with greater psychological distress (Bockting et al., 2013).

Rationale for the Current Study

The current literature examining violence and mental health among transgender individuals is limited in a number of ways. First, it suffers from several methodological limitations. The available literature is limited in its generalizability as many studies rely largely on samples of transgender women, help-seeking populations (e.g., Hepp et al., 2005) or highly visible populations, such as sex workers (Valera et al., 2000). This literature is also flawed due to definitional inconsistency of violence constructs across studies (e.g., Lombardi et al., 2001; Shipherd et al., 2011) and use of behaviorally non-specific measures of violence (e.g., Kenagy & Bostwick, 2005; Xavier, 2007). The problem with using behaviorally non-specific measures of violence is that participants are less likely to report a victimization history when they are forced to label their experiences as violence or assault. Research has documented that use of behaviorally specific measures of violence reduces under reporting, likely capturing a more accurate picture of

experiences of violence (e.g., DiLillo, Hayes, & Hope, 2006; Resnik, Kilpatrick, Dansky, Saunders, & Best, 1993). In addition, the existing data does not describe violence within transgender samples beyond simple frequencies. In contrast, in the current study, the researcher not only examined prevalence of violence, but also chronicity and contextual characteristics of violence (e.g., perceived motivation, perpetrator relationship, and perpetrator gender). Similarly, a very limited amount of research has examined the psychological functioning and mental health consequences associated with experiences of violence among transgender individuals. No studies to date have compared such experiences among transgender and cisgender individuals in the same study.

Lastly, and perhaps most importantly, the existing body of literature in this area has done little to test models that attempt to explain the psychological functioning of transgender individuals. Despite consistent documentation that transgender populations experience increased stress at all three stress levels of the MSM (general, distal, and proximal; e.g., Grant et al., 2011; Xavier et al., 2007), the available research rarely goes beyond simple descriptions of contextual factors that are hypothesized to impact mental health (e.g., violence, unemployment, job loss, income, housing and employment discrimination, perceived stigma, and internalized transphobia, Grant et al., 2011; Shipherd et al., 2011). As such, the next logical step for research is to test models that include the contextual factors that are hypothesized to contribute to the overall psychological functioning of transgender individuals, such as those included in the MSM.

Given the above outlined gaps and limitations of the extant literature, the overarching study aim of the current study was to better understand transgender

individuals' experiences of violence, psychological functioning, and the mental health consequences associated with violence in relation to those of cisgender individuals. The study was one of the first to examine the psychological functioning and mental health consequences of violence in transgender individuals, and to compare these experiences to those of a cisgender sample. Finally, this study was the first to extend the MSM to the transgender population by highlighting the unique impact of distal minority stress (violence) and proximal minority stress (stigma, identity concealment, and internalized transphobia) on the psychological functioning (stress, and depressive, posttraumatic stress, and anxiety symptomology) of transgender individuals through the application of the MSM. The current study also addresses some measurement and sampling issues by using behaviorally specific measures that allow for a more nuanced characterization of constructs such as experiences of violence in a non-help seeking population.

Aim 1: To assess the prevalence and chronicity of verbal, physical, and sexual violence in transgender and cisgender individuals and to compare the prevalence and chronicity of verbal, physical, and sexual violence experienced in transgender and cisgender individuals. It is hypothesized that transgender individuals will experience more prevalent and more chronic verbal, physical, and sexual violence compared to cisgender individuals (Hypothesis 1).

Aim 2: To compare the mental health functioning of transgender and cisgender individuals overall and the impact of verbal, physical and sexual violence on mental health symptomology in transgender and cisgender individuals. It is hypothesized that transgender individuals overall and transgender individuals who experience verbal,

physical, and sexual violence will have higher rates of depression, anxiety, stress, PTSD, past suicide attempts, and alcohol and drug use than cisgender individuals overall (Hypothesis 2A), and cisgender victims of verbal violence (Hypothesis 2B), physical violence (Hypothesis 2C), and sexual violence (Hypothesis 2D).

Aim 3: To determine the impact of transgender minority stress experiences (perceived stigma, identity concealment, and identity negativity) on mental health symptomatology in the presence of experiences of verbal, physical, and sexual violence in transgender individuals. It is hypothesized that that greater perceived stigma, identity concealment, and identity negativity will predict poorer psychological functioning symptomology in transgender participants above and beyond the impact of experiences of chronicity of verbal, physical, and sexual violence (Hypothesis 3).

Method

Participants

A total of 852 participants were enrolled in this study. Seventy-eight participants consented to participate, but did not answer any questions, and therefore were not considered to be part of the overall sample. Eleven participants were excluded because of their reported intersex status. Of the remaining 763 participants, 743 completed enough of the survey to be included in some, but not all of the analyses. Overall, 535 participants completed the entire survey resulting in a 72% completion rate (see Figure 2, Appendix C, pg. 102 for participant flow chart). Both transgender and cisgender participants were self-selected samples of convenience. Participants completed the study questionnaires at one time point, retrospectively reporting on their experiences of violence, MSM model variables, and mental health. Participants consisted of 342 (46.0%) transgender and 401 (54.0%) cisgender individuals who were 18 years of age or older. Participants ranged in age from 18 to 75, with a mean age of 35 years (*SD* = 10.84). The sample was predominantly White (81.6%), with most having either full or part-time employment (66.6%), a Bachelor's degree or other higher level education (49.1%), and being in a committed relationship (51.0%). Nearly half had an annual income of $25,000 or greater (49.1%). See Table 1, Appendix A, pg. 68 for additional demographic and identity characteristics of this sample.

When comparing study completers, those who did not drop out of the study but may have some missing data, to non-completers, those who dropped out at some point during participation, study completers were significantly more likely to be transgender,

X^2 (1, N = 743) = 5.84, p = .02, and have a higher mean level of education, t(741) = -3.70, p < .001, than study non-completers. Study completers and non-completers did not differ significantly on any other demographic characteristics including age, income, race/ethnicity, sexual orientation, or relationship status, t(682) = -1.47, p = .14; t(629) = -1.42, p = .16; X^2 (1, N = 740) = 1.38, p = .24; X^2 (1, N = 718) = 0.09, p = .76; X^2 (1, N = 743) = .16, p = .69, respectively.

Measures

Demographics Questionnaire. Participants reported on basic characteristics such as age, ethnicity and race, religious affiliation, SES, education level, geographic location, and relationship status (see Appendix D, pg. 103). See Table 2, Appendix A, pg. 70 for a list of all measures, constructs, and variable calculation.

Gender Identity Questionnaire. The Gender Identity Questionnaire (Appendix D, pg. 106) consisted of four questions that were constructed for this study based on recommendations for transgender research by Sausa, Sevelius, Keatley, Inguez, and Reyes (2009). Participants were asked to briefly define their gender identity in their own words, to indicate their assigned sex at birth, to identify their current gender, and to report if they were born with an intersex condition. For the current study, participants were included in the transgender group if they endorsed a current gender that was incongruent from their assigned sex at birth.

Sexual Orientation Questionnaire. The Sexual Orientation Questionnaire (Appendix D, pg. 107) consisted of four questions that were constructed for this study based on recommendations from a reputable web resource on sexual orientation research

(gaydata.org). Participants were given the opportunity to self-define their sexual orientation, and were subsequently asked questions assessing their sexual orientation identity, sexual behavior over the past 12 months, and sexual attraction. The sexual orientation identity variable was used to represent sexual orientation in the current study.

Outness Inventory. Participants' out-status was measured with the Outness Inventory (OI; Appendix D, pg. 108; Mohr & Fassinger, 2000), an 11-item measure examining the degree to which one's gender identity is known by and openly discussed with people in different spheres of one's life. Participants were asked to indicate, *how open you are about your transgender/gender variant identity to the people listed below*, which included immediate and extended family members, new and old cisgender friends, strangers, co-workers, and members of one's religious community. Participants rated their level of outness for each group on a 7-point scale ranging from 1 (*person definitely does not know about your transgender/gender variant identity*) to 7 (*person definitely knows about your transgender/gender variant identity and it is openly talked about*). An overall outness score was calculated for participants by averaging their responses to all of the scale items. Items on this scale were reverse scored so that higher scores indicate greater identity concealment. Only transgender participants completed this measure. Validity for the OI has been provided through expected correlations with variables such as identification with the LGB community and time spent in the coming out process (Mohr & Fassinger, 2000). Correlational analyses regarding outness and LGB community connection provided convergent validity support for the measure with both bisexual and LG participants (Balsam & Mohr, 2007). Chronbach's alpha for the current study was

.89.

Transgender Identity Scale. Transgender identity negativity was assessed using the Transgender Identity Scale (TIS; Appendix D, pg. 109). The TIS is a slightly reworded version of the 27-item inventory developed by Mohr and Fassinger (2000) that assesses attitudes and feelings about one's gender identity; for example, *I will never be able to accept my gender identity until all of the people in my family have accepted me*. Items are answered on a 7-point scale from 1 (*disagree strongly*) to 7 (*agree strongly*). The TIS yields a global subscale of Negative Identity constructed from the mean of four of the six subscales (i.e., Internalized transnegativity, Need for Privacy, Need for Acceptance, and Difficult Process). Higher scores on the Negative Identity Index indicate greater negative beliefs about one's gender identity. Only transgender participants completed this measure. Validity evidence for the original version of this scale was provided through predicted associations with phase of LGB identity development, degree of investment in one's LGB social identity, self-esteem, and degree of interaction with heterosexual individuals (Mohr & Fassinger, 2000). Chronbach's alpha for the current study was .84.

Stigma Scale. The Stigma Scale (SS; Appendix D, pg. 110; Martin & Dean, 1987) is an 11-item scale that assesses expectations of rejection and discrimination regarding gender identity; for example, *most employers will pass over the application of a transgender person in favor of another applicant.* Respondents rated their responses on a 6-point scale ranging from *strongly agree* to *strongly disagree*. Participants' responses were averaged with higher scores indicate greater expectations of rejection and

discrimination. Only transgender participants completed this scale. Validity evidence has been provided though positive correlations with four forms of psychological distress in gay men: demoralization, guilt, suicidal ideation and behavior, and AIDS related traumatic stress response (Meyer, 1995). The SS was also significantly negatively related to the degree of outness in gay men (Meyer, 2003). Chronbach's alpha for the current study was .87.

Verbal Violence Scale. The Verbal Violence Scale (VVS; Appendix D, pg. 112) was adapted from the Index of Psychological Abuse (IPA; Sullivan & Bybee, 1999), a scale developed to assess verbal abuse in dating and marital relationships. The VVS is an 11-item scale that assesses a range of verbally abusive behaviors (e.g., *Called you names* and *Criticized your physical appearance and/or sexual attractiveness*). Participants reported on the number of times they experienced these behaviors since the age of 14. Response options included: *Once, 2-5 times, 6-10 times, 11-20 times, 20+ times, and never*. Prevalence was classified dichotomously as victims and non-victims. Participants who report responses of *1* through *5* on any item were classified as victims, whereas participants who endorse responses of *0* on all items were classified as non-victims. The percentage of individuals who are classified as victims out of each overall group (transgender and cisgender) represented the prevalence of verbal violence for each group (Strauss, 2004). Chronicity of verbal violence was measured by averaging participants' responses for each of the items on this scale. High scores indicate more chronic experiences of verbal violence. Participants answered a series of follow-up questions regarding the frequency of verbal violence experiences over the past year, most frequent

relationship to the perpetrator, most frequent perpetrator gender, how often these experiences were perceived to be related to one's gender identity, and how often these incidents were reported to the police. There are not any published validity data on the original IPA. Chronbach's alpha for the current study was .93.

Physical Violence Scale. A modified version of the Revised Conflict Tactics Physical Aggression Subscale (CTS2; Appendix D, pg. 114; Straus, Hamby, Boney-McCoy, & Sugarman, 1996) was used to measure physical violence in adulthood. This 12-item scale assessed experiences of physical violence since the age of 14 (e.g., having someone *Throw something at you that could hurt* and having someone *Use a knife or other weapon on you*). Response options and method of classification of victim/non-victim status, prevalence, and chronicity, and violence follow-up questions were the same as that used for the VVS. Higher scores on the chronicity scale indicate more chronic experiences of physical violence. Evidence of convergent validity for this scale has been documented in relation to escalation theory (Berkowitz, 1993), and validity has also been documented through analysis of the complete scale's factor structure (Lucente et al., 2001; Straus et al., 1996). Chronbach's alpha for the current study was .91.

Sexual Experiences Survey – Short Form Victimization. The sexual experiences survey-short form victimization (SES-SFV; Appendix D, pg. 116) was used to measure sexual victimization from the age of 14 on. The SES-SFV (Koss et al., 2007) is a 10-item self-report instrument that assesses sexual victimization experiences at five levels. In order from least to most severe the levels are defined as follows: (a) no history of sexual victimization; (b) unwanted sexual contact involving the use of continual

arguments, authority, or physical force to coerce the victim into sex play, including fondling, kissing, or petting but not sexual intercourse; (c) sexual coercion involving the use of authority, continual arguments, and pressure to compel the victim to have sexual intercourse; (d) attempted rape involving the use of physical force, alcohol, or drugs to attempt sexual intercourse with the victim but intercourse did not occur; and (e) rape involving the use of alcohol, drugs, or physical force to coerce the victim to have sexual intercourse, including vaginal, anal, and/or oral sex. The respondents indicated how many times they experienced each of the unwanted sexual experiences for each item since the age 14 (e.g., *Someone had oral sex with me or made me have oral sex with them without my consent by threatening to physically harm me or someone close to me*). Response options included: *0, 1, 2, 3-5, 6-10, 11-20, and 20*. The method of classification of victim/non-victim status, prevalence, and chronicity, and violence follow-up questions were the same as that used for the VVS and PVS. Higher scores on the chronicity scale indicate more chronic experiences of sexual violence. Reliability and validity data from a recent study conducted in the Laboratory for the Study and Prevention of Sexual Assault at Ohio University reported a two-week test-retest reliability of .72 for this scale using a binary classification of sexual assault. Concurrent validity was demonstrated by a significant correlation with the original version of the SES (Murphy, Gidycz, & Johnson, under review). Chronbach's alpha for the current study was .96.

Impact of Events Scale - Revised. Posttraumatic stress was measured with the Impact of Events Scale—Revised (IES-R; Appendix D, pg. 122; Weiss & Marmar, 1997). This 22-item scale assesses symptoms that are congruent with Posttraumatic Stress

Disorder (PTSD; e.g., *I had trouble staying asleep* and *I was jumpy and easily startled*). Participants were asked to rate each item based on how much it distressed or bothered them. Response options included, *0 = Not at all; 1 = A little bit; 2 = Moderately; 3 = Quite a bit; 4 = Extremely*. Participants' scores were averaged, with higher scores indicating more PTSD symptomology. The IES-R immediately followed the series of violence questionnaires. Participants were asked to identify their most severe experience of violence or their most severe relationship stressor if they have had no experiences of violence. Directions then prompted participants completed this questionnaire in relation to whichever experience they identified. Two-week test-retest reliabilities of the IES-R have been reported to be .57, .51, and .59 for the intrusion, avoidance, and hyperarousal subscales, respectively (Weiss & Marmar, 1997). Scores on the IES-R subscales correlated significantly and positively with a diagnosis of PTSD with values ranging from r =.49 to .79 for the intrusion subscale and r = .29 to .80 for the avoidance subscale. Diagnostic correlates were not calculated for the hyperarousal sub-scale. The IES-R has shown the ability to validly assess PTSD symptomatology in a wide range of populations, including violence survivors (Sundin & Horowitz, 2002). Chronbach's alpha for the current study was .96.

Depression, Anxiety, and Stress Scale. The Depression Anxiety and Stress Scale (DASS; Appendix D, pg. 124; Lovibond & Lovibond, 1995) is a 42-item measure that contains three, 14-item subscales measuring depressive symptoms (e.g., *I couldn't seem to experience any positive feeling at all*), anxiety symptoms (e.g., *I experienced breathing difficulty*), and stress symptoms (e.g., *I found myself getting upset by quite*

trivial things) experienced over a one-week time frame. Participants indicated how much each statement applied to them on a 4-point scale (*0 = Did not apply to me at all; 1 = Applied to me to some degree, or some of the time; 2 = Applied to be a considerable degree, or a good part of the time; and 3 = Applied to me very much, or most of the time*). Sample items include, *I just couldn't seem to get going* and *I found it difficult to relax.* Responses for each scale were averaged with higher scores on each scale indicating greater depression, anxiety, and stress. The DASS depression scale has been shown to correlate .77 with the Beck Depression Inventory (BDI) and the DASS anxiety scale has been shown to correlate .84 with the Beck Anxiety Inventory (BAI; Antony, Bieling, Cox, Enns, & Swinson, 1998). The DASS stress scale correlates with both the BDI (.62) and BAI (.64), which is consistent with the tripartite model of anxiety and depression (Clark & Watson, 1991). Chronbach's alphas for the current study were 97 (depression), .93 (anxiety), and .95 (stress). The composite mental health functioning variables was constructed from the average of responses from the DASS and the IES.

Self-Harm Questionnaire. The Self-Harm Questionnaire (Appendix D, pg. 126) is a 6-item instrument that was developed for the current study to assess past suicidal ideation, past suicidal attempts, and past self-injurious behaviors. All participants were asked if they have ever had thoughts of ending their life, ever made an attempt to end their life, and ever attempted to injure themselves without the intention of ending their life. Transgender participants who endorsed an affirmative response to any of these three questions were asked a follow-up question assessing how often their suicidal thoughts, actions, or self-harm were related to their transgender/gender variant identity.

Alcohol Use Disorders Identification Test. Alcohol use and abuse and dependence characteristics were assessed with the Alcohol Use Disorders Identification Test (AUDIT; Appendix D, pg. 127; Saunders, Aasland, Babor, de la Fuente, & Grant, 1993). The AUDIT is a 10-item questionnaire, on which participants report the frequency of their drinking (0 = *never*, 1 = *monthly or less*, 2 = *2-4 times a month*, 3 = *2-3 times a week*, and 4 = *4 or more times a week*), the number of alcoholic drinks consumed on a typical drinking occasion (0 = *1 or* 2, 1 = *3 or 4*, 2 = *5 or 6*, 3 = *7 to 9*, and *4 = 10 or more*), how often they have experienced problems associated with their drinking (0 = *never*, 1 = *less than monthly*, 2 = *monthly*, 3 = *weekly*, and 4 = *daily or almost daily*) (e.g., *How often during the last year have you found that you were not able to stop drinking once you had started?*), and the impact of their drinking on others (0 = *no*, 2 = *yes, but not in the last year*, and 4 = *yes, during the last year*) (e.g., *Have you or someone else been injured because of your drinking?*). Participants' scores were summed, with higher scores indicating greater problems with alcohol use. A correlation coefficient of .78 was demonstrated between the AUDIT and the CAGE (Ewing, 1984); another commonly used screener for alcohol use problems. Chronbach's alpha for the current study was .87.

Drug Abuse Screening Test. Drug use and abuse were assessed with the Drug Abuse Screening Test (DAST – 10; Appendix D, pg. 129). The DAST-10 is 10-item version of the original DAST designed to identify drug-use related problems in the past year with *yes/no* responses (e.g., *Do you abuse more than one drug at a time?*; Skinner, 1982). Respondents' scores were summed with higher scores indicating greater drug use

and associated problems. The DAST-10 has demonstrated temporally stable over a range of 7 to 43 days (r = .71) and the ability to discriminate between psychiatric outpatients with and without current drug abuse/dependence diagnoses (Cocco & Carey, 1998). Chronbach's alpha for the current study was .71.

Procedure

The project was advertised as a study of Social and Interpersonal Experiences. Both transgender and cisgender participants were recruited from a variety of online media mechanisms, with targeted online recruiting for transgender participants from LGBT organizations. Recruited individuals were first directed to a website (see Appendix E, pg. 130) that provided information about the research, the researcher, service referrals, and a link to the survey website. Interested participants then clicked on the study link and viewed the informed consent page (see Appendix F, pg. 134). Informed consent was provided by clicking on a link at the bottom of the informed consent page to continue on to the study. After consenting, participants completed study questionnaires in the order in which they are listed in Appendix D (see Appendix D, pg.103 for measures). A decision tree was built into the programming of the survey to ensure completion of the appropriate measures by the appropriate participants. The survey took approximately 30 minutes to compete. After completing all questionnaires participants viewed the debriefing form for the study (see Appendix F, pg. 136). Please see Appendix G, pg. 137 for a more detailed description of study procedure.

Results

Descriptive Statistics and Preliminary Analyses

Sample demographic characteristics stratified by gender identity (i.e., transgender and cisgender) are presented in Table 1 (see Appendix A, pg. 68). Means, standard deviations, and ranges for continuous variables used in the study analyses are presented in Table 7 (see Appendix B, pg. 77) as well as the internal consistency for the present sample. See Table 3 (see Appendix A, pg. 73) for correlations of variables of interest in the transgender group and Table 4 (see Appendix A, pg. 74) for correlations of variables of interest in the cisgender group.

