

Minority Stress: Understanding Alcohol Behaviors, Suicidality, and Non-Suicidal Self-Injury
among Transgender Adults

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Abstract

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Transgender (trans) individuals are at high risk for health-related problems including alcohol misuse, suicidality - suicide ideation, attempts, and deaths – and non-suicidal self-injury (NSSI). Relatively little research has investigated alcohol behaviors specifically among trans adults. High rates of suicidality and NSSI among trans adults have been established by previous research; however, there is a dearth of studies that attempt to understand predictors of these health-related problems. One hypothesized explanation for health disparities between trans individuals and the general population is that trans individuals experience high rates of minority stress related to their marginalized status. For the current two studies, a sample of trans adults was recruited nationally to complete a cross-sectional battery of online measures. Study 1 was a descriptive study that examined alcohol quantity and frequency, alcohol-related problems, and drinking to cope motives across trans subgroups. Differences in alcohol behaviors were found according to gender expression, but not sex assigned at birth or gender identity. Study 2 examined associations among minority stress, alcohol-related problems, suicidality and NSSI, while controlling for differences in gender expression and gender identity. Increased minority stress was found to increase suicidality, but not alcohol-related problems or NSSI. Increased alcohol-related problems were found to increase NSSI. Taken together, the findings suggest that individual and societal-level interventions targeting minority stress and alcohol misuse may be an effective way to decrease rates of health-related problems among trans adults.

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Brief Introduction:

Minority Stress: Understanding Alcohol Behaviors and Suicidality Among Transgender Adults

Health disparities between transgender (trans) individuals and the general population are increasingly evident (APA, 2015; Bockting, 2013; Zucker, Lawrence, & Kreukels, 2016). Transgender is an umbrella term used to refer to a diverse group of people who experience incongruence between their gender identity and the gender role assigned by society according to sex at birth (Bockting, 2013). Rates of suicide attempts among trans individuals are approximately eight times rates found in the general population (Grant et al., 2011; Marshall, Claes, Bouman, Witcomb, & Arcelus, 2016; Nock et al., 2008), and rates of suicidal ideation and non-suicidal self-injury (NSSI) are similarly discrepant (Marshall et al., 2016). Alcohol use is one identified risk-factor for suicidal behavior in the general population (Lamis & Malone, 2012). Trans individuals are identified as an at-risk group for problem alcohol use because they are hypothesized to drink to cope with prejudice and discrimination they experience as a marginalized group (Hughes & Eliason, 2002; National Institutes of Health, 2010). However, there is a dearth of research investigating alcohol behaviors among trans individuals (Xavier, Bobbin, Singer, & Budd, 2005). Study 1 began addressing this gap in the literature by investigating alcohol use, alcohol-related problems, and drinking to cope motives among a national sample of trans adults.

Empirical research is needed to investigate other potential risk-factors for high rates of suicide and NSSI among trans individuals. There are two primary theories in the literature that account for health-related problems among sexual minorities (LGB individuals): The Minority Stress Model (Meyer, 2003) and the Psychological Mediation Framework (Hatzenbuehler, 2009). Both theories have been used to explain increased suicidal behaviors and alcohol-related

problems in LGB populations (Hatzenbuehler, 2009; Meyer, 2003) and, therefore, may help explain high rates of suicidal behaviors and potential alcohol-related problems among trans people. The Minority Stress Model postulates that sexual minorities experience elevated stress as a result of minority discrimination, which contributes to negative mental health outcomes. According to the model, there are three general processes by which sexual minorities are subjected to minority stress: 1) exposure to objective, external events that create overt stress, such as discrimination; 2) chronic vigilance associated with the anticipation and expectation that external stressful events will occur; and 3) internalized negative attitudes from society. The Psychological Mediation Framework builds on the Minority Stress Model and includes another pathway through general psychological processes. Hendricks and Testa (2012) propose an adaptation of the Minority Stress Model to incorporate the unique experiences of trans people. However, few studies empirically investigate minority stress processes among trans individuals (Perez-Brumer et al., 2015) and no study has compared the Minority Stress Model to the Psychological Mediation Framework. Applying the Minority Stress Model and the Psychological Mediation Framework, Study 2 used quantitative model testing to investigate associations between minority stress, alcohol use, suicidal behavior, and NSSI in a cross-sectional online survey of trans adults.

Study 1

A Descriptive Analysis of Alcohol Behaviors across Gender Identity Subgroups within a Sample
of Transgender Adults

Abstract

Transgender (trans) adults are identified as an at-risk group for problem alcohol use. However, descriptive empirical data examining alcohol behaviors among trans adults is limited. The present study investigates alcohol behaviors – including quantity, frequency, alcohol-related problems, and drinking to cope motives – across sex assigned at birth, gender expression and gender identity subgroups within a sample of trans adults. A total of 317 trans participants were recruited nationally to complete a cross-sectional battery of online measures. Overall, our sample had high rates of alcohol use and alcohol-related problems, relative to the general population. Furthermore, significant and meaningful differences in drinking frequency, alcohol-related problems and drinking motives were found according to gender expression, but not sex assigned at birth or gender identity. Future work should examine alcohol behaviors among trans individuals, including investigation of predictors and causal pathways, to inform prevention and intervention work aimed at reducing trans people’s risk for alcohol-related problems.

Introduction

Transgender (trans) adults are identified as an at-risk group for problem alcohol use, including abuse and dependence (e.g., Greenwood & Gruskin, 2007; Hughes & Eliason, 2002). Although empirical data examining alcohol behaviors among trans adults is limited, it has been hypothesized that trans individuals drink to cope with prejudice and discrimination they experience as a marginalized group (Hughes & Eliason, 2002; Meyer, 2000; Hendricks & Testa, 2012). However, basic descriptive information about alcohol related behavior and drinking motives within this population—beyond quantity and/or frequency—has been scant (Flentje, Bacca, & Cochran, 2015). Persistent methodological problems have limited the availability of descriptive information about alcohol use among trans adults. For instance, existing research lumps trans participants together with lesbian, gay, and bisexual participants to form the common acronym LGBT, or lumps all trans participants into one transgender category (Smalley, Warren, & Barefoot, 2016). Trans adults are a diverse group of individuals who endorse a variety of gender identities (Bockting, 2013; Grant et al., 2011), which necessitates research investigations that distinguish gender identity and sexual orientation as orthogonal constructs. The present study investigates alcohol behaviors – including quantity, frequency, alcohol-related problems, and drinking to cope motives – across gender identity subgroups within a national sample of trans adults.

Definitional Issues

Transgender is an umbrella term that has been used to refer to a diverse group of people whose gender identity and/or gender role do not conform to what is typically associated with their sex assigned at birth (APA, 2015). In contrast, the term “cisgender” has emerged to refer to people whose gender identity and gender expression (the presentation of an individual, including

physical appearance, clothing choice, and behaviors that express aspects of gender role; APA, 2015) align with sex assigned at birth; a person who is not trans (APA, 2015; Tate, Ledbetter, & Youssef, 2012). When a trans individual is perceived as cisgender based on their gender expression, it is referred to as “passing.” Gender nonconforming is an adjective used to describe people whose gender expression or gender identity differs from gender norms associated with their assigned birth sex (APA, 2015). Some trans individuals strongly identify with members of the opposite sex (male-to-female [MTF] or transwoman; female-to-male [FTM] or transman) and others identify beyond the gender binary (e.g., genderqueer). Gender nonconforming is also an identity label adopted by some trans individuals who do not identify within the gender binary. Some trans individuals desire to physically transition using procedures such as hormone replacement therapy or gender confirmation surgery, while other trans individuals do not (APA, 2011; Bockting, 2013). Individuals who physically transition are often referred to as “transsexual” in the literature (APA, 2015).