Preliminary data analyses were conducted to determine whether transgender and cisgender participants differed significantly based on the following demographic characteristics: age, education, income, employment status, relationship status, sexual orientation, and race/ethnicity. In comparison with cisgender participants, a greater number of transgender participants identified themselves as a person of color and as a sexual minority, X^2 (1, N = 740) = 4.80, p = .03 and X^2 (1, N = 743) = 178.20, p < .001, respectively. Transgender participants also reported significantly lower mean annual incomes, t(629) = 3.89, p < .001, than cisgender participants. In contrast, significantly more cisgender participants had full- or part-time employment, X^2 (1, N = 743) = 13.85, p < .001. No differences were noted regarding educational attainment, age, or relationship status, t(741) = 0.58, p = .56, t(682) = -1.68, p = .09, X^2 (1, N = 743) = 1.13, p = .29.

Primary Analyses

Characteristics of Violence among Cisgender and Transgender Participants (Aim 1). Descriptive statistics were calculated to assess the prevalence and chronicity of verbal, physical, and sexual violence in both the transgender and cisgender groups. Characteristics of each type of violence were calculated for the overall sample, as well as the transgender and cisgender groups separately (see Table 8, Appendix B, pg. 78). Comparisons between the transgender and cisgender groups on characteristics of violence by violence type can be found in Appendix H: Aim 1 Secondary Analyses, pg. 139. Because a high percentage of both transgender and cisgender participants endorsed experiences of verbal violence, this variable was recoded using only severe forms of verbal violence (i.e., *Threatened to hurt you, Threatened to hurt your family or friends, and Harassed your family or friends in some way*; Sullivan & Bybee, 1999).

Among transgender participants, 66.2% reported experiences of verbal violence, 63.4% reported experiences of physical violence, and 58.5% reported experiences of sexual violence since the age of 14. A quarter of transgender participants (26.5%) reported that they had been raped at some point in their life. Among cisgender participants 63.9% reported experiences of verbal violence, 60.1% reported experiences of physical violence, and 68.1% reported experiences of sexual violence since the age of 14. Just over one fifth of cisgender participants (21.7%) reported a history of rape.

To assess hypothesis 1, three Pearson's chi-square analyses were conducted to evaluate the differences in prevalence of each type of violence in the transgender and cisgender groups. Contrary to predictions, the first two chi-square tests did not reveal any significant differences between prevalence of verbal or physical violence reported by

transgender and cisgender participants, X^2 (1, N = 616) = 0.35, p = .56 and X^2 (1, N = 602) = 0.72, p = .40, respectively. The third chi-square test revealed that cisgender participants had more prevalent experiences of sexual violence, X^2 (1, N = 505) = 5.04, p =.03, which was again contrary to study hypotheses.

Three independent samples t-tests were conducted to evaluate differences in the mean chronicity score of each type of violence between the transgender and cisgender groups. Contrary to predictions, transgender participants did not report more chronic experiences of verbal violence than cisgender participants, t(614) = -.68, p = .50. No differences were noted between the chronicity of physical or sexual violence between transgender and cisgender participants, t(600) = -0.68, p = .50 and t(591) = -0.70, p = .49, respectively. Means and standard deviations for violence chronicity and psychological functioning variables in these and subsequent analyses can be found in Table 5 (see Appendix A, pg. 75).

Mental Health Symptomology (Aim 2). The mental health symptomology of the transgender and cisgender groups (victims and non-victims), including depression, anxiety, stress, PTSD symptomology, past self-harming behavior, past suicidal thoughts, past suicide attempts, alcohol, and drug use, were compared in the overall sample and separately among victims of each of the three types of violence.

Multivariate analyses of covariance (MANCOVA) were conducted to evaluate differences in depression, anxiety, and PTSD symptomology, and stress between the transgender and cisgender groups. Income, occupation, and sexual orientation were significant correlates with each of the four dependent variables and were therefore

included as covariates in each of these analyses. Hierarchical logistic regression analyses (HLRA) were conducted to predict past self-harming thoughts and behavior. The analyses predicting past self-harming behavior controlled for the covariates employment status, income, and sexual orientation. The analyses predicting past suicidal ideation and past suicide attempts controlled for the aforementioned covariates as well as race/ethnicity. In the HLRS the covariates were entered into the first block and gender was entered into the second block in the presence of the covariates. Only the results of the final model of the HLRA will be reported below. There were no significant correlates of alcohol-related problems; however, income was a significant correlate of drug use. Therefore, ANOVA analyses were conducted to analyze differences in alcohol use and ANCOVA analyses were conducted to analyses differences in drug use, accounting for income, between cisgender and transgender groups.

Mental Health Functioning within the Overall Sample **(**Hypothesis 2A). The omnibus tests of the MANCOVA were significant for each of the four dependent variables such that transgender participants reported higher levels of PTSD, depressive, and anxiety symptomology, as well as stress, $F(4, 433) = 7.07$, $p < .001$, partial $\eta^2 = .06$, $F(4, 433) = 5.92$, $p < .001$, partial $\eta^2 = .05$, $F(4, 433) = 6.87$, $p < .001$, partial $\eta^2 = .06$, $F(4, 433) = 5.26$, $p < .001$, partial $\eta^2 = .05$, respectively (Table 9, Appendix B, pg. 81). There were significant overall main effects for income and sexual orientation in the presence of the other variables, $F(4, 430) = 3.40$, $p = .009$, Wilk's $\lambda = 0.969$, partial $\eta^2 = .04$, $F(4, 430) = 4.01$, $p = .003$, Wilk's $\lambda = 0.964$, partial $\eta^2 = .04$, respectively. The main effects of gender and employment status were not significant in the presence of the other

variables $F(4, 430) = 0.43$, $p = .79$, Wilk's $\lambda = 0.996$, partial $\eta^2 = .004$, $F(4, 430) = 1.65$, $p = .16$, Wilk's $\lambda = 0.985$, partial $\eta^2 = .02$.

Between-subjects tests revealed significant univariate effects for income, employment status, and sexual orientation. Those with lower income reported more PTSD and depressive symptomology, $F(1, 433) = 8.15$, $p = .005$, partial $\eta^2 = .02$, $F(1, 433) = 7.36$ $p = .007$, partial $\eta^2 = .02$, respectively. Those who were unemployed reported greater anxiety symptomology, $F(1, 433) = 6.00$, $p = .02$, partial $\eta^2 = .01$ Those who identified as a sexual minority reported greater PTSD, depressive, and anxiety symptomology, as well as stress, $F(1, 433) = 9.11$, $p = .003$, partial $\eta^2 = .02$, $F(1, 433) = 6.58$, $p = .01$, partial $\eta^2 = .02$, $F(1, 433) = 15.05$, $p < .001$, partial $\eta^2 = .03$, and $F(1, 433) = 11.53$, $p = .001$, partial $\eta^2 = .03$, respectively.

The final model of the HLRA predicting past self-harming behavior using gender was significant X^2 $(4, N = 450) = 36.26$, $p < .001$, *Nagelkerke's* $R^2 = .10$ (Table 10, Appendix B, pg. 82). Gender did not make a significant contribution to the model above the first step, X^2 $(1, N = 450) = 0.04$, $p = .84$. Income and sexual orientation had significant effects on the prediction of past self-harming behavior. Specifically, the odds of reporting past self-harming behavior increased by 1.10 with every one point decrease in income and sexual minorities were at a 2.86 greater odds of reporting past self-harming behavior than heterosexual participants, *Wald* = 4.17, $p = .04$, *Wald* = 19.79, $p < .001$, respectively.

The final model of the HLRA predicting past suicidal ideation using gender was significant X^2 $(5, N = 448) = 49.91$, $p < .001$, *Nagelkerke's* $R^2 = .15$ (Table 11, Appendix

B, pg. 83). Gender made a significant contribution to the model above the first step, X^2 (1, N = 448) = 4.23, p = .04. Employment status, sexual orientation, gender identity had significant effects on the prediction of past suicidal ideation, such that individuals who were unemployed had a 1.97 greater odds of reporting past suicidal ideation, *Wald* = 4.05, p = .04. Participants who identified as a sexual minority were at a 2.27 greater odds of reporting past suicidal ideation, *Wald* = 10.64, p = .001. Lastly, individuals who identified as transgender were at a 1.72 greater odds of reporting past suicidal ideation than those who did not reported a transgender identity, Wald = 4.22, p = .04, respectively.

The final model HLRA was conducted to predict past suicidal behavior using gender was significant, X^2 (5, N = 448) = 34.30, p < .001, *Nagelkerke's* R^2 = .10 (Table 12, Appendix B, pg. 84). Gender did not make a significant contribution to the model above the first step, X^2 (1, N = 448) = .29, p = .59. Income and sexual orientation had significant effects on the prediction of past suicidal behavior such that as mean income decreased by one point, the odds of reporting past suicidal behavior increased by 1.16 and individuals who identified as a sexual minority were at a 2.08 greater odds of reporting past suicidal behavior, *Wald* = 11.33, p = .001, *Wald* = 7.62, p = .005, respectively.

The results of the ANOVA analysis comparing problematic alcohol use between transgender and cisgender participants was significant and demonstrated that cisgender participants reported higher levels of problematic alcohol use than transgender participants F(1, 523) = 9.35, p = .002, , partial η^2 = .02. The results of the ANCOVA analysis comparing problematic drug use between cisgender and transgender participants in the presence of the covariate income was not significant, F(2, 446) = 3.44, p = .03,

partial $\eta^2 = .02$. However, there was a significant univariate between-subjects effect for income, such that as participants reported lower income, reported drug use increased, $F(1, 446) = 6.44$, $p = .01$, $\eta^2 = .01$ (Tables 13 and 14, Appendix B, pg. 85).

Mental Health Functioning among Victims of Verbal Violence **(**Hypothesis 2B**).** The omnibus tests were significant for each of the four dependent variables in the MANCOVA comparing differences in psychological functioning between cisgender and transgender victims of verbal violence (Table 15, Appendix B, pg. 87). Transgender victims of verbal violence reported higher levels of PTSD, depressive, and anxiety symptomology, as well as stress than cisgender victims of verbal violence, $F(4, 282) = 4.15$, $p = .003$, partial $\eta^2 = .06$, $F(4, 282) = 4.51$, $p = .002$, partial $\eta^2 = .06$, $F(4, 282) = 4.01$, $p = .004$, partial $\eta^2 = .05$, $F(4, 282) = 2.87$, $p = .02$, partial $\eta^2 = .04$, respectively. There was only a significant overall main effect for income in the presence of the other variables, $F(4, 279) = 2.61$, $p = .04$, Wilk's $\lambda = 0.964$, partial $\eta^2 = .04$. The overall main effects of gender, sexual orientation, and employment status were not significant in the presence of the other variables, $F(4, 279) = 1.27$, $p = .28$, Wilk's $\lambda = 0.982$, partial $\eta^2 = .02$, $F(4, 279) = 2.11$, $p = .08$, Wilk's $\lambda = 0.971$, partial $\eta^2 = .03$, $F(4, 279) = 1.37$, $p = .45$, Wilk's $\lambda = 0.981$, partial $\eta^2 = .02$.

Between-subjects tests showed that there were significant univariate effects for income, employment status, and sexual orientation. Those with lower income reported more depressive symptomology, $F(1, 282) = 6.67$, $p = .01$, partial $\eta^2 = .02$. Those who were unemployed reported greater anxiety symptomology, $F(1, 282) = 3.73$, $p = .05$, partial $\eta^2 = .01$ Those who identified as sexual minority reported greater depressive and

anxiety symptomology, as well as stress, $F(1, 282) = 4.28$, $p = .04$, partial $\eta^2 = .02$, $F(1, 282) = 7.61$, $p = .006$, partial $\eta^2 = .03$, and $F(1, 282) = 7.47$, $p = .007$, partial $\eta^2 = .03$, respectively.

The final model of the HLRA predicting past self-harming behavior with gender among victims of verbal violence was significant X^2 (4, $N = 293$) = 23.13, $p < .001$, *Nagelkerke's* $R^2 = .10$ (Table 16, Appendix B, pg. 87). The addition of gender did not make a significant contribution to the model above the first step, X^2 (1, $N = 293$) = .02, $p = .89$. Sexual orientation had a significant effect on the prediction of past self-harming behavior among victims of verbal violence such that individuals who identified as a sexual minority were at a 2.94 greater odds of reporting self-harming behavior, *Wald* = 13.75, $p < .001$.

The final model of the HLRA predicting past suicidal ideation using gender was significant, X^2 (5, $N = 292$) = 31.07, $p < .001$, *Nagelkerke's* $R^2 = .15$ (Table 17, Appendix B, pg. 88). Gender did not make a significant contribution to the model above the first step, X^2 (1, $N = 292$) = 3.06, $p = .08$. Income and sexual orientation had the only significant effects on the prediction of past suicidal ideation among victims of verbal violence, such that as income decreased by one point participants odds of reporting past suicidal ideation increased by 1.12, *Wald* = 3.84, $p = .05$. Participants who identified as a sexual minority were at a 2.33 greater odds of reporting past suicidal ideation, *Wald* = 6.33, $p = .01$.

The final model of the HLRA predicting past suicidal behavior using gender among victims of verbal violence was significant, X^2 (5, $N = 292$) = 29.97, $p < .001$,

Nagelkerke's R^2 = .13 (Table 18, Appendix B, pg. 89). Gender did not make a significant contribution to the model above the first step, X^2 (1, N = 292) = 1.00, p = .32. Income and sexual orientation had significant effects on the prediction of past suicidal behavior among victims of verbal violence such that as income decreased by one point the odds of reporting past suicidal behavior increased by 1.20 and for individuals who identified as a sexual minority the odds of reporting past suicidal behavior increased by 2.04, *Wald* = 11.70, p = .001, *Wald* = 5.40, p = .02, respectively.

The results of the ANOVA analysis comparing problematic alcohol use between transgender and cisgender victims of verbal violence was significant, demonstrating that cisgender participants reported higher levels of problematic alcohol use than transgender participants, F(1, 335) = 5.42, p = .02, , partial η^2 = .02. The results of the ANCOVA analysis comparing problematic drug use between cisgender and transgender victims of verbal violence was not significant, F(2, 289) = 1.26, p = .28, partial η^2 = .009 (Tables 19 and 20, Appendix B, pg. 90).

Mental Health Functioning Among Victims of Physical Violence (Hypothesis 2C). The omnibus tests were significant for each of the four dependent variables in the MANCOVA testing differences in psychological functioning between cisgender and transgender victims of physical violence (Table 21, Appendix B, pg. 91). Transgender victims of physical violence reported higher levels of PTSD, depressive, and anxiety symptomology, as well as stress than cisgender victims of physical violence, F(4, 281) = 4.72, p = .001, partial η^2 = .06, F(4, 281) = 5.43, p < .001, partial η^2 = .07, F(4, 281) = 5.31, p < .001, partial η^2 = .07, F(4, 281) = 3.70, p = .006, partial η^2 = .05, respectively.

There were significant overall main effects for income and sexual orientation in the presence of the other variables, $F(4, 278) = 2.67$, $p = .03$, Wilk's $\lambda = 0.963$, partial $\eta^2 = .04$, $F(4, 278) = 2.96$, $p = .02$, Wilk's $\lambda = 0.959$, partial $\eta^2 = .04$, respectively. The overall main effects of gender and employment status were not significant in the presence of the other variables $F(4, 278) = 0.54$, $p = .71$, Wilk's $\lambda = 0.992$, partial $\eta^2 = .01$, $F(4, 278) = 0.72$, $p = .58$, Wilk's $\lambda = 0.990$, partial $\eta^2 = .01$.

Between-subjects tests showed that there were significant univariate effects for income and sexual orientation. The nature of these relationships was such that those with lower income experienced more PTSD and depressive symptomology, $F(1, 281) = 5.40$, $p = .02$, partial $\eta^2 = .019$, $F(1, 281) = 7.33$ $p = .01$, partial $\eta^2 = .03$, respectively. Those who identified as a sexual minority identity reported greater PTSD, depressive, and anxiety symptomology, as well as stress, $F(1, 281) = 6.20$, $p = .01$, partial $\eta^2 = .02$, $F(1, 281) = 3.96$, $p = .05$, partial $\eta^2 = .01$, $F(1, 281) = 10.60$, $p = .001$, partial $\eta^2 = .04$, and $F(1, 281) = 4.78$, $p = .02$, partial $\eta^2 = .02$, respectively.

The final model of the HLRA predicting past self-harming behavior using gender among victims of physical violence was significant, X^2 $(4, N = 292) = 32.60$, $p < .001$, *Nagelkerke's* $R^2 = .14$. (Table 22, Appendix B, pg. 92). Gender did not make a significant contribution to the model above the first step, X^2 $(1, N = 292) = .04$, $p = .83$. Income and sexual orientation had significant effects on the prediction of past self-harming behavior among victims of physical violence such that as individuals experienced a one point decrease in income the odds of reporting past self-harming behavior was 1.12 greater,

Wald = 4.62, p = .03. Similarly those who identified as a sexual minority were at a 3.33 greater odds of reporting self-harming behavior, *Wald* = 15.65, $p < .001$.

The final model of the HLRA predicting past suicidal ideation using gender among victims of physical violence was significant, X^2 (5, N = 291) = 31.81, $p <$ .001, *Nagelkerke's* R^2 = .16 (Table 23, Appendix B, pg. 93). Gender did not make a significant contribution to the model above the first step, X^2 (1, N = 291) = 3.61, p = .06. Income and sexual orientation had the only significant effects on the prediction of past suicidal ideation among victims of physical violence, such that as income decreased by one point participants odds of reporting past suicidal ideation increased by 1.14, *Wald* = 3.74, p = .05. Participants who as a sexual minority were at a 2.22 greater odds of reporting past suicidal ideation, *Wald* = 5.54, p = .02.

The final model of the HLRA predicting past suicidal behavior using gender among victims of physical violence was significant, X^2 (5, N = 291) = 28.30, $p <$ .001, *Nagelkerke's* R^2 = .13 (Table 24, Appendix B, pg. 94). Gender did not make a significant contribution to the model above the first step, X^2 (1, N = 291) = .05, p = .83. Income and sexual orientation had significant effects on the prediction of past suicidal behavior among victims of physical violence such that as income decreased by one point the odds of reporting past suicidal behavior increased by 1.19 and for individuals who identified as sexual minority were at a 2.38 increased odds of reporting past suicidal behavior, *Wald* = 11.38, p = .001, *Wald* = 8.11, p = .004, respectively.

The results of the ANOVA analysis comparing problematic alcohol use between transgender and cisgender victims of physical violence was significant, demonstrating

that cisgender participants reported higher levels of problematic alcohol use than transgender participants $F(1, 328) = 4.75$, $p = .03$, partial $\eta^2 = .01$. The ANCOVA comparing problematic drug use between transgender and cisgender victims of physical violence was not significant, $F(2, 288) = 2.42$, $p = .09$, partial $\eta^2 = .02$ (Tables 25 and 26, Appendix B, pg. 95).

Mental Health Functioning Among Victims of Sexual Violence (Hypothesis 2D). The omnibus tests were significant for each of the four dependent variables in the MANCOVA examining differences in psychological functioning between cisgender and transgender victims of sexual violence (Table 27, Appendix B, pg. 96). Transgender victims of sexual violence reported higher levels of PTSD, depressive, and anxiety symptomology, as well as stress than cisgender victims of sexual violence, $F(4, 245) = 6.37$, $p < .001$, partial $\eta^2 = .09$, $F(4, 245) = 4.31$, $p = .002$, partial $\eta^2 = .07$, $F(4, 245) = 3.79$, $p = .005$, partial $\eta^2 = .06$, $F(4, 245) = 3.87$, $p = .005$, partial $\eta^2 = .06$, respectively. There were significant overall main effects for income and sexual orientation in the presence of the other variables, $F(4, 242) = 2.81$, $p = .03$, Wilk's $\lambda = 0.956$, partial $\eta^2 = .04$, $F(4, 242) = 2.45$, $p = .05$, Wilk's $\lambda = 0.961$, partial $\eta^2 = .04$, respectively. Again, the overall main effects of gender and employment status were not significant in the presence of the other variables, $F(4, 242) = 0.57$, $p = .68$, Wilk's $\lambda = 0.991$, partial $\eta^2 = .009$ and $F(4, 242) = 0.92$, $p = .45$, Wilk's $\lambda = 0.985$, partial $\eta^2 = .02$, respectively.

Between-subjects tests showed that there were significant univariate effects for income and sexual orientation. The nature of these relationships was such that those with lower income experienced more PTSD and depressive symptomology, as well as stress,

$F(1, 245) = 5.34$, $p = .02$, partial $\eta^2 = .02$, $F(1, 245) = 8.39$ $p = .004$, partial $\eta^2 = .03$, and $F(1, 245) = 4.05$, $p = .05$, partial $\eta^2 = .02$, respectively. Those who were of a sexual minority identity reported greater PTSD and anxiety symptomology, as well as stress, $F(1, 245) = 6.37$, $p = .01$, partial $\eta^2 = .03$, $F(1, 245) = 8.44$, $p = .004$, partial $\eta^2 = .03$, and $F(1, 245) = 7.67$, $p = .01$, partial $\eta^2 = .03$, respectively.

The final model of the HLRA predicting past self-harming behavior by gender among victims of sexual violence was significant, X^2 (4, $N = 252$) = 26.49, $p < .001$, *Nagelkerke's* $R^2 = .14$ (Table 28, Appendix B, pg. 97). The addition of gender did not make a significant contribution to the model above the first step, X^2 (1, $N = 252$) = .01, $p = .91$. Income and sexual orientation had significant effects on the prediction of past self-harming behavior among victims of sexual violence, such that as individuals experienced a one point decrease in income the odds of reporting past self-harming behavior was 1.14 greater, *Wald* = 4.45, $p = .04$. Similarly those who identified as a sexual minority were at a 3.13 greater odds of reporting self-harming behavior, *Wald* = 12.49, $p < .001$.

The final model of the HLRA predicting past suicidal ideation using gender among victims of sexual violence was significant, X^2 (5, $N = 251$) = 30.31, $p < .001$, *Nagelkerke's* $R^2 = .17$ (Table 29, Appendix B, pg. 98). Gender did not make a significant contribution to the model above the first step, X^2 (1, $N = 251$) = 2.68, $p = .10$. Income, employment status, and sexual orientation had significant effects on the prediction of past suicidal ideation among victims of sexual violence, such that as income decreased by one point participants the odds of reporting past suicidal ideation increased by 1.19, participants who reported current unemployment were at a 4.06 greater odds of reporting

past suicidal ideation, and participants who identified as a sexual minority were at a 1.96 greater odds of reporting past suicidal ideation, *Wald* = 6.22, *p* = .01, *Wald* = 4.71, *p* = .03, *Wald* = 3.72, *p* = .05.

The final model of the HLRA predicting past suicidal behavior using gender among victims of sexual violence, controlling for occupation, income, race/ethnicity, and sexual orientation was significant, X^2 (5, *N* = 251) = 12.56, *p* = .03, *Nagelkerke's* R^2 = .07 (Table 30, Appendix B, pg. 99). Gender did not make a significant contribution to the model above the first step, X^2 (1, *N* = 251) = .28, *p* = .60. Sexual orientation had a significant effect on the prediction of past suicidal behavior among victims of sexual violence such that for individuals who identified as a sexual minority were at a 1.89 increased odds of reporting past suicidal behavior, *Wald* = 3.96, *p* = .05.

The results of the ANOVA analysis comparing problematic alcohol use between transgender and cisgender victims of sexual violence was significant, demonstrating that cisgender participants reported higher levels of problematic alcohol use than transgender participants, *F*(1, 282) = 4.08, *p* = .04, partial η^2 = .01. The overall model of the ANCOVA comparing problematic drug use between transgender and cisgender victims of sexual violence was not significant, *F*(2, 249) = 2.45, *p* = .09, partial η^2 = .02. However, there was a significant univariate between-subjects effect for income, such that as participants reported lower income, reported drug use increased, *F*(1, 249) = 4.90, *p* = .03, η^2 = .02 (Tables 31 and 32, Appendix B, pg. 100).

Violence, Proximal Minority Stress, and Mental Health (Aim 3). A hierarchical linear regression analysis was conducted to determine the impact of

perceived gender identity-related stigma, gender identity concealment (outness), and internalized negative gender identity on overall mental health symptomology (as measured by the average of scores on DASS and IES-R) in transgender participants above and beyond the impact of chronicity of verbal, physical, and sexual violence among transgender participants. Sexual orientation, income level, and employment status were also included in the regression analysis to control for any impact they might have on mental health symptomology. The results of this analysis are reported in Table 6 (see Appendix A, pg. 76).

Sexual orientation, income and employment status were entered into the first block of the equation. The model was significant and accounted for a significant amount of the variance in overall mental health symptomology, $R^2 = .06$, $F(3, 250) = 5.35$, $p = .001$. Within this model sexual orientation significantly predicted overall mental health functioning, such that transgender participants who were of sexual minority status had poorer mental health functioning (greater mean symptoms), $t(250) = 2.79$, $p = .006$, $pr = .17$.

The three violence chronicity variables were entered into the second block of the equation. The model was significant and accounted for a significant increase in the variance accounted for over the first model $\Delta R^2 = .12$, $\Delta F(3, 247) = 12.61$, $p < .001$, accounting for 19% of the total variance in mental health functioning. Within this model significant relationships were found between sexual orientation, and physical violence chronicity and overall mental health functioning, such that transgender participants who had poorer mental health functioning (greater mean symptoms) were more likely to be of

sexual minority status and have more chronic experiences of physical violence, $t(247) = 2.85$, $p = .005$, $pr = .18$, $t(247) = 2.58$, $p = .01$, $pr = .16$, respectively.

The three variables measuring transgender minority stress, transgender stigma, identity concealment, and internalized identity negativity, were entered into the third step of the model. The variables in the third model accounted for a significant increase in variance over the second model $\Delta R^2 = .09$, $\Delta F\ (3, 244) = 10.31$, $p < .001$, accounting for 28% of the total variance in mental health functioning. Within this model significant relationships were found between overall mental health functioning and sexual orientation, verbal violence chronicity, physical violence chronicity, and internalized transgender identity negativity. The nature of these relationships were such that transgender participants who had poorer mental health functioning (greater mean symptoms) were more likely to be of sexual minority status, had more chronic experiences of verbal and physical violence, and held more negative beliefs about their transgender identity, $t(244) = 3.83$, $p < .001$, $pr = .24$, $t(244) = 1.94$, $p = .05$, $pr = .12$, $t(244) = 2.37$, $p = .02$, $pr = .15$, $t(244) = 4.33$, $p < .001$, $pr = .27$, respectively.

Discussion

The current study aimed to better characterize experiences of violence and violence-related psychological functioning among transgender individuals in the context of the Minority Stress Model (Meyer, 2003). Overall the rates of violence among transgender and cisgender individuals met or exceeded those documented by previous research (e.g., Acierno et al., 1997; Basile et al., 2007; Coker et al., 2002; Grant et al., 2011; Xavier et al., 2000). Contrary to expectations, prevalence rates and chronicity scores of violence did not differ between transgender and cisgender individuals, with the exception of cisgender participants reporting a higher prevalence of sexual violence. There are several potential explanations for the similarity in violence prevalence rates and chronicity scores in this study. The composition of the sample may have contributed to this finding. Over 72% of both the cisgender and the transgender groups were largely composed of individuals who were assigned the female sex at birth, and females generally tend to experience more violence than males. This suggests that female assigned at birth transgender individuals may have comparable experiences of violence to cisgender women. In part, the higher rates of violence documented among study participants may also be related to the behaviorally-specific measures used to assess violence in the current study. Previous research has consistently documented that providing participants with behaviorally-specific response options rather providing response options labeled as violence reduces under reporting (e.g., DiLillo, Hayes, & Hope, 2006; Resnik, Kilpatrick, Dansky, Saunders, & Best, 1993). It is also possible that these rates are a function of the self-selected sampling methods used in this study, as

those with a victimization history may have been more likely to participate and remain invested in completing the study than those without such a history.

It was hypothesized in aim two that transgender participants overall and transgender victims of each form of violence would report poorer psychological functioning on each of the outcome measures, greater suicidality, and greater problematic substance use. These hypothesized relationships were supported with the exception of those regarding substance use. However, the effect of gender identity was not significant after accounting for the impact of significant demographic covariates, namely, income and sexual orientation. Gender identity only had a significant effect on reports of past suicidal ideation between transgender and cisgender participants in the overall sample comparisons. Interestingly, for both groups the mean symptom levels across all symptom measures were generally low, suggesting that this was a rather well functioning sample.

Although these results do not support the aim two hypotheses, they are consistent with the MSM and highlight important aspects of transgender mental health. Sexual orientation was one of the most robust predictors of poorer psychological functioning across nearly all analyses in aims two and three, consistent with the body of literature documenting the impact of stigma, discrimination and victimization on sexual minority mental health (e.g., Meyer, 2003; Smith & Ingram, 2004; Szymanski, 2005). Perhaps most important is the nearly 2 to 3 times greater odds of reporting past self-harming thoughts and behaviors among sexual minority participants. Especially, when noting that 86% of transgender participants in this study reported a sexual minority identity. Indeed, cisgender participants were five and a half times more likely to identify as heterosexual

than transgender participants. These results suggest that sexual orientation is one of the most important factors to understanding the mental health of transgender individuals.

Income is also critical to understanding the psychological functioning of transgender participants. Nearly a quarter of transgender participants (22.2%) reported an annual mean income under $12,000, which is just above the federal poverty level of $11,450 annual income (U. S. Department of Health and Human Services, 2013). This is in comparison to the 12% of cisgender participants who reported an annual mean income in the same range. It is reasonable to assume that, at least in part, the lower mean income among transgender participants is an indirect effect of the prevalent experiences of employment discrimination reported in transgender populations. There is ample evidence documenting disproportionate rates of unemployment (APA, 2009), job discrimination (Herbst et al., 2008), income below the poverty line (APA, 2009), and other financial disadvantages related to high rates of out of pocket health care expenses (Lev, 2004) among transgender populations. Indeed, transgender participants in the current study were significantly more likely to be unemployed than cisgender participants.

Comparisons of problematic substance use were not supportive of aim two hypotheses. The overall levels of alcohol and drug use for both groups were below the recommended cut off for problematic use for each of these screening measures (Babor, Higgins-Biddle, Saunders, & Monteiro, 2001; Skinner, 1982), suggesting that both groups engaged in a normative level of substance use that was not impairing. It is possible that those who were interested in this study were well functioning and that study recruitment did not attract a very diverse sample. Indeed, the demographic characteristics

of study participants were generally, highly educated and female sex assigned. Also, even though there were more participants who identified as a person of color in the transgender group than in the cisgender group, both groups were predominantly composed of White participants. Previous research reporting on alcohol and drug use in transgender populations has largely focused on transgender women (male assigned at birth), who are well documented to have high rates of engagement in sex work (Operario, Soma, & Underhill, 2008) and often misuse drugs and alcohol as a coping mechanism (Grant et al., 2011). This trend is even more pronounced among transgender people of color (Grant et al., 2011). Educational attainment has also been found to be a protective factor from sex work engagement. Thus, this transgender sample may have had a number of protective factors that reduced the risk for problematic substance use.

Finally, the study aimed to examine the mental health functioning of transgender individuals in the context of the minority stress model (Meyer, 2003). The final model of the hierarchical regression supported the unique and additive role of both distal stressors and proximal minority stressors on the psychological functioning of transgender individuals. Two of the three violence chronicity variables (verbal and physical violence) emerged as significant predictors of psychological functioning in the presence of the other demographic and minority stress variables. This emphasizes the importance of assessing both the range and frequency of violence experiences among transgender individuals, as they are key factors to understanding transgender mental health.

Interestingly, internalized transgender identity negativity was the only proximal minority stress variable that stood out as a robust predictor of psychological functioning.

Previous research examining proximal minority stress variables has been mixed. Internalized identity negativity has been most consistently and directly associated with poorer psychological functioning in cisgender sexual minority samples (e.g., Kelleher, 2009; Lewis, Derlega, Griffin, & Krowinski, 2003; Wright & Perry, 2006). Alternatively, studies examining identity concealment have noted that it had an indirect effect on psychological functioning, such that less identity concealment ameliorated internalized homophobia (e.g., Wright & Perry). Research on perceived stigma has documented both deleterious (Kelleher, 2009) and indirect protective effects on psychological distress (Crocker & Major, 1989). It is possible that both identity concealment and perceived stigma are more indirectly impacting the psychological functioning of transgender participants in this study, as both of these variables have significant, moderate, positive correlations with internalized transgender identity negativity. It is notable, however, that none of these studies examined minority stress variables in the context of violence.

The results of this study also highlighted highly intertwined relationship between sexual orientation and gender identity among transgender individuals. Indeed, 86% of transgender participants identified as a sexual minority in this study. Grant and colleagues (2011) documented a similarly high overlap in a larger and more diverse sample of transgender participants, with 79% identifying as non-heterosexual (Grant et al., 2011). The existing body of literature examining the relationship between sexual orientation and gender identity supports a complex relationship between these two constructs (APA, 2009). Research has documented genetic, environmental, and cultural components explaining the link between sexual orientation and gender identity, including

gender non-conformity in childhood (e.g., Bell, Weinberg, & Hammersmith, 1981; Burri, Cherkas, Spector, & Rahman 2011), differences in brain development (e.g., Pillard & Weinrich, 1987), and perceived transgressions of gender norms due to social presentation or sexual identity/attraction (e.g., Herek, 1991). Thus, there is support for a relationship between these two constructs, albeit one that is complex and not fully understood.

In sum, the relationships among minority stress variables and mental health are complex and warrant future research to disentangle their direct and indirect impact on psychological functioning. The current study identifies several variables that are key to understanding transgender mental health from each type of stressor of the MSM.

Study Limitations

Whereas this study makes several important contributions to the existing literature on violence, mental health, and minority stress among transgender populations, there are several limitations to consider. Several measurement issues limit the interpretation of results from the current study, including reliance on self-report symptom measures and retrospective reporting. The cross-sectional nature of the current study also prevents causal inferences from being made. The use of a self-selected Internet sample, while it has many advantages for reaching less prevalent groups, reduces control over study participation; for example, rushing through the study, completing the study across multiple time points, and completing the study more than once. However, the later is unlikely given then length of the current study and lack of incentive to participate.

Despite targeted efforts towards recruiting more diverse participants, both in terms of gender, gender identity, and racial/ethnic background, the final sample tuned out

to be largely cisgender females and female sex assigned at birth transgender individuals, who were predominantly White and highly educated. This suggests that there may have been self-selection bias or that study recruitment did not reach or attract more diverse participants. Although this limits generalizability to the broader transgender community, at the same time, female sex assigned transgender individuals have by far received the least attention in this already understudied area of research. Therefore, these results add significantly to the body of knowledge the mental health functioning of female sex assigned transgender individuals. However, there remains limited generalizability to female sex assigned transgender people of color.

Recommendations for Future Research, Clinical Care, and Policy

The current study has important implications for future research, clinical care, and public policy. This study lends support to the extension of the MSM to transgender populations, highlighting key risk factors that lead to poorer mental health functioning, namely, identifying as a sexual minority, having lower income, experiencing more chronic verbal and physical violence, and having greater negative beliefs about one's transgender identity. Consistent with the theoretical framework of the MSM, it would be fruitful for future research to address resiliency factors, such as the role of social support and coping on transgender mental health. Indeed, recruitment methods from this study targeted members of online social network communities, who may have received a level of social support from these communities that was protective. Given the high rates of all three types of violence documented in this and other studies it would also be beneficial for future research to investigate the impact of complex trauma, as well as the differential

impact of bias-related violence on mental health symptomology among transgender populations. Past research has shown that complex and bias-related traumas are more difficult to recover from (e.g., Garnets, Herek, & Levy, 1990; Herek, Gillis, & Cogan, 1999).

These results also highlight the importance of considering the range of contextual factors that impact transgender individuals' mental health in the provision of psychological services rather than overpathologizing due to identification as transgender (e.g., Meyer, 2010). Few clinicians report feeling "sufficiently familiar" with transgender issues (APA, 2009). Clinicians and training programs should be encouraged to increase cultural competence for working with transgender populations by including transgender issues in training curricula. Existing guidelines on areas of cultural competence in counseling transgender individuals provide guidance for increasing cultural competence with transgender patients (Burnes, Singh, Harper, Harper, Maxon-Kann, Pickering, et al., 2010). Lastly, clinicians should carefully assess and monitory self-harming thoughts and behaviors throughout treatment of transgender patients.

Finally, this research underscores the need for better policy and legal protection for transgender individuals. Existing literature documents high levels of perceived threat within transgender communities (e.g., Lombardi et al., 2001). This threat, along with actual experiences of violence and other minority stressors has a strong psychological impact on transgender individuals. Therefore, the continuation of research, such as that from the current study, is essential to support policy efforts, as more and more protections are being established for the transgender community.

References

Acierno, R., Resnick, H. S., & Kilpatrick, D. G. (1997). Health impact of interpersonal violence: I. Prevalence rates, case identification, and risk factors for sexual assault, physical assault, and domestic violence in men and women. *Behavioral Medicine*, *23*(2), 53-64. doi:10.1080/08964289709596729

Alessi, E. J. (2013). A Framework for Incorporating Minority Stress Theory into Treatment with Sexual Minority Clients. *Journal of Gay & Lesbian Mental Health*, (just-accepted). doi:10.1080/19359705.2013.789811

Allen, J. P., Litten, R. Z., Fertig, J. B., & Babor, T. (1997). A review of research on the Alcohol Use Disorders Identification Test (AUDIT).*Alcoholism: Clinical and Experimental Research*, *21*(4), 613-619. doi:10.1111/j.1530-0277.1997.tb03811.x

Antony, M. M., Bieling, P. J., Cox, B. J., Enns, M. W., & Swinson, R. P. (1998). Psychometric properties of the 42-item and 21-item versions of the Depression Anxiety Stress Scales in clinical groups and a community sample. *Psychological Assessment*, *10*(2), 176-181. doi:10.1037/1040-3590.10.2.176

American Psychological Association, Task Force on Gender Identity and Gender Variance. (2009). *Report of the Task Force on Gender Identity and Gender Variance.* Washington, DC: Author.

Babor, T. F., Higgins-Biddle, J. C., Saunders, J. B., & Monteiro, M. G. (2001). The alcohol use disorders identification test. *Guidelines for use in primary care*, *2*.

Balsam, K. F., & Mohr, J. J. (2007). Adaptation to sexual orientation stigma: A comparison of bisexual and lesbian/gay adults. *Journal of Counseling Psychology*, *54*(3), 306-319. doi:10.1037/0022-0167.54.3.306

Basile, K. C., Chen, J., Black, M. C., & Saltzman, L. E. (2007). Prevalence and characteristics of sexual violence victimization among U.S. adults, 2001-2003. *Violence and Victims*, *22*(4), 437-448. doi:10.1891/088667007781553955

Basile, K. C., Arias, I., Desai, S., & Thompson, M. P. (2004). The differential association of intimate partner physical, sexual, psychological, and stalking violence and posttraumatic stress symptoms in a nationally representative sample of women. *Journal of Traumatic Stress*, *17*(5), 413-421. doi:10.1023/B:JOTS.0000048954.50232.d8

Bell, A. P., Weinberg, M. S., & Hammersmith, S. K. (1981). *Sexual preference: Its development in men and women* (Vol. 2). Bloomington: Indiana University Press.

Berkowitz, L. (1993). *Aggression: Its causes, consequences, and control.* Washington, DC: Temple University Press.

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 US Transgender Population. *American journal of public health*, *103*(5), 943-951. doi:10.2105/AJPH.2013.301241

Briere, J. (1997). *Psychological assessment of adult posttraumatic states*. Washington DC: American Psychological Association.

Burnes, T. R., Singh, A. A., Harper, A. J., Harper, B., Maxon-Kann, W., Pickering, D. L., & Hosea, J. U. L. I. A. (2010). American Counseling Association: Competencies for counseling with transgender clients. *Journal of LGBT Issues in Counseling*, *4*(3/4), 135-159. doi:10.1080/15538605.2010.524839

Burri, A., Cherkas, L., Spector, T., & Rahman, Q. (2011). Genetic and environmental influences on female sexual orientation, childhood gender typicality and adult gender identity. *PloS one*, *6*(7), e21982. doi:10.1371/journal.pone.0021982

Campbell, R., Greeson, M. R., Bybee, D., & Raja, S. (2008). The co-occurrence of childhood sexual abuse, adult sexual assault, intimate partner violence, and sexual harassment: a mediational model of posttraumatic stress disorder and physical health outcomes. *Journal of consulting and clinical psychology*, *76*(2), 194. doi:10.1037/0022-006X.76.2.194

Clark, L. A., & Watson, D. (1991). Tripartite model of anxiety and depression: Psychometric evidence and taxonomic implications. *Journal of Abnormal Psychology*, *100*(3), 316-336. doi:10.1037/0021-843X.100.3.316

Clements-Nolle, K., Marx, R. Guzman, R., & Katz, M. (2001). HIV prevalence, risk behaviors, health care use, and mental health status of transgender people: Implications for public health intervention. *American Journal of Public Health*, 91, 915- 921. doi:10.2105/AJPH.91.6.915

Clements-Nolle, K., Marx, R., & Katz, M. (2006). Attempted suicide among transgender persons: The influence of gender-based discrimination and victimization. *Journal of Homosexuality, 51*(3), 53−69. doi:10.1300/J082v51n03_04

Cocco, K. M., & Carey, K. B. (1998). Psychometric properties of the Drug Abuse Screening Test in psychiatric outpatients. *Psychological Assessment*, *10*(4), 408-414. doi:10.1037/1040-3590.10.4.408

Coker, A. L., Davis, K. E., Arias, I., Desai, S., Sanderson, M., Brandt, H. M., & Smith, P. H. (2002). Physical and mental health effects of intimate partner violence for men and women. *American Journal of Preventative Medicine, 24*(4), 260-268. doi:10.1016/S0749-3797(02)00514-7

Coleman, E., Gooren, L., & Ross, M. (1989). Theories of gender transpositions: A critique and suggestions for further research. doi:10.1080/00224498909551533

Crocker, J., & Major, B. (1989). Social stigma and self-esteem: The self-protective properties of stigma. *Psychological review*, *96*(4), 608. doi:10.1037/0033-295X.96.4.608

Dang, A. (2007). *Living in the margins: A national survey of lesbian, gay, bisexual and transgender Asian and Pacific Islander Americans*. Washington D. C.: National Gay and Lesbian Task Force Policy Institute. Retrieved from http://www.thetaskforce.org/downloads/reports/reports/API_LivingInTheMargins.pdf

Dawe, S., Seinen, A., & Kavanagh, D. (2000). An examination of the utility of the AUDIT in people with schizophrenia. *Journal of Studies on Alcohol*, *61*(5), 744-750.