Trans individuals are also diverse in terms of sexual orientation. While sexual orientation and gender identity are related, they are distinct constructs (Diamond, 2002). Sexual orientation refers to a person’s sexual and emotional attraction to another person and the behavior and/or social affiliation that may result from this attraction. Gender identity refers to a person’s deeply felt, inherent sense of being a man, a woman, or an alternative gender that may or may not correspond to a person’s sex assigned at birth (APA, 2015). Trans individuals sometimes identify as sexual minorities (e.g., lesbian, gay, bisexual, queer) and sometimes identify as heterosexual. Research that lumps these individuals into one category disregards obvious biological, psychosocial, and cultural differences among these subgroups that may contribute to health-risk behaviors such as alcohol use (Smalley et al., 2016). Although there is some evidence that

health-risk behaviors differ between gender and sexual minority subgroups (Grant et al., 2011; Smalley et al., 2016), very minimal research attention has been given to investigating differences in alcohol use among trans subgroups. Furthermore, there is currently no systematic method established for dividing trans individuals into subgroups.

Trans Alcohol Use

Research combining LGBT populations has consistently found LGBT individuals consume alcohol in greater quantities and more frequently compared to the general population, and are more likely to abuse alcohol (Cochran & Cauce, 2006; Drabble, Midanik, & Trocki, 2005; Greenwood & Gruskin, 2007; Hughes & Eliason, 2002; Kann et al., 2011). A limited number of studies specifically focus on trans alcohol use, independent of sexual orientation. Data from the Transgender Needs Assessment Survey in Washington DC indicate that 48% of trans participants report a history of alcohol and/or other substance abuse (Xavier, Bobbin, Singer & Budd, 2005). In a study with 75,192 transgender and nontransgender-identified students age 18-29 years, nontransgender-identified individuals were more likely to report having engaged in any heavy episodic drinking (HED) versus no HED in the past 2 weeks, compared to transgender-identified individuals. However, transgender-identified individuals reported HED on more days than nontransgender-identified individuals (Coulter et al., 2015). Such findings suggest that more research is needed to further document alcohol use disparities between transgender and nontransgender-identified individuals and to potentially specify the unique risks associated with particular alcohol use parameters, such as frequency, quantity and HED.

Only a handful of studies have investigated alcohol use among trans subgroups such as trans women (MTF), transmen (FTM), and nonbinary individuals. Research with MTF trans individuals reports rates of alcohol abuse ranging from 24-37% (Wolf & Dew, 2012) and rates of

heavy alcohol use (more than 4 drinks/day or 14 drinks/wk for natal males and more than 3 drinks/day and 7 drinks/wk for natal females) during the prior 6 months to be as high as 60.4% (Nuttbrock, 2012). Smalley and colleagues (2016) investigated four different alcohol behaviors across gender subgroups among a sample of 3,279 sexual and gender minorities. Participants rated how frequently they engaged in each of the behaviors on a 5-point frequency scale (*never, rarely, sometimes, most of the time, always or almost always*). The authors calculated percentages for the combined *most of the time* and *always or almost always* categories. Findings indicated that cisgender men reported the most frequent overall alcohol use (21.0%), binge drinking (10.9%), the highest likelihood of drinking without the desire to (6.4%), and the highest likelihood of driving under the influence (3.8%). Although not statistically different, among transgender participants, transgender males were slightly more likely (15.2%) to drink alcohol frequently than transgender females (14.3%) and genderqueer or nonbinary individuals (13.3%). Transgender males (1.8%) were also more likely to drive while intoxicated than transgender females (1.4%) and genderqueer or nonbinary participants (0.0%). Genderqueer or nonbinary participants were slightly more likely (8.0%) to binge drink than transgender males (7.2%) and transgender females (7.0%). Finally, transgender females were slightly more likely (4.3%) to drink without the desire to than transgender males (2.7%) and genderqueer or nonbinary individuals (2.0%). From this research, there are general trends indicating that traditional male gender role norms may be more related to alcohol-related risk taking than sex assigned at birth (e.g., cis-males and trans males). Furthermore, genderqueer or non-binary individuals may be at a lower risk for alcohol-related risk taking. However, Smalley and colleagues (2016) only included three trans subgroups (MTF, FTM, and nonbinary), did not investigate differences

across sex assigned at birth, and did not investigate the influence of gender expression or the ability to pass as cisgender on alcohol use behaviors.

Gender expression has been found to affect alcohol use. In a sample of sexual minority women, women who identified as butch (more masculine expression) used alcohol more frequently and consumed larger quantities of alcohol than women who identified as femme (more feminine expression), suggesting that women who defy typical gender norms may have higher rates of alcohol use (Rosario, Schrimshaw, & Hunter, 2008). Conceivably, individuals who are less likely to pass as cisgender are more likely to face discrimination than individuals who are more likely to pass, which may explain increased rates of alcohol use.

Drinking to Cope

The concept of drinking motives is rooted in the assumption that people drink alcohol to attain certain valued outcomes, and that drinking behavior serves different functions (Cooper, 1994). Therefore, drinking motives are what drive people to consume alcohol. There are four types of drinking motives, including enhancement (to make me feel better), social (to make social gatherings more fun), conformity (to fit in), and coping (to ease distress; Cooper, 1994). Understanding drinking motives helps elucidate risk factors for alcohol consumption (Maclean & Lecci, 2000). Research on drinking motives has found coping motives to be related to alcohol use, alcohol-related problems, and non-alcohol related problems, such as involvement in violent activities (Kundsche, Knibbe, Gmel, & Engels, 2006). Reed and colleagues (2010) hypothesized that LGBT individuals are at increased risk for heavy alcohol use as a result of increased motivation to drink to cope with harassment, prejudice, and discrimination experienced as part of a marginalized group. However, few studies have investigated drinking to cope motives among

LGBT individuals (Ebersole, Noble, & Madson, 2012) and, to our knowledge, no study to date has directly investigated drinking to cope motives among an exclusively trans sample.

The National Transgender Discrimination Report (NTDR), an extensive survey of trans discrimination with over 6,450 transgender and gender nonconforming respondents, found that over a quarter of respondents endorsed using drugs or alcohol to cope with mistreatment they faced due to discrimination (e.g., violence and harassment at school, losing a job due to bias) (Grant et al., 2011). Furthermore, analyses based on the NTDR found that the more frequently trans respondents were perceived as transgender and gender nonconforming, the more types of discriminatory events they faced and, in turn, the more likely they were to engage in drug/alcohol abuse (Miller & Grollman, 2015). Therefore, some trans identity subgroups may be at greater risk of discrimination based on their gender expression and, in turn, may be at increased risk of drinking to cope. However, this survey did not inquire about alcohol use independent of drug use. The survey also used a single, dichotomous item to assess engaging in drug/alcohol use, thus limiting conclusions on frequency and quantity of alcohol use. Investigating drinking to cope motives among trans identity subgroups may help us understand potential functions of alcohol consumption and its associations with alcohol-related problems.