DiLillo, D., Hayes, S. A., & Hope, D. A. (2006). Sensitivity of the Anxiety Disorder Interview Schedule IV in detecting potentially traumatic childhood

maltreatment. *Journal of Psychopathology and Behavioral Assessment*, *28*(2), 131-135. doi:10.1007/s10862-006-7491-9

Elliott, D. M., Mok, D. S., & Briere, J. (2004). Adult sexual assault: Prevalence, symptomatology, and sex differences in the general population. *Journal of Traumatic Stress*, *17*(3), 203-211. doi:10.1023/B:JOTS.0000029263.11104.23

Ewing, J. A. (1984). Detecting alcoholism. *JAMA: the journal of the American Medical Association*, *252*(14), 1905-1907. doi:10.1001/jama.1984.03350140051025

Fisher, B. S., Cullen, F. T., & Turner M.G. (2000). The sexual victimization of college women. Retrieved from www.ncjrs.org/txtfiles1/nij/182369.txt

For Ourselves: Reworking Gender Expression (FORGE) (2005). Transgender Sexual Violence Project. Retrieved from http://www.forge-forward.org/transviolence/docs/FINAL_Graphs.pdf

Garnets, L., Herek, G. M., & Levy, B. (1990). Violence and Victimization of Lesbians and Gay Men Mental Health Consequences. *Journal of Interpersonal Violence*, *5*(3), 366-383. doi:10.1177/088626090005003010

Garofalo, R., Deleon, J., Osmer, E., Doll, M., & Harper, G. W. (2006). Overlooked, misunderstood and at-risk: Exploring the lives and HIV risk of ethnic minority male-to-female transgender youth. *Journal of Adolescent Health*, 38, 230-236. doi:10.1016/j.jadohealth.2005.03.023

Grant, J. M., Mottet, L.A., Tanis, J., Harrison, J., Herman, J. L., & Keisling, M. (2011). *Injustice at every turn: A report of the National Transgender Discrimination Survey*. Washington: National Center for Transgender Equality and National Gay

and Lesbian Task Force. Retrieved from http://www.thetaskforce.org/downloads/reports/reports/ntds_full.pdf

Hamilton, C. J., & Mahalik, J. R. (2009). Minority stress, masculinity, and social norms predicting gay men's health risk behaviors. *Journal of Counseling Psychology*, *56*(1), 132-141. doi:10.1037/a0014440

Hanssmann, C., Morrison, D., & Russian, E. (2008). Talking, gawking, or getting it done: Provider trainings to increase cultural and clinical competence for transgender and gender-nonconforming patients and clients. *Sexuality Research & Social Policy*, *5*(1), 5-23. doi:10.1525/srsp.2008.5.1.5

Hendricks, M. L., & Testa, R. J. (2012). A conceptual framework for clinical work with transgender and gender nonconforming clients: An adaptation of the Minority Stress Model. *Professional Psychology: Research and Practice*, *43*(5), 460. doi:10.1037/a0029597

Hepp, U., Kraemer, B., Schnyder, U., Miller, N., & Delsignore, A. (2005). Psychiatric comorbidity in gender identity disorder. *Journal of Psychosomatic Research*, *58*(3), 259-261. doi:10.1016/j.jpsychores.2004.08.010

Herek, G. M. (1991). Stigma, prejudice, and violence against lesbians and gay men. In J. C. Gonsierek & J. D. Weinrich (Eds.), *Homosexuality: Research implications for public policy*, (pp. 60-80). Newbury Park, CA: Sage.

Herek, G. M., Gillis, J. R., & Cogan, J. C. (1999). Psychological sequelae of hate-crime victimization among lesbian, gay, and bisexual adults. *Journal of Consulting and Clinical Psychology*, *67*(6), 945. doi:10.1037/0022-006X.67.6.945

Iverson, K. M., Dick, A., McLaughlin, K. A., Smith, B. N., Bell, M. E., Gerber, M. R., Cook, N., & Mitchell, K. S. (2012). Exposure to Interpersonal Violence and Its Associations With Psychiatric Morbidity in a US National Sample: A Gender Comparison. doi:10.1037/a0030956

Karno, M., Granholm, E., & Lin, A. (2000). Factor structure of the Alcohol Use Disorders Identification Test (AUDIT) in a mental health clinic sample. *Journal of Studies on Alcohol*, *61*(5), 751-758.

Kaysen, D., Lostutter, T. W., & Goines, M. A. (2005). Cognitive processing therapy for acute stress disorder resulting from an anti-gay assault. *Cognitive and behavioral practice*, *12*(3), 278-289. doi:10.1016/S1077-7229(05)80050-1

Kelleher, C. (2009). Minority stress and health: Implications for lesbian, gay, bisexual, transgender, and questioning (LGBTQ) young people. *Counselling psychology quarterly*, *22*(4), 373-379. doi:10.1080/09515070903334995

Kenagy, G. P. (2005a). The health and social service needs of transgender people in Philadelphia. *International Journal of Transgenderism*, 3(2/3), 49-56. doi:10.1300/J485v08n02_05

Kenagy, G. P. (2005b). *Transgender health: Findings from two needs assessment studies in Philadelphia*. Health & Social Work, 30, 19-26.

Kenagy, G. P., & Bostwick, W. B. (2005). Health and social service needs of transgender people in Chicago. *International Journal of Transgenderism*, 8(2/3), 57-66. doi:10.1300/J485v08n02_06

Kessler, R. C., Sonnega, A., Bromet, E., Hughes, M., & Nelson, C. B. (1995). Posttraumatic stress disorder in the National Comorbidity Survey. *Archives of general psychiatry*, *52*(12), 1048. doi:10.1001/archpsyc.1995.03950240066012

Koss, M. P., Abbey, A., Campbell, R., Cook, S., Norris, J., Testa, M. et al. (2007). Revising the SES: A collaborative process to improve assessment of sexual aggression and victimization. *Psychology of Women Quarterly*, *31*(4), 357-370. doi:10.1111/j.1471-6402.2007.00385.x

Koss, M. P., Gidycz, C. A., & Wisniewski, N. (1987). The scope of rape: Incidence and prevalence of sexual aggression and victimization in a national sample of higher education students. *Journal of Consulting and Clinical Psychology, 55,* 162-170. doi:10.1037/0022-006X.55.2.162

Lev, A. (2004). *Transgender emergence: Therapeutic guidelines for working with gender variant people and their families*. Binghamton, NY: Haworth Press.

Lewis, R. J., Derlega, V. J., Griffin, J. L., & Krowinski, A. C. (2003). Stressors for gay men and lesbians: Life stress, gay-related stress, stigma consciousness, and depressive symptoms. *Journal of Social and Clinical Psychology*, *22*(6), 716-729. doi:10.1521/jscp.22.6.716.22932

Lippa, R. A. (2001). Gender-related traits in transsexuals and nontranssexuals. *Archives of Sexual Behavior*, *30*(6), 603-614. doi:10.1023/A:1011962917346

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.

Lovibond, S.H. & Lovibond, P.F. (1995). *Manual for the Depression Anxiety Stress Scales*. (2nd. Ed.) Sydney: Psychology Foundation.

Maisto, S. A., Carey, M. P., Carey, K. B., Gordon, C. M., & Gleason, J. R. (2000). Use of the AUDIT and the DAST-10 to identify alcohol and drug use disorders among adults with a severe and persistent mental illness. *Psychological Assessment*, *12*(2), 186-192. doi:10.1037/1040-3590.12.2.186

Martin, J. L. & Dean, L. (1987). *Summary of measures: Mental health effects of AIDS on at-risk homosexual men*. Division of Sociomedical Sciences, Columbia University, School of Public Health. Unpublished manuscript.

McGowan, C. K. (1999). *Transgender needs assessment*, *December 1999*. New York, NY: The HIV Prevention Planning Unit of the New York City Department of Health.

Mechanic, M. B., Weaver, T. L., & Resick, P. A. (2000). Intimate partner violence and stalking behavior: Exploration of patterns and correlates in a sample of acutely battered women. *Violence and Victims*, *15*(1), 55-72.

Mehra, B., Merkel, C., & Bishop, A. P. (2004). The internet for empowerment of minority and marginalized users. *New media & society*, *6*(6), 781-802. doi:10.1177/146144804047513

Meyer, I. H. (2010). Identity, stress, and resilience in lesbians, gay men, and bisexuals of color. *The Counseling Psychologist*, *38*(3), 442-454. doi:10.1177/0011000009351601

Meyer, I. H. (2003). Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: Conceptual issues and research evidence. *Psychological Bulletin*, *129*(5), 674-697. doi:10.1037/0033-2909.129.5.674

Mohr, J., & Fassinger, R. (2000). Measuring dimensions of lesbian and gay male experience. *Measurement and Evaluation in Counseling and Development*, *33*(2), 66-90.

Mouton, C. P., Rodabough, R. J., Rovi, S. L., Brzyski, R. G., & Katerndahl, D. A. (2010). Psychosocial effects of physical and verbal abuse in postmenopausal women. *The Annals of Family Medicine*, *8*(3), 206-213. doi:10.1370/afm.1095

National Center for Transgender Equality. (2009). *Transgender terminology.* Retrieved from http://transequality.org/Resources/NCTE_TransTerminology.pdf

Nemoto, T., Operario, D., Keatley, J., & Villegas, D. (2004). Social context of HIV riskbehaviors among male-to-female transgenders of colour. *AIDS Care*, 16(6), 724−735. doi:10/1080/09540120413331269567

Operario, D., Soma, T., & Underhill, K. (2008). Sex work and HIV status among transgender women: systematic review and meta-analysis. *JAIDS Journal of Acquired Immune Deficiency Syndromes*, *48*(1), 97-103. doi:10/1097/QAI.0b013e31816e3971

Pillard, R. C., & Weinrich, J. D. (1987). The periodic table model of the gender transpositions: Part I. A theory based on masculinization and defeminization of the brain. *Journal of Sex Research*, *23*(4), 425-454. doi:10.1080/00224498709551384

Reback, C. J., Simon, P. A., Bemis, C. C., & Gatson, B. (2001). *The Los Angeles transgender health study: Community report*. West Hollywood, CA: Cathy J. Reback.

Rees, S., Silove, D., Chey, T., Ivancic, L., Steel, Z., Creamer, M., et al. (2011). Lifetime prevalence of gender-based violence in women and the relationship with mental disorders and psychosocial function. *JAMA: the journal of the American Medical Association*, *306*(5), 513. doi:10.1001/jama.2013.218058

Resnick, H. S., Acierno, R., & Kilpatrick, D. G. (1997). Health impact of interpersonal violence: II. Medical and mental health outcomes. *Behavioral Medicine*, *23*(2), 65-78.

Resnick, H. S., Kilpatrick, D. G., Dansky, B. S., Saunders, B. E., & Best, C. L. (1993). Prevalence of civilian trauma and posttraumatic stress disorder in a representative national sample of women. *Journal of consulting and clinical psychology*, *61*(6), 984. doi:10.1037/0022-006X.61.6.984

Risser, J. M., Shelton, A., McCurdy, S., Atkinson, J., Padgett, P., Useche, et al. (2005). Sex, drugs, violence, and HIV status among male-to-female transgender persons in Houston, Texas. *International Journal of Transgenderism*, 3(2/3), 67-74. doi:10.1300/J485v08n2_07

Sánchez, F. J., Westefeld, J. S., Liu, W. M., & Vilain, E. (2010). Masculine gender role conflict and negative feelings about being gay. *Professional Psychology: Research and Practice, 41*, 104-111. doi:10.1037/a0015805

Saunders, J. B., Aasland, O. G., Babor, T. F., de la Fuente, J. R., & Grang, M. (1993). Development of the Alcohol Use Disorders Identification Test (AUDIT): WHO collaborative project on early detection of persons with harmful alcohol consumption: II. *Addiction*, *88*(6), 791-804. doi:10.1111/j.1360-0443.1993.tb02093.x

Shipherd, J. C., Maguen, S., Skidmore, W. C., & Abramovitz, S. M. (2011). Potentially Traumatic Events in a Transgender Sample Frequency and Associated Symptoms. *Traumatology*, *17*(2), 56-67. doi:10.1177/1534765610395614

Skinner, H. A. (1982). The Drug Abuse Screening Test. *Addictive Behaviors*, *7*(4), 363-371. doi:10.1016/0306-4603(82)90005-3

Smith, N. G., & Ingram, K. M. (2004). Workplace Heterosexism and Adjustment Among Lesbian, Gay, and Bisexual Individuals: The Role of Unsupportive Social Interactions. *Journal of counseling psychology*, *51*(1), 57. doi:10.1037/0022-0167.51.1.57

Smith, B. N., Shipherd, J. C., Schuster, J. L., Vogt, D. S., King, L. A., & King, D. W. (2011). Posttraumatic stress symptomatology as a mediator of the association between military sexual trauma and post-deployment physical health in women. *Journal of Trauma & Dissociation*, *12*(3), 275-289. doi:10.1080/15299732.2011.551508

Stotzer, R. L. (2009). Violence against transgender people: A review of United States data. *Aggression and Violent Behavior*, *14*(3), 170-179. doi:10/1016/j.avb.2009.01.006

Straus, M. A., & Douglas, E. M. (2004). A Short Form of the Revised Conflict Tactics Scales, and Typologies for Severity and Mutuality. *Violence and Victims*, *19*(5), 507-520. doi:10.1891/vivi.19.5.507.63686

Straus, M. A., Hamby, S. L., Boney-McCoy, S., & Sugarman, D. B. (1996). The revised Conflict Tactics Scales (CTS2): Development and preliminary psychometric data. *Journal of Family Issues*, *17*(3), 283-316. doi:10.1177/019251396017003001

Sullivan, C. M., & Bybee, D. I. (1999). Reducing violence using community-based advocacy for women with abusive partners. *Journal of Consulting and Clinical Psychology*, *67*(1), 43-53. doi:10.1037/0022-006X.67.1.43

Sundin, E. C., & Horowitz, M. J. (2002). Impact of Event Scale: Psychometric properties. *British Journal of Psychiatry*, *180*(3), 205-209. doi:10.1192/bjp.180.3.205

Sugano, E., Nemoto, T., & Operario, D. (2006). The impact of exposure to transphobia on HIV risk behavior in a sample of transgender women of color in San Francisco. *AIDS and Behavior,* 10, 217-225. doi:10.1300/J485v08n02_05

Twenge, J. M., & Crocker, J. (2002). Race and self-esteem: meta-analyses comparing whites, blacks, Hispanics, Asians, and American Indians and comment on Gray-Little and Hafdahl (2000). doi:10.1037/0033-2909.128.3.371

U. S. Department of Health and Human Services. (2013). *2013 Federal Poverty Guidelines*. Retrieved from http://aspe.hhs.gov/poverty/13poverty.cfm

Valera, R. J., Sawyer, R. G., & Schiraldi, G. R. (2000). Violence and post traumatic

stress disorder in a sample of inner city street prostitutes. *American Journal of Health Studies*, 16(3), 149−155.

Weiss, D. S., & Marmar, C. R. (1996). The Impact of Event Scale - Revised. In J. Wilson & T. M. Keane (Eds.), *Assessing psychological trauma and PTSD* (pp. 399-411). New York: Guilford.

Witten, T. M. (2003). Life course analysis — The courage to search for something more: Middle adulthood issues in the transgender and intersex community. *Journal of Human Behavior in the Social Environment*, 8(2/3), 189−224.

Wright, E. R., & Perry, B. L. (2006). Sexual identity distress, social support, and the health of gay, lesbian, and bisexual youth. *Journal of Homosexuality*,*51*(1), 81-110. doi:10.1300/J082v51n01_05

Xavier, J. (2000). *The Washington, D. C. Transgender Needs Assessment Survey final report for phase two*. Washington D.C.: Administration for HIV/AIDS of the District of Columbia Retrieved from http://www.gender.org/resources/dge/gea01011.pdf

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(2/3), 31-48. doi:10.1300/J485v08n02_04

Xavier, J., Honnold, J. A., & Bradford, J. B. (2007). *The Health, health-related needs, and lifecourse experiences of transgender Virginians.* Richmond: Division of Disease Prevention through the Centers of Disease Control and Prevention, Virginia Department of Health Retrieved from

http://www.vdh.virginia.gov/epidemiology/DiseasePrevention/documents/pdf/THISFINALREPORTVol1.pdf

Appendix A: Primary Tables

Table 1

Demographic Characteristics by Gender Identity

Demographic Characteristics	Transgender (*n* = 342)	Cisgender (*n*=401)
Gender identity		
Man	--	111 (27.7%)
Woman	--	290 (72.3%)
Transman	135 (39.4%)	--
Transwoman	43 (12.6%)	--
Genderqueer/Androgenous	121 (35.4%)	--
Other	43 (12.6%)	--
Assigned Birth Sex		
Female	273 (79.8%)	111 (27.7%)
Male	64 (18.7%)	290 (72.3%)
Decline to State	5 (1.5%)	--
Average age in years	28.27 (11.36)	26.93 (9.52)
Ethnicity		
White	267 (78.1%)	339 (84.5%)
Non-White	73 (21.3%)	60 (15.0%)
Decline to state	2 (0.6%)	2 (.5%)
Geographic location		
North America - USA	287 (84.0%)	325 (81.1%)
North America - Other	23 (6.8%)	19 (4.7%)
South America	2 (0.6%)	--
Europe	19 (5.6%)	37 (9.2%)
India	--	1 (0.3%)
Australia/New Zealand	11 (3.0%)	15 (3.7%)
Africa	--	4 (1.0%)
Relationship status		
Single	153 (44.8%)	162 (40.4%)
In a relationship or married	163 (47.6%)	216 (53.9%)
Separated, divorced, or widowed	13 (3.8%)	17 (4.2%)
Other	13 (3.8%)	6 (1.5%)
Highest level of education		
Junior high or partial high school	10 (3.0%)	7 (1.7%)
High school grad or GED	125 (36.5%)	144 (35.9%)
Some college or associates degree	42 (12.3%)	50 (12.5%)
Bachelor's degree	103 (30.1%)	124 (30.9%)
Master's or equivalent	47 (13.7%)	61 (15.2%)
Doctorate	15 (4.4%)	15 (3.8%)

Employment status		
Full-time	130 (38.0%)	178 (44.4%)
Part-time	74 (21.6%)	113 (28.2%)
Keeping house/raising children full-time	8 (2.4%)	13 (3.3%)
Disabled or retired	27 (7.9%)	19 (4.7%)
Unemployed, looking for work, or student	100 (29.2%)	78 (19.4%)
Decline to state	3 (0.9%)	--
Annual income		
Less than $12,000	76 (22.2%)	48 (12.0%)
$12,000-24,999	66 (19.3%)	76 (18.9%)
$25,000-49,999	74 (21.6%)	93 (23.2%)
$50,000-74,999	36 (10.5%)	57 (14.3%)
$75,000-99,999	15 (4.4%)	27 (6.7%)
$100,000 or more	21 (6.1%)	42 (10.5%)
Decline to state	13 (3.8%)	19 (4.7%)
Don’t know	41 (12.1%)	39 (9.7%)
Sexual Orientation		
Heterosexual/straight	43 (12.5%)	242 (60.3%)
Gay/lesbian	70 (20.5%)	37 (9.2%)
Bisexual	48 (14.0%)	52 (13.0%)
Asexual	29 (8.5%)	6 (1.5%)
Pansexual	93 (27.2%)	30 (7.5%)
Other	54 (15.8%)	14 (3.5%)
Decline to state	5 (1.5%)	20 (5.0%)

Table 2

Measures, Constructs, & Variable Calculation

Measure	Construct(s)	Participants Who Complete	Variable Calculation	Meaning of Score
Demographic questionnaire	Age, race and ethnicity, religious affiliation, SES (annual income, number of people in household), education level, & relationship status	All	Each question represents a separate construct	NA
Gender Identity Questionnaire	Open ended response, current sex/gender, & assigned sex at birth	All	Each question represents a separate construct	NA
Sexual Orientation Questionnaire	Sexual orientation identity, sexual behavior over past 12 months, & sexual attraction	All	Each question represents a separate construct	NA
Outness Inventory (OI)	Openness about gender identity	All transgender for gender identity	Items averaged	Higher scores indicate greater concealment of one's gender identity
Stigma Scale (SS)	Perceived rejection and discrimination regarding one's gender identity	All transgender for gender identity	Items averaged	Higher scores indicate greater perceived about one's transgender identity