Present Study

The present study examined quantity and frequency of alcohol use, alcohol-related problems, and coping motives in a sample of trans adults across: (1) sex assigned at birth, (2) gender identity, and (3) gender expression/passing. Given the descriptive nature of the study, no a priori hypotheses were made. The central aim of the study was to expand descriptive information about alcohol behaviors among trans adults.

Methods

Procedures

Participants were recruited via online advertisements placed on social media (i.e. Facebook, Instagram, Tumblr, Twitter); Gender Odyssey, an international transgender conference; and by contacting transgender-related organizations throughout the U.S. Interested participants could follow a link to the study website for more information or a link that would take them directly to a brief online screening. Eligible participants included individuals who: 1) lived in the U.S., 2) could speak and read English fluently, 3) were between the ages of 18-44, and 4) identified as transgender, defined as having a gender identity today that is different from the gender they were assigned at birth. A total of 396 individuals completed the screening survey and followed a link to an online information statement for informed consent. A total of 325 individuals agreed to participate in the 45-minute online survey, and 247 completed the survey in full.

All interested participants viewed an informational statement prior to participation. The statement explained informed consent including their rights as a participant in research, study procedures, potential risks and benefits and compensation. Participants had the chance to enter a raffle for a \$100 Amazon gift card for study completion, for which they had a 1/25 or better chance of winning. Participants also had the option to refer friends to the survey for a chance to win an additional \$100 Amazon gift card. Participants were provided the study phone number and email for more information.

Measures

Demographics. Age, natal sex (male, female, and intersex), gender identity, gender expression, transition status, race/ethnicity, sexual orientation, and SES were assessed. For race/ethnicity and sexual orientation, participants were asked to select all response options that applied.

Gender identity and gender expression/passing. Gender Identity was first assessed with an open-ended question that allowed participants to write-in their primary gender identity. Gender identity was also assessed using 14 gender identity response options drawn from the NTDR (Grant et al., 2011). Participants indicated on a 3-point scale how much they identified with each of the 14 gender identity terms (1 = *Not at all*, 2 = *Somewhat*, 3 = *Strongly*). Gender expression/passing was assessed with a single item that asked participants to respond to the statement, “People can tell I’m trans even if I don’t tell them,” on a 5-point scale (1 = *Always*, 2 = *Most of the time*, 3 = *Sometimes*, 4 = *Occasionally*, 5 = *Never*). A high score on this scale indicates that the person is less likely to be perceived as transgender based on their gender expression and thus more likely to pass.

Alcohol Use. The Daily Drinking Questionnaire (DDQ; Collins, Parks, & Marlatt, 1985; Kivlahan, Marlatt, Fromme, Coppel, & Williams, 1990) assesses average alcohol consumption patterns over a typical week during the past month. Drink sizes are standardized for beer, liquor, and wine. The DDQ has demonstrated reliability, with Cronbach’s alphas ranging between .66 and .75 (Allen & Wilson, 2003). Total sum of typical number of drinks per week, typical weekly drinking frequency, typical drinking quantity per day, typical drinking quantity per drinking day, and the largest number of drinks consumed on one occasion in the past month were computed. The National Institute on Alcohol Abuse and Alcoholism (NIAAA) recommended questions on alcohol consumption (NIAAA, 2003) were used to assess the frequency of heavy episodic drinking (HED; 4 or more drinks of alcohol on one occasion) in the past year (0 = *Never* to 9 = *Every day*).

Alcohol-related problems. The Alcohol Use Disorder Identification Test (AUDIT; Saunders, Aasland, Babor, De La Fuente, & Grant, 1993) was used to identify potential

hazardous drinking (pattern of drinking that increases risk of harmful consequences), harmful use (alcohol consumption resulting in health consequences), and alcohol dependence. For each of 10 AUDIT items, options range from 0–4 in scoring (e.g., 0 = *Never* to 4 = *4 or more times a week*), with higher scores indicating more problematic alcohol use. A score of eight or more indicates a strong likelihood of hazardous or harmful drinking. The AUDIT has demonstrated reliability and validity (e.g., Maisto, Conigliaro, McNeil, Kraemer, & Kelley, 2000; McAleavey et al., 2012).

The Short Inventory of Problems (SIP; Blanchard, Morgenstern, Labouvie, Morgan, & Bux, 1993) is a 15-item questionnaire that asks participants to indicate how often each of the listed consequences of alcohol use has happened to them during the past three months (0 = *Never* to 3 = *Daily or almost daily*). Item responses are summed to produce a total score made up of 5 subscales: impulse control, social responsibility, and physical, interpersonal, and intrapersonal consequences of drinking. The SIP demonstrates good internal consistency ($\alpha = .95$; Kenna, Longabaugh, Gogieneni, et al., 2005) and test-retest reliability ($r = .89$; Miller, Tonigan, & Longabaugh, 1995).

Drinking motives. The five-item Drinking Motives coping subscale (Cooper, 1994) was used to assess drinking to cope. Participants indicated how often they drank alcohol for the stated reason (e.g., “to forget your worries”; 1 = *Never* to 5 = *Always*). The Drinking Motives questionnaire has demonstrated good internal consistency (α 's = .77-.85).

Data Analysis

We adopted a rule-based approach to operationalize four distinct gender identity subgroups: (1) All individuals who somewhat or strongly identified as MTF and not at all identified as FTM, gender nonconforming, or genderqueer were classified as MTF ($n = 31$). (2)

All individuals who somewhat or strongly identified as FTM and not at all identified as MTF, gender nonconforming, or genderqueer were classified as FTM ($n = 71$). (3) Individuals who identified somewhat or strongly as gender nonconforming or genderqueer and not at all as MTF or FTM were classified in a gender nonconforming/genderqueer category ($n = 29$). (4) All individuals who did not fit into these 3 groups, were placed in an “other” category ($n = 172$). This rule-based approach was based on a precedent in the literature to divide trans samples into MTF, FTM, and non-binary / genderqueer / “other” subgroups (Grant et al., 2011; House, Van Horn, Coppeans, & Stepleman, 2011; Smalley et al., 2016)¹.

Frequency distributions were calculated to examine the distribution of demographic factors. Cross-tabs were also conducted to classify the intersection of sexual orientation and the four gender identity subgroups for the sample. Means with standard deviations were calculated for alcohol characteristics of the full sample and alcohol characteristics across sex assigned at birth, gender expression, and gender identity. Because the sample size for intersex individuals was small, we did not have power to conduct inferential statistics between all 3 groups.

Therefore, we conducted an independent samples t-test to examine differences between males and females across alcohol variables. ANOVAs were performed across gender expression and gender identity subgroups. In order to identify specific between-groups differences, statistically significant ANOVAs were followed by pairwise post hoc Tukey HSD tests.

Results

Participant Demographics

A total of 317 participants were included in data analyses. Participants represented all regions of the U.S. (Northeast, South, Midwest, West) and over 150 unique zip codes. Table 1.1 presents demographic characteristics of the sample. The average age of the sample was 28.11

(6.94), and the majority of participants were Caucasian (72.5%), although a significant portion identified as Multiracial or Mixed Race (15.9%). Approximately 45% of participants reported earning less than \$21,000 per year. Almost all of the participants (98.2%) endorsed multiple of the 14 gender identities, and there were over 40 unique gender identities written in, including “demiguy,” “fluid,” “neutrois,” and “trigender.” Participants selected a variety of sexual orientations, and 47.3% of the sample selected more than one sexual orientation. Table 1.2 presents the intersection of sexual orientation and gender identity, revealing that the largest proportion of FTM individuals identified as heterosexual (36.5%) and the largest proportion of MTF (28.6%), gender nonconforming/genderqueer (55.2%), and “other” (57.6%) individuals identified using multiple sexual orientations.

Table 1.3 displays alcohol characteristics of the full trans sample. Seventy-five percent of participants reported having at least one drink in the past month. The mean AUDIT score for the total sample was 4.40.

Alcohol Characteristics by Sex Assigned at Birth and Gender Identity

Differences in alcohol characteristics between sex assigned at birth are presented in Table 1.4. There were no significant differences between males and females on any of the alcohol variables. However, intersex individuals displayed higher mean scores on four of nine alcohol variables, compared to males and females. Differences in alcohol characteristics between all 14 gender identities are presented in Table 1.5. While inferential statistics could not be conducted due to the ability for participants to select multiple gender identities, mean scores indicate no patterns of increased alcohol risk for any one gender identity group. Differences in alcohol characteristics between the 4 mutually-exclusive gender identity subgroups are presented in Table 1.6. There were no significant differences across gender identity subgroups for any of the

alcohol variables. However, a pattern emerged in which MTF individuals displayed higher mean scores on five of the nine alcohol variables, compared to the FTM, gender nonconforming/genderqueer, and other groups.

Alcohol Characteristics by Gender Expression/Passing

Differences in alcohol characteristics based on gender expression/passing are presented in Table 1.7. Of the nine alcohol variables investigated, there were significant differences across gender expression/passing for four of the variables: drinking frequency, the SIP, the AUDIT, and the Coping Motives scale. On six out of the nine total alcohol variables, individuals who indicated that people “occasionally” can tell that they are trans had the highest mean scores.

Discussion

Trans individuals are often described as an at-risk group for problematic alcohol use (e.g., Greenwood & Gruskin, 2007; Hughes & Eliason, 2002), but relatively little research has investigated alcohol related behaviors, especially alcohol-related problems and drinking motives, among trans individuals independent of sexual minorities. Even fewer studies have looked at alcohol use across gender identity and/or gender expression. As such, the goals of the current study were to examine quantity and frequency of alcohol use, alcohol-related problems, and coping motives in a sample of trans adults across: (1) sex assigned at birth, (2) gender identity, and (3) gender expression/passing.

Alcohol Characteristics of the Full Sample

According to the Centers of Disease Control (CDC, 2013), approximately half of the U.S. adult population reported drinking alcohol in the past 30 days, 6% reported heavy drinking (15 or more drinks/week for men and 8 or more per week for women), and 17% reported Heavy Episodic Drinking (HED; more than 4 drinks per occasion for females and more than 5 drinks

per occasion for males). Alcohol characteristics for our full sample indicate that 75% of the sample reported drinking alcohol in the past 30 days and 23% reported drinking 8 or more drinks per week. Furthermore, 57.6% participants reported HED (more than 4 drinks on one occasion) in the past year and 41.4% reported HED in the past month. Therefore, it appears that our trans sample is more likely to drink alcohol and engage in heavy drinking and HED than the general population. These results are consistent with studies that suggests trans individuals have a higher quantity and frequency of alcohol use and HED than the general population (Coulter et al., 2015; Nuttbrock, 2012).

There is a dearth of current research that investigates alcohol-related problems among trans individuals. A needs assessment study of trans people of color found that almost half the trans participants reported a history of alcohol and/or other substance abuse (Xavier et al., 2005) and a review of alcohol and substance use among MTF individuals reported rates of alcohol abuse ranging from 24-37% (Wolf & Dew, 2012). In our sample, the average score on the AUDIT (4.40), which assesses risk for alcohol abuse and dependency, fell below the cutoff of 8 for risk of harmful drinking (Babor, Higgins-Biddle, Saunders, & Monteiro, 2001).

Approximately 17% of our sample met the AUDIT cutoff, indicating risk of hazardous or harmful alcohol use, including alcohol abuse. While these results are somewhat consistent with the limited research showing that trans individuals may be at increased risk of alcohol abuse, we may have found lower rates of risk because we examined alcohol abuse independent of other substance abuse, we had a primarily white sample, and we recruited for diverse gender identities. However, 42.9% of our sample endorsed experiencing a negative consequence of drinking according to the SIP. More research is needed to examine potential alcohol-related problems other than alcohol abuse among trans individuals.

Finally, over 72% of our full sample reported drinking to cope at least some of the time. The most endorsed drinking to cope item was “to forget about your problems” (54.2%). This is an important finding that implies a potential pathway explaining high rates of alcohol use among trans individuals. It may be that trans individuals experience discrimination as a result of their minority status, which motivates them to drink alcohol to cope and in turn puts them at risk of alcohol-related problems. While this hypothesis is speculative, it is supported by results from the NTDR, which show that over ¼ of respondents endorsed using alcohol or other substance abuse to cope specifically with experiences of discrimination (Grant et al., 2011). Future empirical work should directly investigate associations between discrimination, coping motives, and alcohol use behaviors.

Gender Identity and Sexual Orientation

In addition to assessing gender using 14 different, non-mutually exclusive gender identity terms, we divided our sample into distinct gender identity subgroups for analytical purposes. Based on previous literature, we aimed to divide our sample into three subgroups: FTM, MTF, and gender nonconforming/genderqueer. However, in our attempt to categorize our sample by gender identity, there were 172 participants who did not fit the MTF, FTM, or gender nonconforming/genderqueer identity category. Therefore, we created a fourth group that we called “other.” This is an important finding, because it suggests that research that excludes individuals who do not identify as MTF, FTM or gender nonconforming/genderqueer may be missing a significant portion of individuals whose gender identity is incongruent with their sex assigned at birth. Furthermore, it implies that research that only includes MTF, FTM and gender nonconforming/genderqueer response options may have an unintentional negative impact on participants who do not feel their gender identity is represented. In fact, qualitative research from

the present study found that multiple participants indicated appreciation for the multiple gender identity response options. For example, one participant wrote, “Great job on the self-identification part,” and another wrote, “It actually included two-spirit identities. It means so much to me that you thought about us.” Finally, the decision to divide samples into these three subgroups is somewhat arbitrary, and future work should develop a more inclusive, sensitive, and systematic method of dividing their trans samples into subgroups for analytic purposes.