Measure	Construct(s)	Participants Who Complete	Variable Calculation	Meaning of Score
Transgender Identity Scale (TIS)	Negativity about one's gender identity	All transgender for gender identity	Items from internalized homonegativity, need for privacy, need for acceptance, and difficult process subscales averaged for overall Negative Identity Index	Higher scores indicate greater negative beliefs about one's sexual orientation or gender identity
Verbal Violence Scale (VVS)	Verbal violence and harassment	All	Prevalence – percentage of overall group with any experience of violence. Chronicity – Items averaged	Higher scores indicate greater rates of verbal harassment and violence
Physical Violence Scale (PVS)	Physical violence	All	Prevalence – percentage of overall group with any experience of violence. Chronicity – Items averaged	Higher scores indicate greater rates of physical violence

Measure	Construct	Participants Who Complete	Variable Calculation	Meaning of Score
Sexual Experiences Survey – Short Form Victims (SES-SFV)	Sexual violence	All	Prevalence – percentage of overall group with any experience of violence. Chronicity – Items averaged	Higher scores indicate greater rates of sexual violence
Depression, Anxiety & Stress Scale (DASS)	Depression, anxiety, and stress symptomology	All	Items for each subscale averaged	Higher scores indicate greater depressive, anxiety, and stress symptomology
Impact of Events Scale-Revised (IES-R)	Posttraumatic stress symptomology	Participants who endorse an experience of violence or relationship stress	Items averaged	Higher scores indicate greater posttraumatic stress symptomology
Suicidal and Self-injurious Behavior Questionnaire (SSBQ)	Past suicidal ideation, intent, and attempts. Suicide behaviors related to gender identity	All	Each question represents a separate construct	Higher scores indicated more frequent past experiences of each construct.
Alcohol Use Disorders Identification Test (AUDIT)	Alcohol use	All	Items summed	Higher scores indicate greater alcohol use/abuse
Drug Abuse Screening Test (DAST)	Drug use	All	Items summed	Higher scores indicate greater drug use/abuse

Table 3

Correlations among Continuous Variables of Interest for Transgender Sample

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Transgender Identity Concealment	1	.30**	.14**	-.18**	-.06	-.02	.16**	.13*	.17**	.12*	.15**	.00	-.05
2. Transgender Identity Negativity		1	.28**	-.02	.02	-.01	.17**	.33**	.29**	.28**	.27**	.06	-.07
3. Perceived Transgender Stigma			1	.12*	.13*	.07	.11*	.22**	.21**	.17**	.15**	.05	-.10
4. Verbal Harassment/Violence Chronicity				1	.65**	.36**	.22**	.16**	.22**	.18**	.22**	.20**	.20**
5. Physical Violence Chronicity					1	.47**	.29**	.21**	.26**	.24**	.28**	.21**	.19**
6. Sexual Violence Chronicity						1	.34**	.14*	.33**	.26**	.29**	.27**	.24**
7. PTSD Symptomology							1	.53**	.66**	.59**	.88**	.18**	.20**
8. Depressive Symptomology								1	.70**	.72**	.82**	.19**	.21**
9. Anxiety Symptomology									1	.82**	.88**	.27**	.29**
10. Stress										1	.86**	.25**	.30**
11. Composite Mental Health Functioning											1	.23**	.28**
12. Problematic Alcohol Use												1	.28**
13. Problematic Drug Use													1

* $p < .05$ (1-tailed), ** $p < .01$ (1-tailed).

Table 4

Correlations among Continuous Variables of Interest for Cisgender Sample

		2	4	6	7	8	9	10	11	12	13
1.	Verbal Harassment/Violence Chronicity	1	.67**	.37**	.31**	.22**	.30**	.24**	.34**	.20**	.24**
2.	Physical Violence Chronicity		1	.44**	.38**	.31**	.35**	.31**	.39**	.19**	.36**
3.	Sexual Violence Chronicity			1	.24**	.16**	.25**	.19**	.24**	.09	.14**
4.	PTSD Symptomology				1	.46**	.56**	.52**	.86**	.05	.23**
5.	Depressive Symptomology					1	.68**	.76**	.81**	.06	.17**
6.	Anxiety Symptomology						1	.81**	.85**	.20**	.16**
7.	Stress							1	.86**	.13*	.13*
8.	Composite Mental Health Functioning								1	.10	.22**
9.	Problematic Alcohol Use									1	.27**
10.	Problematic Drug Use										1

* $p < .05$ (1-tailed), ** $p < .01$ (1-tailed).

Table 5

Means and Standard Deviations of Psychological Functioning Variables by Violence Type

	Transgender		Cisgender	
Variable	*M*	*SD*	*M*	*SD*
Overall Sample				
PTSD Symptomology	0.95	0.97	0.73	0.92
Depressive Symptomology	0.86	0.91	0.67	0.76
Anxiety Symptomology	0.52	0.60	0.41	0.58
Stress	0.89	0.75	0.74	0.77
Alcohol Use	4.36	5.36	5.90	6.18
Drug Use	1.17	1.59	1.27	1.69
Verbal Violence				
Chronicity	1.12	1.27	1.06	1.21
PTSD Symptomology	1.10	1.01	0.78	0.96
Depressive Symptomology	0.94	0.93	0.74	0.81
Anxiety Symptomology	0.59	0.62	0.47	0.64
Stress	0.92	0.77	0.83	0.85
Alcohol Use	4.99	5.68	6.59	6.86
Drug Use	1.36	1.66	1.53	1.93
Physical Violence				
Chronicity	0.51	0.74	0.49	0.72
PTSD Symptomology	1.05	0.97	0.80	0.98
Depressive Symptomology	1.00	0.94	0.73	0.79
Anxiety Symptomology	0.60	0.61	0.44	0.62
Stress	1.01	0.77	0.81	0.81
Alcohol Use	5.06	5.76	6.56	6.76
Drug Use	1.34	1.48	161	1.96
Sexual Violence				
Chronicity	0.33	0.64	0.29	0.65
PTSD Symptomology	1.13	1.03	0.73	0.92
Depressive Symptomology	0.87	0.88	0.66	0.74
Anxiety Symptomology	0.59	0.62	0.44	0.59
Stress	0.95	0.77	0.78	0.77
Alcohol Use	5.57	5.84	7.07	6.59
Drug Use	1.48	1.72	1.47	1.78

Table 6

Summary of Hierarchical Regression Analysis for Variables Predicting Mental Health Functioning

	Model 1				Model 2				Model 3			
Variable	*B*	*SE B*	*β*	*t*	*B*	*SE B*	*β*	*t*	*B*	*SE B*	*β*	*t*
Income	-.04	.02	-.12	-1.93	-.03	.02	-.08	-1.38	-.02	.02	-.07	-1.24
Employment Status	-.14	.11	-.08	-1.29	-.18	.10	-.10	-1.76	-.12	.10	-.07	-1.21
Sexual Orientation	.26	.09	.17	2.79**	.25	.09	.17	2.85**	.33	.09	.22	3.83***
Verbal Violence Chronicity					.06	.05	.11	1.36	.09	.04	.14	1.94*
Physical Violence Chronicity					.21	.08	.21	2.58*	.19	.08	.18	2.37*
Sexual Violence Chronicity					.13	.08	.12	1.77	.13	.07	.11	1.79
Identity Concealment									.05	.03	.10	1.62
Internalized Identity Negativity									.21	.05	.26	4.33***
Perceived Transgender Stigma									.02	.05	.02	0.29
R^2				.06				.19				.28
F for *Model*				5.35**				9.35***				10.38***

*$p < .05$, **$p < .01$, ***$p < .001$.

Appendix B: Supplemental Tables

Table 7

Means, Standard Deviations, and Ranges for Variables of Interest

Variable	*M*	*SD*	Min	Max	Range	α
Transgender Identity Concealment	4.45	1.43	1.00	7.00	6.00	.89
Transgender Identity Negativity	3.97	0.92	1.55	6.40	4.85	.84
Perceived Transgender Stigma	4.12	0.84	1.45	6.00	4.55	.87
Verbal Violence Chronicity	2.05	1.30	0.00	5.00	5.00	.93
Physical Violence Chronicity	0.49	0.71	0.00	4.33	4.33	.91
Sexual Violence Chronicity	0.31	0.64	0.00	4.49	4.49	.96
PTSD Symptomology	0.85	0.97	0.00	4.00	4.00	.96
Depressive Symptomology	0.79	0.85	0.00	3.00	3.00	.97
Anxiety Symptomology	0.48	0.60	0.00	3.00	3.00	.93
Stress	0.82	0.77	0.00	3.00	3.00	.95
Composite Mental Health Functioning	0.76	0.73	0.00	3.41	3.41	.98
Problematic Alcohol Use	5.15	5.83	0	32	32	.87
Problematic Drug Use	1.20	1.65	0	10	10	.71

Table 8

Characteristics of Violence by Type and Gender Identity

	Transgender			Cisgender		
Violence Characteristic	Verbal Violence	Physical Violence	Sexual Violence	Verbal Violence	Physical Violence	Sexual Violence
Overall Prevalence	184 (66.2%)	177 (63.4%)	145 (58.5%)	216 (63.9%)	194 (60.1%)	175 (68.1%)
Experienced in past year	*n* = 181	*n* = 169	*n* = 132	*n* = 202	*n* = 186	*n* = 156
Yes	122 (67.4%)	50 (29.6%)	19 (14.4%)	122 (60.4%)	45 (24.2%)	32 (20.5%)
No	59 (32.6%)	119 (70.4%)	113 (85.6%)	80 (39.6%)	141 (75.8%)	124 (79.5%)
Related to gender identity	*n* = 184	*n* = 172	*n* = 134	*n* = 207	*n* = 188	*n* = 167
Never	17 (9.2%)	60 (34.9%)	64 (47.8%)	121 (58.5%)	142 (75.5%)	100 (59.9%)
Rarely	29 (15.8%)	26 (15.1%)	22 (16.4%)	40 (19.3%)	22 (11.7%)	13 (7.7%)
Sometimes	54 (29.3%)	31 (18.0%)	23 (17.2%)	35 (16.9%)	16 (8.5%)	16 (9.6%)
Often	55 (29.9%)	27 (15.7%)	12 (9.0%)	8 (3.8%)	6 (3.2%)	11 (6.6%)
Always	29 (15.8%)	28 (16.3%)	13 (9.6%)	3 (1.5%)	2 (1.1%)	27 (16.2%)
Relationship to perpetrator	*n* = 183	*n* = 175	*n* = 134	*n* = 207	*n* = 191	*n* = 157
Stranger	59 (32.2%)	63 (36.0%)	10 (7.5%)	46 (22.2%)	38 (19.9%)	16 (10.2%)
Person you knew (e.g., neighbor, friend, acquaintance, etc.)	77 (42.1%)	42 (24.0%)	60 (44.7%)	111 (53.6%)	67 (35.1%)	75 (47.8%)
Immediate family member	31 (16.9%)	45 (25.8%)	6 (4.5%)	23 (11.1%)	39 (20.4%)	4 (2.5%)
Extended family member	5 (2.7%)	2 (1.1%)	6 (4.5%)	1 (0.5%)	3 (1.6%)	5 (3.2%)

Intimate partner	7 (3.8%)	20 (11.4%)	52 (38.8%)	23 (11.1%)	40 (20.9%)	56 (35.7%)
Don't know	4 (2.3%)	3 (1.7%)	0	3 (1.5%)	4 (2.1%)	1 (0.6%)
Perpetrator gender	*n* = 183	*n* = 174	*n* = 134	*n* = 207	*n* = 189	*n* = 157
Cisgender man	108 (59.0%)	114 (65.5%)	106 (79.1%)	134 (64.7%)	137 (72.5%)	143 (91.1%)
Cisgender woman	54 (29.5%)	45 (25.9%)	20 (14.9%)	53 (25.6%)	43 (22.7%)	13 (8.3%)
Transgender man	1 (0.5%)	2 (1.1%)	2 (1.5%)	1 (0.5%)	2 (1.1%)	0
Transgender woman	2 (1.1%)	1 (0.6%)	1 (0.7%)	0	1 (0.5%)	0
Genderqueer/androgynous person	0	1 (0.6%)	3 (2.3%)	0	0	0
Don't know	18 (9.9%)	11 (6.3%)	2 (1.5%)	19 (9.2%)	6 (3.2%)	1 (0.6%)
Reported to police	*n* = 182	*n* = 173	*n* = 131	*n* = 205	*n* = 187	*n* = 151
Never	163 (89.6%)	144 (83.2%)	115 (87.8%)	185 (90.2%)	161 (86.1%)	134 (88.7%)
Rarely	16 (8.8%)	19 (11.0%)	7 (5.2%)	16 (7.8%)	17 (9.1%)	11 (7.4%)
Sometimes	1 (0.5%)	5 (2.9%)	4 (3.1%)	3 (1.5%)	5 (2.7%)	2 (1.3%)
Often	2 (1.1%)	1 (0.6%)	1 (0.8%)	0	1 (0.5%)	1 (0.6%)
Always	0	4 (2.3%)	4 (3.1%)	1 (0.5%)	3 (1.6%)	3 (2.0%)
Injured		*n* = 177	*n* = 134		*n* = 189	*n* = 155
Never	--	63 (35.6%)	79 (59.0%)	--	89 (47.1%)	109 (70.3%)
Rarely	--	65 (36.7%)	35 (26.1%)	--	68 (36.0%)	33 (21.3%)
Sometimes	--	37 (20.9%)	14 (10.5%)	--	28 (14.7%)	9 (5.8%)

Often	--	10 (5.7%)	3 (2.2%)	--	2 (1.1%)	0
Always	--	2 (1.1%)	3 (2.2%)	--	2 (1.1%)	4 (2.6%)
Injuries required medical attention		*n* = 151	*n* = 114		*n* = 161	*n* = 117
Never	--	118 (78.1%)	93 (81.6%)	--	131 (81.4%)	106 (90.5%)
Rarely	--	22 (14.6%)	10 (8.8%)	--	21 (13.0%)	5 (4.3%)
Sometimes	--	8 (5.3%)	4 (3.5%)	--	7 (4.4%)	2 (1.7%)
Often	--	2 (1.3%)	2 (1.8%)	--	1 (0.6%)	1 (0.9%)
Always	--	1 (0.7%)	5 (4.3%)	--	1 (0.6%)	3 (2.6%)
Ever Raped			*n* = 279			*n* = 304
Yes	--	--	74 (26.5%)	--	--	66 (21.7%)
No	--	--	205 (73.5%)	--	--	238 (78.3%)
Most Distressing Experience			*n* = 268			288
Verbal			111 (41.4%)			93 (32.3%)
Physical			39 (14.6%)			43 (14.9%)
Sexual			73 (27.2)			69 (24.0%)
Relationship			45 (13.2%)			83 (28.8%)

Table 9

Univariate Between-Subjects Effects of MANCOVA Analysis of Psychological Functioning Variables – All Participants

Source	Dependent Variable	*SS*	*df*	*MS*	*F*	η^2
Corrected Model	PTSD	24.09	4	6.02	7.07***	.06
	Depression	15.89	4	3.97	5.92***	.05
	Anxiety	9.03	4	2.26	6.87***	.06
	Stress	11.87	4	2.97	5.26***	.05
Income	PTSD	6.94	1	6.94	8.15**	.02
	Depression	4.93	1	4.93	7.36**	.02
	Anxiety	0.54	1	0.54	1.64	.004
	Stress	1.30	1	1.30	2.31	.01
Employment Status	PTSD	2.69	1	2.69	3.16	.01
	Depression	1.82	1	1.82	2.71	.01
	Anxiety	1.97	1	1.97	6.00*	.01
	Stress	1.47	1	1.47	2.60	.01
Sexual Orientation	PTSD	0.009	1	0.009	9.11**	.02
	Depression	0.003	1	0.003	6.58**	.02
	Anxiety	0.23	1	0.23	15.05***	.03
	Stress	0.16	1	0.16	11.53***	.03
Gender Identity	PTSD	0.009	1	0.009	0.01	.00
	Depression	0.003	1	0.003	0.01	.00
	Anxiety	0.23	1	0.23	0.23	.002
	Stress	0.16	1	0.16	0.16	.001
Error	PTSD	368.71	433	0.85		
	Depression	290.41	433	0.67		
	Anxiety	142.72	433	0.33		
	Stress	244.08	433	0.56		
Total	PTSD	698.65	438			
	Depression	559.17	438			
	Anxiety	245.06	438			
	Stress	546.73	438			

*$p < .05$, **$p < .01$, ***$p < .001$.

Table 10

Summary of Hierarchical Logistic Regression Analysis for Variables Predicting Self-Harming Behavior – All Participants

	Model 1				Model 2			
Variable	*B*	*SE*	*Wald*	*Exp(B)*	*B*	*SE*	*Wald*	*Exp(B)*
Income	-.08	.04	4.13*	.92	-.08	.04	4.17*	.92
Employment Status	.30	.26	1.38	1.35	.31	.26	1.42	1.35
Sexual Orientation	-1.02	.20	25.50***	.36	-1.04	.24	19.79***	.36
Gender					0.5	.24	0.04	1.05
Nagelkerke R^2				.10				.10
X^2 *Block*				36.22***				0.04
X^2 *Model*				36.22***				36.26***

*$p < .05$, ***$p < .001$.

Table 11

Summary of Hierarchical Logistic Regression Analysis for Variables Predicting Past Suicidal Ideation – All Participants

	Model 1				Model 2			
Variable	*B*	*SE*	*Wald*	*Exp(B)*	*B*	*SE*	*Wald*	*Exp(B)*
Income	-.10	.05	4.36*	.91	-.09	.05	3.31	.92
Employment Status	.75	.33	4.99*	2.11	.68	.34	4.05*	1.97
Race/Ethnicity	-.70	.36	3.69	.50	-.68	.36	3.45	.51
Sexual Orientation	-1.09	.23	23.54***	.34	-.83	.26	10.64**	.44
Gender					-.55	.27	4.22*	.58
Nagelkerke R^2				.14				.15
X^2 *Block*				45.68***				4.23*
X^2 *Model*				45.68***				49.91***

*$p < .05$, **$p < .01$, ***$p < .001$.

Table 12

Summary of Hierarchical Logistic Regression Analysis for Variables Predicting Past Suicide Attempt – All Participants

	Model 1				Model 2			
Variable	*B*	*SE*	*Wald*	*Exp(B)*	*B*	*SE*	*Wald*	*Exp(B)*
Income	-.15	.04	12.00**	.86	-.15	.04	11.33**	.86
Employment Status	.04	.27	.02	1.04	.02	.27	0.004	1.02
Race/Ethnicity	-.54	.23	3.73*	.58	-.54	.28	3.68	.59
Sexual Orientation	-.79	.34	11.67**	.45	-.73	.26	7.62**	.48
Gender					-.14	.34	0.29	.87
Nagelkerke R^2				.10				.10
X^2 *Block*				34.01***				.29
X^2 *Model*				34.01***				34.30***

*$p < .05$, **$p < .01$, ***$p < .001$.

Table 13

Results of ANOVA Analyses of Problematic Alcohol Use – All Participants

Source	*SS*	*df*	*MS*	*F*	η^2
Gender	313.62	1	313.62	9.35**	.02
Error	31734.00	523	33.53		
Total	17848.00	525			

**$p < .01$.

Table 14

Results of ANCOVA Analyses of Problematic Drug Use – All Participants

Source	*SS*	*df*	*MS*	*F*	η^2
Income	17.18	1	17.18	6.44*	.01
Gender	3.35	1	3.35	1.26	.003
Error	1189.40	446	2.67		
Total	1879.00	447			

*$p < .05$.

Table 15

Univariate Between-Subjects Effects of MANCOVA Analysis of Psychological Functioning Variables among Victims of Verbal Violence

Source	Dependent Variable	*SS*	*df*	*MS*	*F*	η^2
Corrected Model	PTSD	15.84	4	3.96	4.15**	.06
	Depression	13.22	4	3.31	4.51**	.06
	Anxiety	6.15	4	1.54	4.01**	.05
	Stress	7.36	4	1.84	2.87*	.04
Income	PTSD	2.98	1	2.98	3.12	.01
	Depression	4.95	1	4.95	6.76*	.02
	Anxiety	0.40	1	0.40	1.05	.004
	Stress	0.84	1	0.84	1.31	.005
Employment Status	PTSD	2.66	1	2.66	2.79	.01
	Depression	0.93	1	0.93	1.27	.004
	Anxiety	1.43	1	1.43	3.73*	.01
	Stress	0.59	1	0.59	0.92	.003
Sexual Orientation	PTSD	1.84	1	1.84	1.93	.007
	Depression	3.14	1	3.14	4.28*	.02
	Anxiety	2.91	1	2.91	7.61**	.03
	Stress	4.80	1	4.80	7.47**	.03
Gender Identity	PTSD	1.26	1	1.26	1.32	.005
	Depression	0.01	1	0.01	0.01	.00
	Anxiety	0.05	1	0.05	0.12	.00
	Stress	0.39	1	0.39	0.61	.002
Error	PTSD	269.00	282	0.95		
	Depression	206.47	282	0.73		
	Anxiety	107.99	282	0.38		
	Stress	181.12	282	0.64		
Total	PTSD	539.10	287			
	Depression	422.68	287			
	Anxiety	194.59	287			
	Stress	407.92	287			

*$p < .05$.