We examined sexual orientation by gender identity, using these four gender identity subgroups. Participants endorsed a variety of sexual orientations across the gender identity subgroups, many participants endorsed multiple sexual orientations, and approximately 30 participants wrote in additional sexual orientations (e.g., demisexual and hetero-flexible). These results have a number of important implications. First, they reassert that sexual orientation and gender identity are distinct constructs, which need to be examined as orthogonal. Second, research that forces trans participants to select one sexual orientation and does not provide an open-ended response option may not be capturing the complexity and/or fluidity of sexual orientation within the trans population. Third, risk of alcohol use and other health behaviors may increase among certain combinations of gender identity and sexual orientation subgroups. For example, Smalley and colleagues (2016) found both nonbinary and gay individuals to be at increased risk of HED compared to MTF and FTM individuals and other sexual minority subgroups, respectively. Future research should investigate whether individuals who identify as both nonbinary and gay are at increased risk of HED than individuals who identify as nonbinary and heterosexual, for example. Finally, in order to conduct culturally competent research that is sensitive and inclusive, it may be important to allow participants to select multiple sexual orientations.

Alcohol Characteristics by Sex Assigned at Birth and Gender Identity

To our knowledge, no study to date has examined alcohol characteristics across sex assigned at birth among trans individuals. In our sample, we found no significant differences for any of the alcohol outcomes between individuals who reported being assigned male and female at birth. However, only 3 individuals endorsed an intersex assignment at birth, which did not provide enough power to detect differences between the three groups. There is some evidence in the literature that individuals who identify as cisgender males are at increased risk of alcohol-related problems (Smalley et al., 2016). However, our findings indicate that being assigned male at birth does not put someone at risk for alcohol-related problems among trans individuals. We found a pattern of individuals who were assigned intersex having higher mean scores on alcohol outcomes, however, future work with a larger intersex sample should attempt to replicate our findings.

We examined alcohol characteristics across gender identity using two different methods. First, we reported means for a subset of the alcohol variables across 14 different gender identities. We could not perform inferential statistics because these categories were not mutually exclusive. Overall, we did not see any identifiable patterns of alcohol risk across the different gender identities. However, it is interesting to note that although only 3 individuals reported a sex assignment of intersex at birth, 25 individuals endorsed an intersex gender identity, further indicating that gender identity is not always in alignment with sex assigned at birth. Of the five alcohol characteristics examined, individuals who endorsed an intersex identity had the highest mean AUDIT and mean Coping Motives score.

We found no significant differences for any of the alcohol outcomes between the four gender identity subgroups. However, we noticed a pattern of results such that individuals who

identified as MTF had the highest mean scores on five of the nine alcohol variables. This is inconsistent with findings from Smalley and colleagues (2016), that found that among transgender participants, FTM individuals were at highest risk for alcohol-related health risk behaviors. We also did not replicate findings from Smalley et al. (2016) that gender nonconforming/genderqueer identified trans individuals had the lowest risk for alcohol-related health behaviors. In our sample, the lowest risk group appeared to be the “other” category, which did not have the highest mean for any of the alcohol outcomes. It may be that individuals who were categorized as “other” in our study would have been categorized as gender nonconforming/genderqueer in Smalley and colleague’s (2016) study. Again, there is a need for a systematic method of identifying trans subgroups that enables clearer comparison across studies.

Alcohol Characteristics by Gender Expression/Passing

Although we found no significant differences in alcohol characteristics across sex assigned at birth or gender identity, we did find significant differences according to gender expression/passing on the SIP, the AUDIT, the Coping Motives Scale, and for drinking frequency. Overall, individuals who reported that other people can “occasionally” tell they are trans demonstrated the highest risk for alcohol quantity and frequency and alcohol-related problems compared to individuals who reported that other people can “never,” “sometimes,” or “always” tell they are trans. However, individuals who reported that people can “always/most of the time” demonstrated the highest risk for using alcohol to cope, but only slightly higher than individuals who reported that other people can “occasionally” tell they are trans. Results from the present study cannot explain why individuals who reported that other people can “occasionally” tell they are trans were at the highest alcohol risk.

Overall, gender expression/passing appears to have a more substantial impact on alcohol behaviors than gender identity, per se. If trans individuals who experience discrimination are at increased risk of alcohol-related problems as previously hypothesized (Hughees & Eliason, 2002; Meyer, 2000; Hendricks & Testa, 2012), it may be that gender expression is more predictive of discrimination than gender identity. This intuitively makes sense because individuals who discriminate against others are likely to do so on the basis of outward appearance. According to the NTDR, participants who reported that other people could tell they were trans had higher rates of discrimination compared to individuals who reported that other people could never tell that they were trans (Grant et al., 2011). However, this hypothesis does not help explain why individuals who are “occasionally” perceived as trans are at higher risk for alcohol misuse than individuals who are “always” perceived as trans. It is possible that individuals who are more often perceived as trans do not desire to pass as cisgender. In turn, they may experience less stress related to concealing their gender identity and/or be more likely to have a social support network within the trans community, which may serve as protective factors. Future work should examine other variables that may explain the associations between gender expression and alcohol behaviors, such as minority stress.

Limitations

There are several limitations to the current study that should be considered when interpreting the findings. First, although our study was nationally diverse, we recruited a convenience sample of trans adults and cannot determine its representation of the trans community overall. Second, due to the online nature of our survey, our study included a biased sample of internet users. As a result, we are less likely to reach rural, low SES, and homeless individuals who may be more motivated to drink, consume more alcohol and experience more

alcohol-related problems. Our sample overall was highly educated and potentially underrepresented by racial/ethnic minority status, although the sample was diverse in terms of income.

A strength of our study was that we did not force trans participants to select a single gender identity response option, which provided richer data about the complexity of gender identity. However, because our gender identity groups were not mutually exclusive, our analytical approach was limited to descriptive statistics. Future work would benefit from a mixed-methods approach that uses participants' open-ended responses about gender identity to inform the development of a systematic approach for categorizing trans subgroups for analytical purposes. It is possible that alcohol differences would emerge across subgroups (e.g., within the "other" category) if a more nuanced approach was undertaken.

Conclusion

In summary, overall quantity and frequency of alcohol use and alcohol-related problems were high among a national sample of trans adults, compared to the general population. In addition, our sample of trans adults appeared to be at risk of drinking to cope, which may help explain high rates of alcohol use and alcohol-related problems. Significant and meaningful differences according to gender expression, but not gender identity, also emerged. Future research should investigate the reasons underlying these differences, which may inform prevention and intervention work. For example, it may be important to assess gender expression and passing in addition to gender identity when doing research and clinical work with trans alcohol users. Furthermore, there should be increased efforts to balance inclusivity and sensitivity in research methodology (e.g., having open-ended gender identity response options) with data analytical needs. Finally, there is a strong need for further work on alcohol behaviors

specifically among trans individuals, including research that investigates predictors and causal pathways.

Footnotes

¹Alternately, we attempted cluster analysis approach to delineate distinct gender identity subgroups, but data are not amenable to cluster analysis because there was too much variability in gender identity label endorsement. However, we noted that the clusters that did emerge mapped on to the rule-based approach that we took here, identifying 3 primary gender identity clusters (MTF, FTM, and non-binary) and multiple individuals who could not be clustered together.