Table 16

Summary of Hierarchical Logistic Regression Analysis for Variables Predicting Self-Harming Behavior – Verbal Violence Victims

	Model 1				Model 2			
Variable	*B*	*SE*	*Wald*	*Exp(B)*	*B*	*SE*	*Wald*	*Exp(B)*
Income	-.05	.05	.87	.95	-.05	.05	.82	.96
Employment Status	.26	.32	.65	1.30	.26	.33	.63	1.29
Sexual Orientation	-1.10	.25	18.86***	.33	-1.10	.29	.13.75***	.34
Gender					-.04	.29	.89	.96
Nagelkerke R^2				.10				.10
X^2 *Block*				23.11***				0.02
X^2 *Model*				23.11***				23.13***

***$p < .001$.

Table 17

Summary of Hierarchical Logistic Regression Analysis for Variables Predicting Past Suicidal Ideation – Verbal Violence Victims

	Model 1				Model 2			
Variable	*B*	*SE*	*Wald*	*Exp(B)*	*B*	*SE*	*Wald*	*Exp(B)*
Income	-.14	.06	4.83*	.87	-.12	.06	3.84*	.89
Employment Status	.75	.45	2.85	2.12	.70	.45	2.44	2.02
Race/Ethnicity	-.11	.41	.07	.90	-.09	.41	.05	.92
Sexual Orientation	-1.13	.30	14.61***	.32	-.85	.34	6.33*	.43
Gender					-.62	.36	3.03	.54
Nagelkerke R^2				.14				.15
X^2 *Block*				28.01***				3.06
X^2 *Model*				28.01***				31.07***

*$p < .05$, ***$p < .001$.

Table 18

Summary of Hierarchical Logistic Regression Analysis for Variables Predicting Past Suicide Attempt – Verbal Violence Victims

	Model 1				Model 2			
Variable	*B*	*SE*	*Wald*	*Exp(B)*	*B*	*SE*	*Wald*	*Exp(B)*
Income	-.19	.05	12.67***	.83	-.18	.05	11.70**	.83
Employment Status	.06	.32	.03	1.06	.02	.32	.01	1.02
Race/Ethnicity	-.21	.33	.43	.81	-.21	.36	.42	.81
Sexual Orientation	-.85	.27	9.78**	.43	-.71	.31	5.40*	.49
Gender					-.29	.29	1.00	.75
Nagelkerke R^2				.13				.13
X^2 *Block*				28.97***				1.00
X^2 *Model*				28.97***				29.97***

*$p < .05$, **$p < .01$, ***$p < .001$.

Table 19

Results of ANOVA Analyses of Problematic Alcohol Use – Verbal Violence Victims

Source	*SS*	*df*	*MS*	*F*	η^2
Gender	215.05	1	215.05	5.42*	.02
Error	13303.82	335	39.71		
Total	24837.00	337			

*$p < .05$.

Table 20

Results of ANCOVA Analyses of Problematic Drug Use – Verbal Violence Victims

Source	*SS*	*df*	*MS*	*F*	η^2
Income	6.18	1	6.18	1.91	.007
Gender	3.59	1	3.59	1.11	.004
Error	935.94	289	3.24		
Total	1554.00	292			

Table 21

Univariate Between-Subjects Effects of MANCOVA Analysis of Psychological Functioning Variables among Victims of Physical Violence

Source	Dependent Variable	*SS*	*df*	*MS*	*F*	η^2
Corrected Model	PTSD	17.32	4	4.33	4.72**	.06
	Depression	15.82	4	3.95	5.43***	.07
	Anxiety	7.74	4	1.94	5.31***	.07
	Stress	9.07	4	2.27	3.70**	.05
Income	PTSD	4.95	1	4.95	5.40*	.02
	Depression	5.34	1	5.34	7.33**	.03
	Anxiety	0.81	1	0.81	2.22	.01
	Stress	1.64	1	1.64	2.68	.01
Employment Status	PTSD	1.01	1	1.01	1.10	.004
	Depression	1.13	1	1.13	1.55	.01
	Anxiety	1.05	1	1.05	2.88	.01
	Stress	1.11	1	1.11	1.81	.01
Sexual Orientation	PTSD	5.89	1	5.89	6.20**	.02
	Depression	2.88	1	2.88	3.96*	.01
	Anxiety	3.86	1	3.86	10.60***	.04
	Stress	2.93	1	2.93	4.78*	.02
Gender Identity	PTSD	0.02	1	0.02	0.02	.00
	Depression	0.34	1	0.34	0.52	.002
	Anxiety	0.03	1	0.03	0.08	.00
	Stress	0.06	1	0.06	0.09	.00
Error	PTSD	257.67	281	0.92		
	Depression	204.51	281	0.73		
	Anxiety	102.40	281	0.36		
	Stress	172.16	281	0.61		
Total	PTSD	518.69	286			
	Depression	434.05	286			
	Anxiety	187.63	286			
	Stress	416.47	286			

*$p < .05$, **$p < .01$, ***$p < .001$.

Table 22

Summary of Hierarchical Logistic Regression Analysis for Variables Predicting Self-Harming Behavior – Physical Violence Victims

	Model 1				Model 2			
Variable	*B*	*SE*	*Wald*	*Exp(B)*	*B*	*SE*	*Wald*	*Exp(B)*
Income	-.11	.05	4.58*	.89	-.11	.05	4.62*	.89
Employment Status	.57	.34	2.74	1.77	.58	.35	2.79	1.77
Sexual Orientation	-1.16	.26	20.43***	.31	-1.19	.30	15.65***	.30
Gender					.06	.30	.04	
Nagelkerke R^2				.14				.14
X^2 *Block*				32.56***				0.04
X^2 *Model*				32.56***				32.60***

*$p < .05$, ***$p < .001$.

Table 23

Summary of Hierarchical Logistic Regression Analysis for Variables Predicting Past Suicidal Ideation – Physical Violence Victims

	Model 1				Model 2			
Variable	*B*	*SE*	*Wald*	*Exp(B)*	*B*	*SE*	*Wald*	*Exp(B)*
Income	-.14	.06	4.61*	.87	-.12	.06	3.74*	.88
Employment Status	.89	.47	3.61	2.45	.82	.48	2.96	2.27
Race/Ethnicity	-.18	.42	.18	.84	-.14	.43	.11	.87
Sexual Orientation	-1.14	.30	14.33***	.32	-.81	.34	5.54*	.45
Gender					-.69	.37	3.56	.50
Nagelkerke R^2				.14				.16
X^2 *Block*				28.19***				3.61
X^2 *Model*				28.19***				31.81***

*$p < .05$, ***$p < .001$.

Table 24

Summary of Hierarchical Logistic Regression Analysis for Variables Predicting Past Suicide Attempt – Physical Violence Victims

	Model 1				Model 2			
Variable	*B*	*SE*	*Wald*	*Exp(B)*	*B*	*SE*	*Wald*	*Exp(B)*
Income	-.18	.05	11.64**	.84	-.18	.05	11.38**	.84
Employment Status	.11	.32	.11	1.11	.10	.32	.09	1.10
Race/Ethnicity	-.20	.34	.35	.82	-.20	.34	.35	.82
Sexual Orientation	-.91	.27	11.40**	.40	-.88	.31	8.11**	.42
Gender					-.06	.30	.05	.94
Nagelkerke R^2				.13				.13
X^2 *Block*				28.25***				0.05
X^2 *Model*				28.25***				28.30***

**$p < .01$, ***$p < .001$.

Table 25

Results of ANOVA Analyses of Problematic Alcohol Use – Physical Violence Victims

Source	*SS*	*df*	*MS*	*F*	η^2
Gender	187.50	1	187.50	4.75*	.01
Error	11134.21	328	39.57		
Total	24304.00	330			

*$p < .05$.

Table 26

Results of ANCOVA Analyses of Problematic Drug Use – Physical Violence Victims

Source	*SS*	*df*	*MS*	*F*	η^2
Income	11.06	1	11.06	3.31	.01
Gender	7.78	1	7.78	2.32	.008
Error	963.45	288	3.34		
Total	1614.00	291			

Table 27

Univariate Between-Subjects Effects of MANCOVA Analysis of Psychological Functioning Variables among Victims of Sexual Violence

Source	Dependent Variable	*SS*	*df*	*MS*	*F*	η^2
Corrected Model	PTSD	23.12	4	5.78	6.37***	.09
	Depression	10.86	4	2.72	4.31**	.07
	Anxiety	5.40	4	1.35	3.79**	.06
	Stress	8.76	4	2.19	3.87**	.06
Income	PTSD	4.85	1	4.85	5.34*	.02
	Depression	5.29	1	5.29	8.39**	.03
	Anxiety	0.76	1	0.76	2.16	.001
	Stress	2.29	1	2.29	4.05*	.02
Employment Status	PTSD	1.75	1	1.75	1.93	.01
	Depression	0.10	1	0.10	0.15	.001
	Anxiety	0.01	1	0.01	0.02	<.001
	Stress	0.01	1	0.01	0.02	<.001
Sexual Orientation	PTSD	5.79	1	5.79	6.37*	.03
	Depression	2.14	1	2.14	3.40	.01
	Anxiety	3.01	1	3.01	8.44**	.03
	Stress	4.34	1	4.34	7.67**	.03
Gender Identity	PTSD	1.09	1	1.09	1.20	.01
	Depression	0.15	1	0.15	0.24	.001
	Anxiety	0.01	1	0.01	0.02	<.001
	Stress	0.001	1	0.001	0.001	<.001
Error	PTSD	222.51	245	0.91		
	Depression	154.48	245	0.63		
	Anxiety	87.34	245	0.36		
	Stress	138.74	245	0.57		
Total	PTSD	222.51	250			
	Depression	154.48	250			
	Anxiety	87.34	250			
	Stress	138.73	250			

*$p < .05$, **$p < .01$, *** $p < .001$.

Table 28

Summary of Hierarchical Logistic Regression Analysis for Variables Predicting Self-Harming Behavior – Sexual Violence Victims

	Model 1				Model 2			
Variable	*B*	*SE*	*Wald*	*Exp(B)*	*B*	*SE*	*Wald*	*Exp(B)*
Income	-.13	.06	4.58*	.88	-.13	.06	4.45*	.88
Employment Status	.52	.41	1.60	1.68	.51	.42	1.51	1.67
Sexual Orientation	-1.15	.28	16.70***	.32	-1.13	.32	12.49***	.32
Gender					-.04	.33	.01	.97
Nagelkerke R^2				.14				.14
X^2 *Block*				26.48***				.01
X^2 *Model*				26.48***				26.49***

*$p < .05$, ***$p < .001$.

Table 29

Summary of Hierarchical Logistic Regression Analysis for Variables Predicting Past Suicidal Ideation – Sexual Violence Victims

	Model 1				Model 2			
Variable	*B*	*SE*	*Wald*	*Exp(B)*	*B*	*SE*	*Wald*	*Exp(B)*
Income	-.19	.70	7.19**	.83	-.18	.07	6.22*	.84
Employment Status	1.51	.64	5.59*	4.52	1.40	.65	4.71*	4.06
Race/Ethnicity	-.03	.42	.01	.97	.02	.43	.00	1.02
Sexual Orientation	-.95	.31	9.31**	.39	-.68	.35	3.72*	.51
Gender					-.63	.39	2.64	.54
Nagelkerke R^2				.16				.17
X^2 *Block*				27.63***				2.68
X^2 *Model*				27.63***				30.31***

*$p < .05$, **$p < .01$, ***$p < .001$.

Table 30

Summary of Hierarchical Logistic Regression Analysis for Variables Predicting Past Suicide Attempt – Sexual Violence Victims

	Model 1				Model 2			
Variable	*B*	*SE*	*Wald*	*Exp(B)*	*B*	*SE*	*Wald*	*Exp(B)*
Income	-.11	.06	3.75*	.90	-.11	.06	3.49	.90
Employment Status	.12	.36	.10	1.12	.08	.36	.05	1.08
Race/Ethnicity	-.15	.34	.20	.86	-.14	.34	.18	.87
Sexual Orientation	-.70	.29	6.11*	.50	-.63	.32	3.96*	.53
Gender					-.16	.31	.28	.85
Nagelkerke R^2				.07				.07
X^2 *Block*				12.29*				.28
X^2 *Model*				12.29*				12.56*

*$p < .05$, **$p < .01$, ***$p < .001$.

Table 31

Results of ANOVA Analyses of Problematic Alcohol Use – Sexual Violence Victims

Source	*SS*	*df*	*MS*	*F*	η^2
Gender	159.51	1	159.51	4.08*	.01
Error	11010.77	282	39.05		
Total	22693.00	284			

*$p < .01$.

Table 32

Results of ANCOVA Analyses of Problematic Drug Use – Sexual Violence Victims

Source	*SS*	*df*	*MS*	*F*	η^2
Income	14.84	1	14.84	4.90*	.02
Gender	0.32	1	0.32	0.11	.00
Error	753.96	249	3.03		
Total	1315.00	252			

*$p < .05$.

Appendix C: Figures

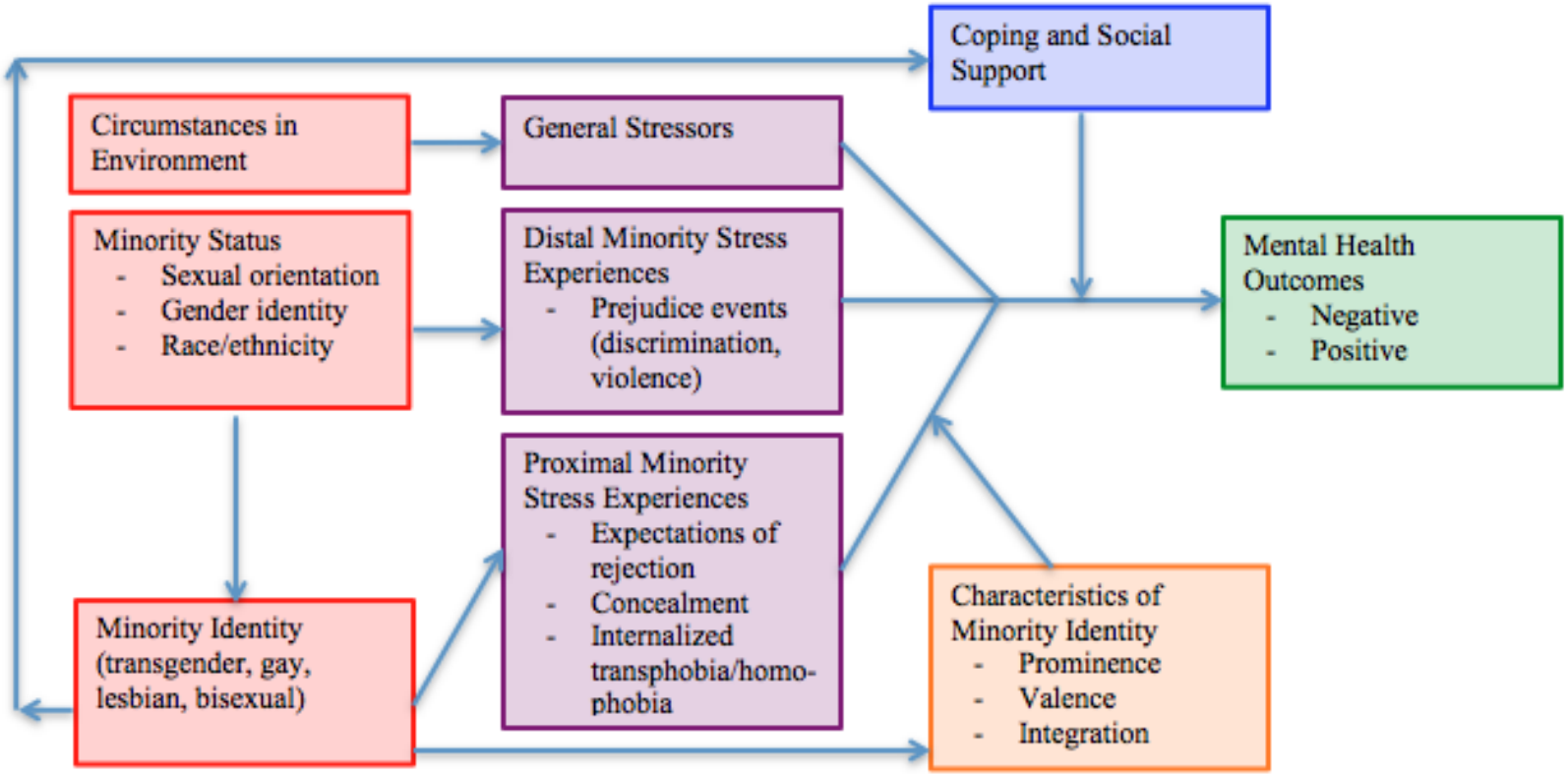

Figure 1. The Minority Stress Model modified to include transgender individuals. Adapted from "Prejudice, Social Stress, and Mental Health in Lesbian, Gay, and Bisexual Populations: Conceptual Issues and Research Evidence," by Meyer, I. H. 2003, *Psychology Bulletin, 129*(5), p. 679. Copyright 2003 by the American Psychological Association, Inc.

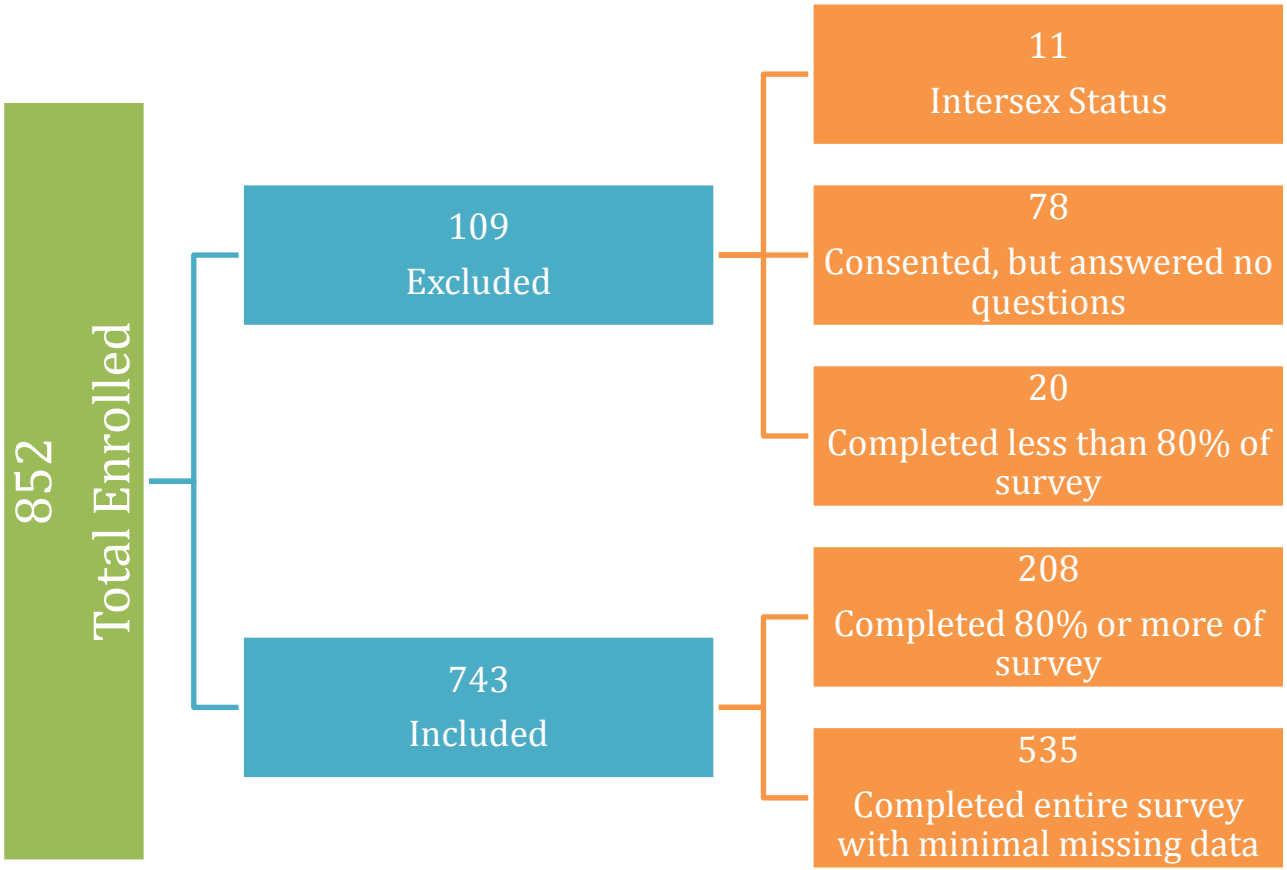

Figure 2. Participant flow.