Brief Transition from Study 1 to Study 2

Findings from Study 1 emphasize the importance of investigating alcohol related behaviors among trans adults. Not only is it important to understand what predicts high rates of alcohol use and alcohol-related problems among trans adults, it is also important to understand how alcohol is related to other health related problems in this population. The most striking health related problems reported among trans individuals are the extremely high rates of suicidality and non-suicidal self-injury (NSSI; Grant et al., 2011; Zucker et al., 2016). It has been hypothesized by existing theoretical models that minority stress may explain health related problems among trans individuals (Hatzenbuehler, 2009; Hendricks & Testa, 2012; Meyer 2000). Furthermore, in the general population, both theoretical and empirical work has found alcohol to be a significant risk factor for suicidality (Lamis & Malone, 2012). Based on findings from Study 1 and existing theories that explain suicidality and NSSI, in Study 2 we investigated the associations among minority stress, alcohol-related problems, suicidality and NSSI among a sample of trans adults.

Study 2

Minority Stress: Understanding Suicidality and Non-Suicidal Self-Injury in Transgender Adults

Abstract

Transgender people are at elevated risk for non-suicidal self-injury (NSSI) and suicidality (suicide ideation and suicide attempts), compared to the general population. Transgender (trans) refers to a diverse group of people who experience incongruence between their gender identity and the gender role assigned at birth (APA, 2015). Trans people who misuse alcohol may be at increased risk of suicidality, compared to trans people who do not misuse alcohol. The present study is guided by two theories, the Minority Stress Model and the Psychological Mediation Framework, which postulate that marginalized sexual minority groups experience elevated stress as a result of anti-minority prejudice, contributing to negative mental health outcomes (Hatzenbeuhler, 2009; Meyer, 2003). The current study utilized these theories to investigate whether internalized transnegativity – operationalized here as transphobia - acts as a mediator (as proposed by the Psychological Mediation Framework) or moderator (as proposed by the Minority Stress Model) in the relationship between distal trans stress and alcohol use, suicidality, and NSSI. A national sample of trans adults ($N=237$) were recruited to complete a cross-sectional battery of online measures. Structural Equation Modeling was used to investigate the two theoretical models. Results suggest that internalized transnegativity acts as both a mediator and a moderator in the relationship between distal trans stress and suicidality, but not NSSI or alcohol-related problems. Furthermore, alcohol-related problems predicted NSSI. Results have important conceptual and translational implications, influencing intervention efforts.

Introduction

Transgender and gender nonconforming (trans) individuals are especially vulnerable to both suicidality – suicide ideation and suicide attempts - and non-suicidal self-injury (NSSI; Grant et al., 2010; Marshall, Claes, Bouman, Witcomb & Arcelus, 2016; Walls, Laser, Nickels, & Wisneski, 2010). Over 40% of respondents in a national sample of 6,500 trans adults reported having attempted suicide at some point in their life (Grant et al., 2011) - eight times the rate found in the general U.S. population (Nock et al., 2008). Despite disproportionate rates of suicide and NSSI found among trans individuals compared to the general population, there is a dearth of empirical research that attempts to understand risk factors for trans suicide and NSSI.

Alcohol is a significant known risk factor for suicide and NSSI in the general population (Conner, Bagge, Goldston, & Ilgen, 2014; Lamis & Malone, 2012). And, although the research is limited, trans individuals are identified as an at-risk group for problem alcohol-use, including abuse and dependence (Hughes & Eliason, 2002). However, the relationship between alcohol use, suicidality, and NSSI has never been investigated among a trans sample. Minority stress theories hypothesize that trans individuals experience stress as a result of being a marginalized group and, in turn, are at risk for negative mental health outcomes including suicidality, NSSI, and alcohol-related problems (Meyer, 2003; Hendricks & Testa, 2012). However, there is currently no empirical work, to date, that directly investigates this hypothesis. The present study uses minority stress theories to investigate the relationships among minority stress, alcohol use, suicidality and NSSI in a national sample of trans adults.

Transgender Definitions

Most researchers study trans people as part of the lesbian, gay, and bisexual community, forming the common acronym LGBT. While sexual orientation and gender identity are

correlated, they are distinct constructs (Diamond, 2002). Sexual orientation refers to the sex to whom one is physically and/or emotionally attracted; whereas, gender identity refers to one's sense of oneself as male, female or trans (APA, 2011). Transgender is an umbrella term used to refer to a diverse group of people who experience incongruence between their gender identity and the gender role assigned by society according to natal sex (Bockting, 2013). In contrast, the term "cisgender" has emerged to refer to people whose gender identity and gender expression (the presentation of an individual, including physical appearance, clothing choice, and behaviors that express aspects of gender role; APA, 2015) align with sex assigned at birth; a person who is not trans (APA, 2015; Tate, Ledbetter, & Youssef, 2012). When an individual is perceived as cisgender based on their gender expression, it is referred to as "passing." Some trans individuals strongly identify with members of the opposite sex (male-to-female [MTF] or transwoman, female-to-male [FTM] or transman) and others identify beyond the gender binary (e.g., genderqueer) (APA, 2011; Bockting, 2013). Gender nonconforming is an adjective used to describe people whose gender expression or gender identity differs from gender norms associated with their assigned birth sex (APA, 2015). Gender nonconforming is also an identity label adopted by some trans individuals who do not identify within the gender binary. The National Transgender Discrimination Report (NTDR), an extensive survey of trans discrimination with over 6,500 trans respondents, indicated that individuals who identify as either "transgender" or "gender nonconforming" share common experiences of discrimination and health problems (Grant et al., 2011). Historically, researchers who recruited trans individuals independent of sexual orientation, excluded trans participants who do not identify as either MTF or FTM.

Suicidality and NSSI

Compared to sexual minority (LGB) and heterosexual individuals, trans individuals have higher rates of suicidality (Marshall et al., 2016), including suicide ideation (thoughts about suicide), suicide attempts (Bockting, 2013; Grant et al., 2011; Dhejne et al. 2011), and suicide deaths (Pfafflin & Junge, 1998). Fitzpatrick and colleagues (2005) found that cross-gender role orientation (i.e., personality traits commonly associated with the opposite sex) significantly predicted suicidal symptoms and that sexual orientation added little variance after accounting for gender role, suggesting that trans suicidality should be investigated independent of sexual orientation. Between 16-41% of trans people report at least one past suicide attempt compared to 5% of the general U.S. population (Grant et al., 2011; Nock et al., 2008; Perez-Brumer et al., 2015; Testa et al., 2012). Suicidal ideation is an important precursor of suicide attempts (Nock et al., 2008). Between 38%-83% of trans people report having experienced suicidal ideation (Testa et al., 2012; Wolf & Dew, 2012). These ranges are likely large because of the limited amount of research, the lack of standardized operational definitions of transgender, and the inconsistent time frames for assessing suicidal behavior. Research suggests that differences in gender identity and gender expression among trans individuals may impact risk for suicidality (Grant et al., 2012; Maguen & Shipherd, 2010; Testa et al., 2012). For example, Testa and colleagues (2012) found that suicide attempt rates are higher among MTF trans (30.4%) than FTM trans individuals (26.3%). Conversely, Maguen and Shipherd (2010) found higher rates of reported suicide attempts among FTM trans than MTF trans individuals, indicating that further research is needed to understand how gender identity and gender expression impacts suicide risk. Despite the disproportionate rate of suicidality among trans people, few studies have attempted to explain the disparity.