Appendix D: Measures

Demographics Questionnaire

1. What is your age in years?

2. Are you Spanish/Hispanic/Latino? Mark the "no" box if not Spanish/Hispanic/Latino?
   A. No, not Spanish/Hispanic/Latino
   B. Yes, Mexican, Mexican Am., Chicano
   C. Yes, Puerto Rican
   D. Yes, Cuban
   E. Yes, other Spanish/Hispanic/Latino (Please Specify): _____
   F. Decline to State

3. What is your race/ethnicity? You may mark one or more to indicate what you consider yourself to be.
   A. White
   B. Black, African American
   C. American Indian or Alaska Native
   D. Native Hawaiian
   E. Guamanian or Chamorro
   F. Samoan
   G. Other Pacific Islander (Please Specify): _____
   H. Asian Indian
   I. Chinese
   J. Filipino
   K. Japanese
   L. Korean
   M. Vietnamese
   N. Other Asian (Please Specify): _____
   O. Other Race (Please Specify): _____
   P. Biracial or multiracial
   Q. Decline to State

4. What is your religious affiliation?
   A. Christian
   B. Muslim
   C. Jewish
   D. Hinduism
   E. Other (Please Specify): _____
   F. Atheist
   G. Decline to State

5. What is your current relationship status (select all that apply)?
   A. Single
   B. Married
   C. Civil union/Domestic partnership
   D. Partnered in monogamous relationship, but not married, in a civil union, or domestic partnership
   E. Partnered in an open relationship
   F. Engaged
   G. Divorced/separated
   H. Cohabiting
   I. Widowed
   J. Other (Please Specify): _____

6. What is the highest grade (or year) of degree you have completed? (Check one.)
   A. 7th grade or less
   B. Junior high school (8th or 9th grade)
   C. Partial high school (10th or 11th grade)
   D. High school diploma or GED
   E. Associate's degree
   F. Bachelor's degree
   G. Master's degree (e.g. MA, MS, Med, MBA)
   H. Doctoral degree (e.g. PhD, MD)

7. Which of the following best describes your current main daily activities and/or responsibilities?
   A. Working full time
   B. Working part-time
   C. Unemployed or laid off
   D. Looking for work
   E. Keeping house or raising children full-time
   F. Retired
   G. Disabled/SSI

8. Which of these categories best describes your total combined family income for the past 12 months? This should include income (before taxes) from all sources, wages, rent from properties, social security, disability and/or veteran's benefits, unemployment benefits, workman's compensation, help from relatives (including child payments and alimony), and so on.

   _____Less than $5,000
   _____$5,000 through $11,999
   _____$12,000 through $15,999
   _____$16,000 through $24,999

_____$25,000 through $34,999
_____$35,000 through $49,999
_____$50,000 through $74,999
_____$75,000 through $99,999
_____$100,000 and greater
_____Don't know
_____No response

9. In what Country do you reside? _____

10. If from the United States, select which region you reside in:
    A. Northeast
    B. Southeast
    C. South
    D. Midwest
    E. Southwest
    F. Northwest

Gender Identity Questionnaire

1. Please briefly define your gender identity.

2. What is your current gender? (Check all that apply)
   ☐ Man
   ☐ Woman
   ☐ Transman
   ☐ Transwoman
   ☐ Genderqueer
   ☐ Additional Category (Please Specify): _____
   ☐ Decline to State

3. What sex were you assigned at birth?
   A. Male
   B. Female
   C. Decline to State

4. Were you born with an intersex condition?
   A. No
   B. Yes

Sexual Orientation Questionnaire

1. Please briefly define your sexual orientation identity.

2. Do you consider yourself to be:
    a. Heterosexual or straight
    b. Gay or lesbian
    c. Bisexual
    d. Asexual
    e. Pansexual
    f. Additional category (Please Specify):_____

3. During the past 12 months, have you had sex with:

    a. Only biological women
    b. Only biological men
    a. Both biological women and men
    b. Only transwomen
    c. Only transmen
    d. Both transwomen and transmen
    e. Biological men and women and transwomen and transmen
    f. Androgynous individuals/Genderqueer individuals
    g. None (asexual)
    h. I haven't had sex in the past 12 months
    i. Additional category (Please Specify):_____

4. People are different in their sexual attraction to other people. Which best describes your feelings? Are you...

    a. Only attracted to biological women
    b. Mostly attracted to biological women
    c. Only attracted to biological men
    d. Mostly attracted to biological men
    e. Equally attracted to biological women and biological men
    f. Only attracted to transwomen
    g. Mostly attracted to transwomen
    h. Only attracted to transmen
    i. Mostly attracted to transwomen
    j. Equally attracted to transwomen and transmen
    k. Mostly attracted to androgynous individuals/Genderqueer individuals
    l. Only attracted to androgynous individuals/Genderqueer individuals
    m. Not sure
    n. None (asexual)
    o. Additional category (Please Specify):_____

Outness Inventory (Only transgender participants complete)

Use the following rating scale to indicate how open you are about your transgender/gender variant identity to the people listed below. Please try to respond to all of the items, but leave items blank if they do not apply to you.

1 = person definitely does NOT know about your transgender/gender variant identity
2 = person might know about your transgender/gender variant identity, but it is NEVER talked about
3 = person probably knows about your transgender/gender variant identity, but it is NEVER talked about
4 = person probably knows about your transgender/gender variant identity, but it is RARELY talked about
5 = person definitely knows about your transgender/gender variant identity, but it is RARELY talked about
6 = person definitely knows about your transgender/gender variant identity, and it is SOMETIMES talked about
7 = person definitely knows about your transgender/gender variant identity, but it is OPENLY talked about
0 = not applicable to your situation' there is no such person or group of people in your life

1. Mother	1	2	3	4	5	6	7	0
2. Father	1	2	3	4	5	6	7	0
3. Siblings (sisters, brothers)	1	2	3	4	5	6	7	0
4. Extended family/relatives	1	2	3	4	5	6	7	0
5. My new cisgender friends	1	2	3	4	5	6	7	0
6. My work peers	1	2	3	4	5	6	7	0
7. My work supervisor	1	2	3	4	5	6	7	0
8. Members of my religious community (e.g., church, temple)	1	2	3	4	5	6	7	0
9. Leaders of my religious community (e.g., church, temple)	1	2	3	4	5	6	7	0
10. Strangers, new acquaintances	1	2	3	4	5	6	7	0
11. My old cisgender friends	1	2	3	4	5	6	7	0

Transgender Identity Scale (Only transgender participants complete)

For each of the following statements, mark the response that best indicates your experience as a transgender/gender variant person. Please be as honest as possible in your response.

1----------2----------3----------4----------5----------6----------7

Disagree Strongly — Agree Strongly

_____ 1. I prefer to keep my relationships with transgender/gender variant people rather private.
_____ 2. I will never be able to accept my gender identity until all of the people in my family have accepted me.
_____ 3. I would rather be cisgender (not transgender) if I could.
_____ 4. Coming out to my friends and family has been a very lengthy process.
_____ 5. I'm not totally sure what my gender identity is.
_____ 6. I keep careful control over who knows about my gender identity.
_____ 7. I often wonder whether others judge me for my gender identity.
_____ 8. I am glad to be a transgender/gender variant person.
_____ 9. I look down on cisgender people.
_____ 10. I keep changing my mind about my gender identity.
_____ 11. My private gender transition is nobody's business.
_____ 12. I can't feel comfortable knowing that others judge me negatively for my gender identity.
_____ 13. Transgender/gender variant people's lifestyles are not as fulfilling a cisgender people's lifestyles.
_____ 14. Admitting to myself that I'm a transgender/gender variant person has been a very painful process.
_____ 15. If you are not careful about whom you come out to, you can get very hurt.
_____ 16. Being a transgender/gender variant person makes me feel insecure around cisgender people.
_____ 17. I'm proud to be part of the transgender community.
_____ 18. Developing as a transgender/gender variant person has been a fairly natural process for me.
_____ 19. I can't decide what my gender identity is.
_____ 20. I think very carefully before coming out to someone.
_____ 21. I think a lot about how my gender identity affects the way people see me.
_____ 22. Admitting to myself that I'm a transgender/gender variant person has been a very slow process.
_____ 23. Cisgender people have boring lives compared with transgender/gender variant people.
_____ 24. My gender identity is a very personal and private matter.
_____ 25. I wish I were cisgender.
_____ 26. I get very confused when I try to figure out my gender identity.
_____ 27. I have felt comfortable with my gender identity just about from the start.

Stigma Scale (Only transgender participants complete)

Please select the answer that best describes your amount of agreement with each of the statements. Don't spend too much time thinking about your responses since your initial reaction to each statement is generally best.

	Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree	Moderately Agree	Strongly Agree
1. Most people would willingly accept a transgender/gender variant person as a close friend						
2. Most people believe that a transgender/gender variant person is just as intelligent as the average person.						
3. Most people believe that a transgender/gender variant person is just a trustworthy as the average citizen.						
4. Most people would accept a transgender/gender variant person as a teacher of young children in public school.						
5. Most people feel that being transgender/gender variant is a sign of personal failure.						
6. Most people would not hire a transgender/gender variant person to take care of their children.						
7. Most people think less of a person who is transgender/gender variant person.						
8. Most employers will hire a transgender/gender variant person if they are qualified for the job.						
9. Most employers will pass over the application of a transgender/gender variant person in favor of another applicant.						
10. Most people in my						

community would treat a transgender/gender variant person just as they would treat anyone.						
11. Once they know a person is transgender/gender variant person, most people will take their opinion less seriously.						

Verbal Violence Scale

Since the age of 14 how many times has another adult or group of adults done the following to you:

	How many times since age 14?					
	Once	2-5 times	6-10 times	11-20 times	20+ times	Never
1. Refused to talk to you?						
2. Called you names?						
3. Tried to humiliate you?						
4. Ridiculed or criticized you in public?						
5. Ridiculed or insulted your beliefs?						
6. Ridiculed or insulted an aspect of your identity?						
7. Criticized your intelligence?						
8. Criticized your physical appearance and/or sexual attractiveness?						
9. Threatened to hurt you?						
10. Threatened to hurt your family or friends?						
11. Harassed your family or friends in some way?						

<u>Thinking about the list of experiences you just completed</u>

1. How frequently have the above occurred in the past year?
    a. Never
    b. Sometimes
    c. Once or twice a month
    d. Once a week
    e. Several times a week
    f. Everyday
    g. Not in the past year, but it did happen before
    h. Never happened

2. How often to you feel these events have occurred because of your gender identity?
    a. Never
    b. Rarely

c. Sometimes
d. Often
e. Always
f. I had no experiences

3. The person/people who did this to you was/were most often?
    a. A stranger
    b. A person you knew (neighbor, friend, acquaintance, co-worker, etc.)
    c. An immediate family member (mother, father, or sibling)
    d. An extended family member (aunt, uncle, cousin, or grandparent)
    e. An intimate partner (sexual partner, committed partner, spouse)
    f. Don't know
    g. I had no experiences

4. The gender of the person/people who did this to you most often was?
    a. Man
    b. Woman
    c. Transgender man
    d. Transgender woman
    e. Don't know
    f. I had no experiences

5. How often did you report these incidents to the police?
    a. Never
    b. Rarely
    c. Sometimes
    d. Often
    e. Always
    f. I had no experiences

Physical Violence Scale

Not counting any incidents you have already mentioned in since the age of 14 how many times did another adult or group of adults do the following to you?

	How many times since age 14?					
	Once	2-5 times	6-10 times	11-20 times	20+ times	Never
1. Throw something at you that could hurt?						
2. Push, grab, or shove you?						
3. Pull your hair?						
4. Slap or hit you?						
5. Kick or bite you?						
6. Choke or attempt to drown you?						
7. Hit you with some object?						
8. Beat you up?						
9. Threaten you with a gun?						
10. Threaten you with a knife or other weapon?						
11. Use a gun on you?						
12. Use a knife or other weapon on you?						

<u>Thinking about the above physical experiences collectively:</u>

1. How frequently have the above experiences occurred in the past year?
    a. Never
    b. Sometimes
    c. Once or twice a month
    d. Once a week
    e. Several times a week
    f. Everyday
    g. Not in the past year, but it did happen before
    h. Never happened

2. How often to you feel these events have occurred because of your gender identity?
    a. Never
    b. Rarely
    c. Sometimes
    d. Often

e. Always
f. I had no experiences

3. The person/people who did this to you was/were most often?
    a. A stranger
    b. A person you knew (neighbor, friend, acquaintance, co-worker, etc.)
    c. An immediate family member (mother, father, or sibling)
    d. An extended family member (aunt, uncle, cousin, or grandparent)
    e. An intimate partner (sexual partner, committed partner, spouse)
    f. Don't know
    g. I had no experiences

4. The gender of the person/people who did this to you most often was?
    a. Man
    b. Woman
    c. Transgender man
    d. Transgender woman
    e. Don't know
    f. I had no experiences

5. How often have you been physically injured from these incidents?
    a. Never
    b. Rarely
    c. Sometimes
    d. Often
    e. Always
    f. I had no experiences

6. If you were injured, how often did your injuries require medical treatment?
    a. Never
    b. Rarely
    c. Sometimes
    d. Often
    e. Always
    f. I had no experiences

7. How often did you report these incidents to the police?
    a. Never
    b. Rarely
    c. Sometimes
    d. Often
    e. Always
    f. I had no experiences

Sexual Experiences Survey – Short Form Victimization

Sexual Experiences	How many times since the age of 14						
1. Someone fondled, kissed, or rubbed up against the private areas of your body (lips, breast/chest, crotch or butt) or removed some of your clothes without your consent *(but did not attempt sexual penetration)* by:	0	1	2	3-5	6-10	11-20	20+
a. Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to							
b. Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn't want to							
c. Taking advantage of me when I was too drunk or out of it to stop what was happening							
d. Threatening to physically harm me or someone close to me							
e. Using force, for example holding me down with their body weight, pinning my arms, or having a weapon							
2. Someone had oral sex with me or made me have oral sex with them without my consent by:	0	1	2	3-5	6-10	11-20	20+
a. Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to							
b. Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn't want to							
c. Taking advantage of me when I was							

too drunk or out of it to stop what was happening							
d. Threatening to physically harm me or someone close to me							
e. Using force, for example holding me down with their body weight, pinning my arms, or having a weapon							
3. If you were assigned male sex at birth and/or identify as MTF and have not had bottom surgery, check box and skip to item 4 **A man put his penis into my vagina, someone inserted fingers or objects without my consent by:**	0	1	2	3-5	6-10	11-20	20+
a. Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to							
b. Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn't want to							
c. Taking advantage of me when I was too drunk or out of it to stop what was happening							
d. Threatening to physically harm me or someone close to me							
e. Using force, for example holding me down with their body weight, pinning my arms, or having a weapon							
4. A man put his penis into my butt, or someone inserted fingers or objects without my consent by:	0	1	2	3-5	6-10	11-20	20+
a. Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to							
b. Showing displeasure, criticizing my							

sexuality or attractiveness, getting angry but not using physical force, after I said I didn't want to							
c. Taking advantage of me when I was too drunk or out of it to stop what was happening							
d. Threatening to physically harm me or someone close to me							
e. Using force, for example holding me down with their body weight, pinning my arms, or having a weapon							
5. Even though it did not happen, someone TRIED to have oral sex with me, or make me have oral sex with them without my consent by:	0	1	2	3-5	6-10	11-20	20+
a. Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to							
b. Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn't want to							
c. Taking advantage of me when I was too drunk or out of it to stop what was happening							
d. Threatening to physically harm me or someone close to me							
e. Using force, for example holding me down with their body weight, pinning my arms, or having a weapon							
6. If you were assigned male sex at birth and/or identify as MTF and have not had bottom surgery, check this box and skip to item 7. **Even though it did not happen, a man TRIED to put his penis into my vagina, or someone tried to stick in fingers or objects without my consent by:**	0	1	2	3-5	6-10	11-20	20+
a. Telling lies, threatening to end the							

relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to							
b. Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn't want to							
c. Taking advantage of me when I was too drunk or out of it to stop what was happening							
d. Threatening to physically harm me or someone close to me							
e. Using force, for example holding me down with their body weight, pinning my arms, or having a weapon							
7. Even though it did not happen, a man TRIED to put his penis into my butt, or someone tried to stick in objects or fingers without my consent by:	0	1	2	3-5	6-10	11-20	20+
a. Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to							
b. Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn't want to							
c. Taking advantage of me when I was too drunk or out of it to stop what was happening							
d. Threatening to physically harm me or someone close to me							
e. Using force, for example holding me down with their body weight, pinning my arms, or having a weapon							

<u>Thinking about the above sexual experiences collectively:</u>

1. Have you ever been raped?
    a. Yes

   b. No

2. How frequently have the above occurred in the past year?
   a. Never
   b. Sometimes
   c. Once or twice a month
   d. Once a week
   e. Several times a week
   f. Everyday
   g. Not in the past year, but it did happen before
   h. Never happened

3. How often to you feel these sexual experiences have occurred because of your gender identity?
   a. Never
   b. Rarely
   c. Sometimes
   d. Often
   e. Always
   f. I had no experiences

4. The person/people who did this to you was/were most often A stranger
   a. A person you knew (neighbor, friend, acquaintance, co-worker, etc.)
   b. An immediate family member (mother, father, or sibling)
   c. An extended family member (aunt, uncle, cousin, or grandparent)
   d. An intimate partner (sexual partner, committed partner, spouse)
   e. Don't know
   f. I had no experiences

5. The gender of the person/people who did this to you most often was?
   a. Man
   b. Woman
   c. Transgender man
   d. Transgender woman
   e. Don't know
   f. I had no experiences

6. How often have you been physically injured from these incidents?
   a. Never
   b. Rarely
   c. Sometimes
   d. Often
   e. Always
   f. I had no experiences

7. If you were injured, how often did your injuries require medical treatment?
    a. Never
    b. Rarely
    c. Sometimes
    d. Often
    e. Always
    f. I had no experiences

8. How often did you report these incidents to the police?
    a. Never
    b. Rarely
    c. Sometimes
    d. Often
    e. Always
    f. I had no experiences

Impact of Events Scale-Revised (To immediately follow violence measures)

INSTRUCTIONS: You have just completed a series of questions about different types of verbal, physical, sexual experiences that people may have in their lives. Please recall the most distressing of these experiences for you. If you have not experienced any of these verbal, physical, or sexual experiences, please recall the most distressing relationship stressor you have experienced in your life.

What type of experience was the most distressing for you?

A. A verbal experiences
B. A physical experience
C. A sexual experience
D. A relationship stressor

Below is a list of difficulties people sometimes have after stressful life events. Please read each item, and then indicate how distressing each difficulty has been for you **DURING THE PAST SEVEN DAYS** with respect to the most distressing experience from of the group of verbal, physical, and sexual experiences on which you just reported. How much were you distressed or bothered by these difficulties? The rating scale is as follows

0 = Not at all; 1 = A little bit; 2 = Moderately; 3 = Quite a bit; 4 = Extremely.

_____ 1. Any reminder brought back feelings about it.
_____ 2. I had trouble staying asleep.
_____ 3. Other things kept making me think about it.
_____ 4. I felt irritable and angry.
_____ 5. I avoided letting myself get upset when I thought about it or was reminded of it.
_____ 6. I thought about it when I didn't mean to.
_____ 7. I felt as if it hadn't happened or wasn't real..
_____ 8. I stayed away from reminders of it.
_____ 9. Pictures about it popped into my mind.
_____ 10. I was jumpy and easily startled.
_____ 11. I tried not to think about it.
_____ 12. I was aware that I still had a lot of feelings about it, but I didn't deal with them.
_____ 13. My feelings about it were kind of numb.
_____ 14. I found myself acting or feeling like I was back at that time.
_____ 15. I had trouble falling asleep.
_____ 16. I had waves of strong feelings about it.

_____ 17. I tried to remove it from my memory.
_____ 18. I had trouble concentrating.
_____ 19. Reminders of it caused me to have physical reactions, such as sweating, trouble breathing, nausea, or a pounding heart.
_____ 20. I had dreams about it.
_____ 21. I felt watchful and on-guard.
_____ 22. I tried not to talk about it.

Depression Anxiety and Stress Scale

Please read each statement and circle a number 0, 1, 2 or 3 that indicates how much the statement applied to you *over the past week*. There are no right or wrong answers. Do not spend too much time on any statement. *The rating scale is as follows:*

0 Did not apply to me at all
1 Applied to me to some degree, or some of the time
2 Applied to me to a considerable degree, or a good part of time
3 Applied to me very much, or most of the time

1	I found myself getting upset by quite trivial things	0	1	2	3
2	I was aware of dryness of my mouth	0	1	2	3
3	I couldn't seem to experience any positive feeling at all	0	1	2	3
4	I experienced breathing difficulty (eg, excessively rapid breathing, breathlessness in the absence of physical exertion)	0	1	2	3
5	I just couldn't seem to get going	0	1	2	3
6	I tended to over-react to situations	0	1	2	3
7	I had a feeling of shakiness (eg, legs going to give way)	0	1	2	3
8	I found it difficult to relax	0	1	2	3
9	I found myself in situations that made me so anxious I was most relieved when they ended	0	1	2	3
10	I felt that I had nothing to look forward to	0	1	2	3
11	I found myself getting upset rather easily	0	1	2	3
12	I felt that I was using a lot of nervous energy	0	1	2	3
13	I felt sad and depressed	0	1	2	3
14	I found myself getting impatient when I was delayed in any way (eg, elevators, traffic lights, being kept waiting)	0	1	2	3
15	I had a feeling of faintness	0	1	2	3
16	I felt that I had lost interest in just about everything	0	1	2	3
17	I felt I wasn't worth much as a person	0	1	2	3
18	I felt that I was rather touchy	0	1	2	3
19	I perspired noticeably (eg, hands sweaty) in the absence of high temperatures or physical exertion	0	1	2	3
20	I felt scared without any good reason	0	1	2	3
21	I felt that life wasn't worthwhile	0	1	2	3

Reminder of rating scale:

0 Did not apply to me at all
1 Applied to me to some degree, or some of the time
2 Applied to me to a considerable degree, or a good part of time
3 Applied to me very much, or most of the time

	I found it hard to wind down	0	1	2	3
22					
23	I had difficulty in swallowing	0	1	2	3
24	I couldn't seem to get any enjoyment out of the things I did	0	1	2	3
25	I was aware of the action of my heart in the absence of physical exertion (eg, sense of heart rate increase, heart missing a beat)	0	1	2	3
26	I felt down-hearted and blue	0	1	2	3
27	I found that I was very irritable	0	1	2	3
28	I felt I was close to panic	0	1	2	3
29	I found it hard to calm down after something upset me	0	1	2	3
30	I feared that I would be "thrown" by some trivial but unfamiliar task	0	1	2	3
31	I was unable to become enthusiastic about anything	0	1	2	3
32	I found it difficult to tolerate interruptions to what I was doing	0	1	2	3
33	I was in a state of nervous tension	0	1	2	3
34	I felt I was pretty worthless	0	1	2	3
35	I was intolerant of anything that kept me from getting on with what I was doing	0	1	2	3
36	I felt terrified	0	1	2	3
37	I could see nothing in the future to be hopeful about	0	1	2	3
38	I felt that life was meaningless	0	1	2	3
39	I found myself getting agitated	0	1	2	3
40	I was worried about situations in which I might panic and make a fool of myself	0	1	2	3
41	I experienced trembling (eg, in the hands)	0	1	2	3
42	I found it difficult to work up the initiative to do things	0	1	2	3

Self-Harm Questionnaire

1. Have you ever had thoughts about ending your life?
    a. Yes
    b. No (if no, skip to question 3)

2. (For transgender participants only. Cisgender participants skip) How often have these thoughts been related to your transgender/gender variant identity?
    a. Never
    b. Rarely
    c. Sometimes
    d. Often
    e. Always

3. Have you ever made an attempt to end your life?
    a. Yes
    b. No (if no, skip to question 6)

4. (For transgender participants only. Cisgender participants skip) How often were these actions (attempting to end your life) related to your transgender/gender variant identity?
    a. Never
    b. Rarely
    c. Sometimes
    d. Often
    e. Always

5. Have you ever harmed yourself without the intention of ending your life (e.g., cut/carved on your skin, burned yourself, hit or bit yourself on purpose, scraped or erased your skin, pulled your hair out, picked areas of your body to draw blood, or inserted objects under your skin or nails)?
    a. Yes
    b. No (if no, skip to the next measure)

6. (For transgender participants only. Cisgender participants skip) How often were these actions (harming yourself) related to your transgender/gender variant identity?
    a. Never
    b. Rarely
    c. Sometimes
    d. Often
    e. Always

Alcohol Use Disorders Identification Test

Please circle the answer that is correct for you

1. How often do you have a drink containing alcohol?
   A. Never
   B. Monthly or less
   C. 2-4 times a month
   D. 2-3 times a week
   E. 4 or more times a week

2. How many standard drinks containing alcohol do you have on a typical day when drinking?
   A. 1 or 2
   B. 3 or 4
   C. 5 or 6
   D. 7 to 9
   E. 10 or more

3. How often do you have six or more drinks on one occasion?
   A. Never
   B. Less than monthly
   C. Monthly
   D. Weekly
   E. Daily or almost daily

4. During the past year, how often have you found that you were not able to stop drinking once you had started?
   A. Never
   B. Less than monthly
   C. Monthly
   D. Weekly
   E. Daily or almost daily

5. During the past year, how often have you failed to do what was normally expected of you because of drinking?
   A. Never
   B. Less than monthly
   C. Monthly
   D. Weekly
   E. Daily or almost daily

6. During the past year, how often have you needed a drink in the morning to get yourself going after a heavy drinking session?

A. Never
B. Less than monthly
C. Monthly
D. Weekly
E. Daily or almost daily

7. During the past year, how often have you had a feeling of guilt or remorse after drinking?
A. Never
B. Less than monthly
C. Monthly
D. Weekly
E. Daily or almost daily

8. During the past year, have you been unable to remember what happened the night before because you had been drinking?
A. Never
B. Less than monthly
C. Monthly
D. Weekly
E. Daily or almost daily

9. Have you or someone else been injured as a result of your drinking?
A. No
B. Yes, but not in the past year
C. Yes, during the past year

10. Has a relative or friend, doctor or other health worker been concerned about your drinking or suggested you cut down?
A. No
B. Yes, but not in the past year
C. Yes, during the past year

Drug Abuse Screening Test

Please check the one response to each item that best describes how you have felt over the past 12 months.

	No	**Yes**
1. Have you used drugs other than those required for medical	0	1
2. Do you abuse more than one drug at a time?	0	1
3. Are you always able to stop using drugs when you want to?	0	1
4. Have you had "blackouts" or "flashbacks" as a result of drug use?	0	1
5. Do you ever feel bad or guilty about your drug use?	0	1
6. Does your spouse (or parents) ever complain about your	0	1
7. Have you neglected your family because of your use of drugs?	0	1
8. Have you engaged in illegal activities in order to obtain drugs?	0	1
9. Have you ever experienced withdrawal symptoms (felt sick) when you stopped taking drugs?	0	1
10. Have you had medical problems as a result of your drug use (e.g., memory loss, hepatitis, convulsions, bleeding, etc.)?	0	1

How often do you use drugs other than those for medical reasons?

A. Never
B. Monthly or less
C. 2-4 times a month
D. 2-3 times a week
E. 4 or more times a week

PLEASE CLICK HERE TO FINISH THE STUDY

Appendix E: Recruitment and Advertising Materials

Sample Website Content for Transgender Participants

Home Page

Thank you for your interest in GenderStudy!

What is this study?

- An anonymous online survey that takes 20-30 minutes of your time.
- Assessing interpersonal experiences.
- Surveying transgender people about how their interpersonal experiences impact their mental health.
- Asking transgender people about how they cope with their interpersonal experiences.

Who can participate?

- People who identify as transgender, transsexual, trans, transgenderist, bigender, FTM, MTF, genderqueer, gender variant, agender, cross-dresser, two spirit, or do not identify with a particular gender.
- People whose gender identification is different from the one your parents or guardians gave you.
- People who are seen by themselves or others as androgynous.
- People who question their gender identity.
- People of every culture, ethnic, and religious background.
- People who are over the age of 18.

About Page

Who is researching this and why?

- The researcher is committed to a lifelong career of serving the transgender/gender variant/queer community through research, counseling, and advocacy.
- This researcher is organizing this study as their dissertation project for a Doctoral degree in Clinical Psychology.
- Email the researcher with questions about the study: sw938306@ohio.edu.

What is going to happen to the results?

- The survey will be on the web until the end of September 2012 or until study recruitment is complete.
- The results will be posted on this website by the winter of 2012-13.
- Results will be described in a research report.
- The research report will be printed in a book of Ohio University Doctoral Dissertations.

- The research report may be published in other academic journals.
- The results may be presented at conferences and universities.
- The results will be circulated to LGBT organizations.

Resources Page

Gay & Transgender Hate Crime Hotline - 1-800-616-HATE

National Center for Transgender Equality – www.ncte.org

National Coalition of Anti-Violence Programs – www.ncavp.org

For general information about mental health and psychological resources:

- The American Psychological Association – www.apa.org
- National Alliance on Mental Illness – www.nami.org

For help finding a psychologist or mental health provider in your area:

- Find a Psychologist - locator.apa.org/
- NAMI information helpline - 1 (800) 950-NAMI (6264)

If you need to speak to a counselor more immediately:

- National Suicide Prevention Lifeline 1-800-273-TALK

Survey Page

CLICK HERE TO BEGIN THE STUDY.

Sample Website Content for Cisgender Participants

Home Page

Thank you for your interest in GenderStudy!

What is this study?

- An anonymous online survey that takes 20-30 minutes of your time.
- Assessing interpersonal experiences of different people in different types of communities.
- Surveying people in different types of communities about how their interpersonal experiences impact their mental health.
- Asking people about how they cope with their interpersonal experiences.

Who can participate?

- People who are over the age of 18.
- People of every culture, ethnic, and religious background.

About Page

Who is researching this and why?

- The researcher is committed to a lifelong career of serving underrepresented groups in the community through research, counseling, and advocacy.
- This researcher is organizing this study as their dissertation project for a Doctoral degree in Clinical Psychology.
- Email the researcher with questions about the study: sw938306@ohio.edu

What is going to happen to the results?

- The survey will be on the web until the end of September 2012 or until study recruitment is complete.
- The results will be posted on this website by the winter of 2012-13.
- Results will be described in a research report.
- The research report will be printed in a book of Ohio University Doctoral Dissertations.
- The research report may be published in other academic journals.
- The results may be presented at conferences and universities.
- The results will be circulated to social justice organizations.

Resources Page

For general information about mental health and psychological resources:

- The American Psychological Association – www.apa.org
- National Alliance on Mental Illness – www.nami.org

For help finding a psychologist or mental health provider in your area:

- Find a Psychologist - locator.apa.org/
- NAMI information helpline - 1 (800) 950-NAMI (6264)

If you need to speak to a counselor more immediately:

- National Suicide Prevention Lifeline 1-800-273-TALK

Survey Page

CLICK HERE TO BEGIN THE STUDY.

Appendix F: Forms

Consent Form

Ohio University Consent Form

Title of Research: Social and Interpersonal Experiences

Researchers: Milo Wilson

You are being asked to participate in research. For you to be able to decide whether you want to participate in this project, you should understand what the project is about, as well as the possible risks and benefits in order to make an informed decision. This process is known as informed consent. This form describes the purpose, procedures, possible benefits, and risks. It also explains how your personal information will be used and protected. Once you have read this form and your questions about the study are answered, you will be asked to participate in this study. You may print a copy of this document for your records.

Explanation of Study
This study is being done in order to better understand the interpersonal experiences of different groups of people and the relationship between interpersonal experiences, coping, and mental health. If you agree to participate, you will be asked to complete several questionnaires, some which will ask for personal and sexual information. Please consider your comfort level with these types of questions before agreeing to participate. We ask that you answer each questionnaire to the best of your ability and as completely as possible unless instructed to skip questions based on your response to previous items. If you have any questions or concerns the researchers contact information is listed later in this form. Your participation in this study should take approximately 15 to 20 minutes.

Risks and Discomforts
No physical risks or discomforts are anticipated; however, some individuals might experience emotional discomfort. Participation is voluntary, and you may stop responding and withdraw from the study at any point without penalty.

Benefits
This study is important to science/society because it helps people to understand the unique experiences of, improve services for, and advocate for better legislation to protect members of different groups in society.

Confidentiality and Records
This is an anonymous study. Your study information will be kept confidential by not collecting any identifying information and storing data on a secure computer in a locked laboratory. There will be no way to connect your identity to your survey information. No

paper records of your study information will be maintained. These procedures are implemented in order to protect the rights and privacy for the participants.

Contact Information
If you have any questions regarding this study, please contact:

Milo S. Wilson, M.S.	056 Porter Hall (740-593-1088)	sw938306@ohio.edu
Christine A. Gidycz, Ph.D.	231 Porter Hall (740-593-1092)	gidycz@ohio.edu

If you have any questions regarding your rights as a research participant, please contact Jo Ellen Sherow, Director of Research Compliance, Ohio University, (740)593-0664.

By agreeing to participate in this study, you are agreeing that:

- you have read this consent form
- you have been informed of potential risks and they have been described to your satisfaction.
- you understand Ohio University has no funds set aside for any injuries you might receive as a result of participating in this study
- you are 18 years of age or older
- your participation in this research is completely voluntary
- you may choose to stop completing the study at any time. If you decide to stop participating in the study, there will be no penalty to you and you will not lose any benefits to which you are otherwise entitled.

CLICK HERE TO PROVIDE CONSENT AND BEGIN THIS STUDY.

Debriefing Form

Debriefing Form

Thank you for your participation in this study. This study is being done in order to better understand the interpersonal experiences of transgender people and people whose gender identity is congruent with their natal birth sex and the relationship between interpersonal experiences, coping, and mental health. To accomplish this goal, you were asked questions about personal life events, including psychological, physical, and sexual experiences. The responses to these questions will be compared with other people who have differing life events.

Your participation will help us understand how previous experiences are related to later life experiences and how people cope with and respond to different interpersonal experiences. As a reminder, your answers are completely anonymous.

If you have any further questions regarding the nature of this study, or would like to request details of the results of this study please feel free to contact one of the following:

Milo S. Wilson, M.S.	056 Porter Hall (593-1088)	sw938306@ohio.edu
Christine A. Gidycz, Ph.D.	231 Porter Hall (593-1092)	gidycz@ohio.edu

In addition, if you are concerned about the study materials used or questions asked and wish to speak with a professional, or if you would like more information or reading material on this topic, please contact one of the following resources:

For general information about mental health and psychological resources:

- The American Psychological Association – www.apa.org
- National Alliance on Mental Illness – www.nami.org

For help finding a psychologist or mental health provider in your area:

- Find a Psychologist - locator.apa.org/
- NAMI information helpline - 1 (800) 950-NAMI (6264)

If you need to speak to a counselor more immediately:

- National Suicide Prevention Lifeline 1-800-273-TALK

Appendix G: Detailed Study Procedure

The project was advertised as a study of Social and Interpersonal Experiences. Both transgender and cisgender participants were recruited from a variety of online media mechanisms, including Facebook, Reddit, Craig's List, and Tumblr. Additional targeted online recruiting was conducted to enroll transgender participants through websites of local, state, and national lesbian, gay, bisexual, and transgender (LGBT) organizations, as well as transgender specific organizations, including the Ohio University LGBT Center, LGBT centers in Columbus, Cleveland, Pittsburgh, and Cincinnati, TransOhio, Gendercast, Art of Transliness, and the APA Division 44. Other organizations were contacted but did not provide a response to indicate whether they distributed the survey to their members.

Recruited individuals were first directed to a website that provided information about the research, the researcher, service referrals, and a link to the survey website if they choose to participate. There were two websites, one for transgender and one for cisgender participants (see Appendix E, pg. 130 for sample website content for transgender participants and cisgender participants). These websites had information that was tailored to each group in order to maximize participation and not dissuade potential participants.

Participants clicked on the study link first viewed the informed consent page (see Appendix F, pg. 133). Informed consent was provided by clicking on a link at the bottom of the informed consent page to continue on to the study. After consenting to participate in the study, participants were directed to the first page of the questionnaire (see

Appendix D, pg.103 for measures). Participants completed the study questionnaires in the following order: Demographic Questionnaire, Gender Identity Questionnaire, Sexual Orientation Questionnaire, Outness Inventory (Transgender participants only), Stigma Scale (Transgender participants only), Transgender Identity Scale (Transgender participants only), Verbal Violence Scale, Physical Violence Scale, Sexual Experiences Survey, Impact of Events Scale - Revised, Depression, Anxiety, and Stress Scale, Suicide and Self-Harm Questionnaire, Alcohol Use Disorders Identification Test, and Drug Abuse Screening Test. The survey took approximately 30 minutes to compete. At the end of each of the questionnaires all participants viewed the debriefing form for the study (see Appendix F, pg. 136).

A decision tree was built in to the programming of the survey to ensure completion of the appropriate measures by the appropriate participants. Transgender and cisgender individuals were identified by their answers to the gender identity and natal sex questions. LGB individuals were identified by their responses to the sexual orientation identity question. Cisgender individuals skipped gender identity measures, including the Stigma Scale, Outness Inventory, Transgender Identity Inventory, and the Self-Harm Questionnaire gender identity questions.

Appendix H: Aim 1 Secondary Analyses

Secondary analyses were conducted for aim 1 to compare characteristics of violence among transgender and cisgender participants by type of violence (verbal, physical, sexual). Frequencies of characteristics of violence by type and gender can be found in Table 9. Five chi-square analyses were conducted to compare transgender and cisgender victims of verbal violence on experiences of violence within the past year, relationship of violence to gender identity (never/rarely versus sometimes/often/always), perpetrator gender (male or non-male), relationship to perpetrator (stranger versus acquaintance), and frequency of police reporting (never/rarely versus sometimes/often/always). A bonferroni correction was made to account for familywise error, resulting in an alpha level of .01 for statistical significance. Significant covariates are not included in these analyses, as their inclusion did not significantly impact the results.

Summary of Results for Verbal Violence

Transgender and cisgender victims of verbal violence were compared with a series of chi-square analyses on recent experiences of violence, relationship of violence to gender identity, perpetrator gender, relationship to perpetrator, and frequency of police reporting, as well as frequency of injury (never/rarely versus sometimes/often/always). A bonferroni correction was made to account for familywise error, adjusting the p-value for statistical significance to .008 for the following six comparisons. Transgender victims of verbal violence had more frequent experiences of violence within the past year and were more likely to perceive their experiences of verbal violence to be related to their gender

identity than cisgender victims of verbal violence, X^2 (1, N = 383) = 9.24, p = .002 and X^2 (1, N = 391) = 108.90, p < .001, respectively. Transgender victims of verbal violence were no more likely than cisgender victims of verbal violence to be acquainted to their perpetrator, to report a male perpetrator of their violence, or to report the violence to the police, X^2 (1, N = 383) = 5.19, p = .02, X^2 (1, N = 353) = 1.38, p = .24 and X^2 (1, N = 387) = 0.50, p = .82, respectively.

Summary of Results for Physical Violence

Transgender and cisgender victims of physical violence were also compared with a series of chi-square analyses on recent experiences of violence, relationship of violence to gender identity, perpetrator gender, relationship to perpetrator, and frequency of police reporting, as well as frequency of injury (never/rarely versus sometimes/often/always). A bonferroni correction was made to account for familywise error, adjusting the p-value for statistical significance to .008 for the following six comparisons. Transgender victims of physical violence were significantly more likely than cisgender victims of physical violence to perceive their experiences of physical violence to be related to their gender identity and significantly less likely to be acquainted with their perpetrator, X^2 (1, N = 377) = 57.81, p < .001 and X^2 (1, N = 359) = 11.78, p = .001, respectively. Transgender victims of physical violence were no more likely than cisgender victims of physical violence to encounter physical violence in the past year, to report a male perpetrator of their violence, to report their experiences of violence to the police, or to be injured from their experiences of violence, X^2 (1, N = 355) = 0.43, p = .51, X^2 (1, N = 346) = 1.05, p = .31, X^2 (1, N = 360) = 0.57, p = .45, and X^2 (1, N = 312) = 0.50, p = .48, respectively.

Summary of the Results for Sexual Violence

Lastly, transgender and cisgender victims of sexual violence were compared on recent experiences of sexual violence (within the past year), relationship of violence to gender identity, perpetrator gender, relationship to perpetrator, frequency of police reporting, and frequency of injury in a series of six chi-square analyses. A bonferroni correction was made to account for familywise error, adjusting the p-value to .008 for the following comparisons. Transgender victims of sexual violence were significantly less likely to report a male perpetrator sexual violence than cisgender victims of sexual violence, X^2 (1, N = 288) = 7.89, p = .005. Transgender victims of sexual violence were not significantly more likely than cisgender victims of sexual violence to encounter sexual violence in the past year, to perceive their experiences of sexual violence to be related to their gender identity, to be acquainted with their perpetrator, to report their experiences of violence to the police, or to be injured from their experiences of violence, X^2 (1, N = 288) = 1.05, p = .31, X^2 (1, N = 346) = 1.05, p = .31, X^2 (1, N = 290) = 0.67, p = .41, X^2 (1, N = 282) = 0.06, p = .80, and X^2 (1, N = 289) = 3.04, p = .08, respectively.

Thesis and Dissertation Services