Approximately 6% of adults in the general population report a history of NSSI (Briere & Gil, 1998; Klonsky, 1981-1986). Few studies have investigated NSSI among trans adults. Walls et al. (2010) found that 47.2% of the combined MTF and FTM trans sample reported intentional cutting behavior in the past year. House et al. (2011) reported lifetime NSSI prevalence rates among their overall LGBT sample to be 21%, with higher prevalence rates among trans participants (30%). Among trans participants, 33.8% of MTF, 21.7% of FTM, and 37.1% of individuals living as “other” reported histories of NSSI. While it is clear that trans individuals are at risk of suicidal behavior and NSSI, further work is needed to understand specific determinants of their risk.

Alcohol Misuse and Problems

There is conflicting research regarding risk for alcohol problems in the trans population. Some studies found that compared to cisgender and sexual minority individuals, trans individuals were at increased risk of alcohol-related problems (Hughes & Eliason, 2002; Nuttbrock, 2012; Xavier, Bobbin, Singer & Budd, 2005); whereas another study found no increased risk of alcohol-related problems (Smalley et al., 2016). Differing results may be due to differences in gender expression among participants in these studies. Gender expression has been found to affect alcohol use among sexual minorities. Analyses based on the NTDR (Grant et al., 2011) found that the more frequently trans respondents were read as transgender and gender nonconforming, the more types of discriminatory events they faced. In turn, they were more likely to engage in drug/alcohol abuse (Miller & Grollman, 2015). Therefore, trans individuals who experience discrimination may be at increased risk of alcohol-related problems.

Alcohol Misuse, Suicidality and NSSI

In the general population, both theoretical (Lamis & Malone, 2012) and empirical work (Conner et al., 2014; Merrill, Milner, Owens, & Vale, 1992) have found an association between alcohol (e.g., alcohol abuse and dependence) and suicide ideation, attempts, and deaths. Lamis and Malone's (2012) theoretical model suggests a causal relationship in which alcohol use predicts suicide. In their model, aggression/impulsivity among alcohol users is thought to increase risk of life strains (including alcohol-related problems), which precipitates depressive symptoms and may cause an individual to engage in suicidal behaviors.

Empirical work has also found an association between alcohol and NSSI (e.g., Platt & Robinson, 1991). Alcohol-related problems are commonly found among patients with NSSI, and NSSI patients who misuse alcohol are at increased risk of further NSSI and suicidality than those patients who do not misuse alcohol (Platt & Robinson, 1991). Furthermore, a study using data from the Oxford Monitoring System for Attempted Suicide, found that there was a significant increase in alcohol consumption and alcohol-related problems among NSSI female patients, but not male patients, between 1990 and 2000 (Hawton et al., 2003).

There is a dearth of research investigating the relationships among alcohol, suicidality, and NSSI among trans individuals. One study found that trans suicide attempters were more likely than non-attempters to report excessively using or difficulty controlling their use of alcohol (Mathy, 2002). To our knowledge, no study has investigated the relationship between alcohol and NSSI among trans individuals. Alcohol-related problems may be associated with high rates of suicidality and NSSI among trans individuals.

Minority Stress

Minority stress theories.

There are two primary theories in the literature that account for mental health disparities among sexual minorities: The Minority Stress Model (Meyer, 2003) and the Psychological Mediation Framework (Hatzenbuehler, 2009). Both theories have been used to explain increased suicidal ideation and alcohol abuse in LGB populations (Hatzenbuehler, 2009; Meyer, 2003) and, therefore, may help explain suicidality and alcohol use among trans people. The Minority Stress Model postulates that sexual minorities experience elevated stress as a result of minority discrimination, which contributes to negative mental health outcomes. According to the model, there are three general processes by which sexual minorities are subjected to minority stress: 1) exposure to objective, external events that create overt stress, such as discrimination (distal stress processes); 2) chronic vigilance associated with the anticipation and expectation that external stressful events will occur; and 3) internalized negative attitudes from society, such as internalized homophobia (proximal stress processes; Meyer, 2003). The Psychological Mediation Model proposes that in addition to group-specific processes highlighted in the Minority Stress Model, general psychological processes such as emotion regulation are important pathways related to mental health outcomes in sexual minorities. Hendricks and Testa (2012) propose an adaptation of the Minority Stress Model to incorporate the unique experiences of trans people. The distal process, exposure to external events, has received the most research attention, and will be referred to here as “distal trans stress.” Scant research attention has been given to the two proximal processes of the model, hypervigilance and internalized transnegativity (Beemyn & Rankin, 2011; Bockting et al., 2013; Perez-Brumer et al., 2015). We will focus on the proximal process of internalized transnegativity for the current study.

Distal trans stress.

Genderism is a cultural conceptualization that suggests gender is a binary and that aspects of one's gender should be inherently linked to one's sex assigned at birth. Because genderism is pervasive in society, trans people cannot avoid being perceived as different. Genderism, therefore, reinforces marginalization of and discrimination toward trans people who transcend the gender binary (Wolf & Dew, 2012). Anti-discrimination laws in most U.S. cities and states don't protect trans individuals from gender-related discrimination (APA, 2011) and research suggests that trans people experience elevated rates of stigmatization (Grant et al., 2011). The NTDR indicates that trans people experience high levels of discrimination in employment, housing, health care, education, legal systems, and in their own families. Respondents reported rates of harassment in grades k-12 as high as 78%. Furthermore, 90% of trans respondents reported mistreatment or discrimination on the job, and 53% of respondents reported having been verbally harassed or disrespected in places of public accommodation. Over half of the sample experienced significant rejection by their family (Grant et al., 2011). Furthermore, evidence suggests that trans people experience prejudicial attitudes toward their gender nonconformity within the sexual minority (LGB) community (Wolf & Dew, 2012).

Distal trans stress and alcohol, suicidality, and NSSI. Consistent with the Minority Stress Model and the Psychological Mediation Framework, a recent study found that perceived experiences of stigmatization predicted poorer psychological well-being among gender nonconforming individuals (Baams, Beek, Hille, Zevenbergen, & Bos, 2013). Furthermore, a study with 1093 MTF and FTM trans adults found that increased minority stress was associated with increased depression and overall psychological distress (Bockting, Miner, Romine, Hamilton, & Coleman, 2013). Over one quarter of NTDR respondents reported having misused alcohol or drugs to cope with the mistreatment they faced as a result of their gender. Rates of

misuse of alcohol/drugs doubled among those who were physically assaulted or had to leave school due to harassment. Respondents who lost a job due to gender bias were 70% more likely to misuse alcohol/drugs to cope with mistreatment. Thirty-two percent of trans respondents who experienced family rejection reported using alcohol/drugs to cope compared to 19% of accepting families. Furthermore, half of trans respondents delayed or failed to seek treatment for their substance abuse because of anticipated maltreatment. This anticipation is warranted considering that more than 95% of counselors and administrators in substance abuse treatment programs have not received education or training related to transgenderism (Grant et al., 2011).

Evidence suggests that LGBT individuals who have experienced victimization related to their LGBT identities (e.g., verbal and physical threats) are significantly more likely to engage in NSSI, suicidal ideation, and suicide attempts (Hendricks & Testa, 2012; Liu & Mustanski, 2012). When examining these processes in trans populations, the NTDR indicates that rates of suicide attempts increased substantially for individuals who were harassed in school (51%), lost a job (55%), and who experienced physical (61%) or sexual (64%) assault as a result of their gender identity. Over half of individuals rejected by their families reported a history of having attempted suicide, compared to 32% of individuals who were not rejected (Grant et al., 2011). Finally, a recent study found that lower levels of structural stigma (e.g., policies related to sexual orientation discrimination and proportion of gay-straight alliances per public high school) were associated with fewer lifetime suicide attempts among a sample of MTF and FTM trans adults (Perez-Brumer et al., 2015). However, to our knowledge no study to date has investigated the impact of distal trans stress on NSSI in a trans adult sample.

Internalized prejudice.

Internalized prejudice is a phenomenon observed among various marginalized groups that refers to the internalization of negative societal attitudes about one's group, leading to a devaluation of the self and poor self-regard. The terms internalized homophobia and internalized homonegativity specifically refer to the internalization of societal anti-gay attitudes (Meyer, 2003). In contrast to homophobia that implies fear, homonegativity is inclusive of all possible negative attitudes about homosexuality one may internalize (Mayfield, 2001). The terms used here reflect the use of the term in the research cited. Evidence suggests that internalized homophobia decreases during the process of "coming out" (disclosing sexual orientation) as LGB. Nevertheless, LGB individuals maintain varying degrees of internalized antigay attitudes. Research has shown that internalized homophobia is significantly related to poorer mental health including substance use, suicide ideation and NSSI (Meyer, 2003).

According to the Minority Stress Model, internalized prejudice acts as a moderator between distal stressors and mental health outcomes (Meyer, 2003). That is, individuals with higher internalized prejudice are at increased risk for mental health problems. However, the Psychological Mediation Model presents internalized prejudice as a mediator in this relationship (Hatzenbuehler, 2009). That is, individuals who experienced increased distal stress are at increased risk of internalized prejudice, which in turn increases risk for mental health problems. Empirical work with sexual minorities supports both the mediation model and the moderation model of internalized prejudice (Hatzenbuehler, 2009; Meyer, 2003). One study found that the relationship between discrimination and psychological distress was partially mediated by internalized homonegativity (Feinstein, Goldfried, & Davila, 2012). Another study investigating gender identity among lesbian and bisexual women found that more masculine/butch identities, compared to femme identities, were associated with more frequent LGB victimization but less

internalized homophobia (Lehavot & Simoni, 2011), suggesting that the relationship between discrimination and internalized prejudice may not be direct among gender minorities. Research is needed with trans populations to understand how internalized transnegativity impacts mental health outcomes.

In Hendricks & Testa's (2012) adaptation of the Minority Stress Model, they describe a parallel internalized prejudice concept among trans individuals called internalized transphobia (here called internalized transnegativity to more accurately reflect the meaning of the term), which is thought to have a negative effect on an individual's ability to cope with external stressors, reducing resilience in the face of negative events. Few studies have empirically investigated the impact of internalized prejudice on mental health outcomes among trans individuals. Bockting and colleagues (2013) found identity pride (which can be conceptualized as the opposite of internalized prejudice) to be negatively associated with psychological distress among a sample of trans adults. Perez-Brumer et al. (2015) found that in addition to structural stigma, a higher internalized transphobia score was associated with greater lifetime suicide attempts among trans adults. However, no study to date has investigated the combined effects of distal stress and internalized prejudice on mental health outcomes among trans individuals.

Summary of Current Study

The current study investigated two models of minority stress in a trans sample. Specifically, the current study investigated whether internalized transnegativity (process 3) acts as a moderator or mediator (or both) in the relationship between distal trans stress (process 1) and alcohol-related problems, suicidality, and NSSI among a diverse sample of trans adults. It is important to determine whether internalized transnegativity acts as a mediator or moderator in the relationship between distal trans stress and alcohol use and suicidality because it has

important conceptual and translational implications. Conceptually, a mediator assumes a more central, causal role suggesting that trans individuals who are subject to increased levels of discrimination may have increased internalized transnegativity, which leads to worse suicide, NSSI, and alcohol outcomes. However, a moderator suggests that trans individuals develop varying levels of internalized transnegativity as a result of generalized stigma present in the cultural milieu, and these varying levels of internalized transnegativity may interact with discrimination to influence suicide, NSSI, and alcohol. In addition, it may be that internalized transnegativity is a mediator for some outcomes and moderator for others. Enhancing our knowledge in this domain may help target interventions. Hatzenbeuhler (2009) highlights different intervention implications implied by these distinct models. The Minority Stress Model points to interventions at a societal level including policy changes targeted at reducing structural forms of discrimination. The Psychological Mediation Model highlights individual-level clinical interventions, which may target internalized transnegativity directly. We sought to test the following hypotheses, guided by the aforementioned theoretical models:

1) Moderation Model (Figure 2.1)

- a. Distal trans stress will be positively associated with alcohol-related problems, suicidality, and NSSI.
- b. Internalized transnegativity will be positively associated with alcohol-related problems, suicidality, and NSSI.
- c. Alcohol-related problems will be positively associated with suicidality and NSSI.
- d. Internalized transnegativity (process 3) will moderate the relationship between distal trans stress (process 1) and alcohol, suicidality, and NSSI outcomes.

2) Mediation Model (Figure 2.2)

- a. Distal trans stress will be positively associated with alcohol-related problems, suicidality, and NSSI.
- b. Distal trans stress will be positively associated with internalized transnegativity.
- c. Internalized transnegativity will be positively associated with alcohol-related problems, suicidality, and NSSI.
- d. Alcohol-related problems will be positively associated with suicidality and NSSI.
- e. Internalized transnegativity will mediate the relationship between distal trans stress and alcohol, suicidality, and NSSI outcomes.

Methods

Overview

We recruited trans individuals age 18-44, because this age range was identified by the NTDR as the highest risk for alcohol use and suicidality (Grant et al., 2011), to participate in a national online survey. Participants completed a battery of measures including measures of distal trans stress, internalized transnegativity, alcohol-related problems, suicidality, and NSSI.

Participants

Participants were recruited via online advertisements placed on social media (i.e. Facebook, Instagram, Tumblr, Twitter), an international transgender conference called Gender Odyssey, and by contacting transgender-related organizations throughout the U.S. To be eligible for the study, individuals had to: 1) live in the U.S., 2) speak and read English fluently, 3) be between the ages of 18-44, and 4) identify as transgender, defined as having a gender identity today that is different from the gender they were assigned at birth.

Procedures

Interested participants could follow a link to the study website for more information or a link that would take them directly to a brief online screening hosted on Qualtrics, a secure data collection and management program. If participants met eligibility criteria, they could proceed to view the informational statement prior to participation. The statement included information regarding informed consent, including their rights as participants in research, study procedures, potential risks and benefits and compensation. After consenting, participants proceeded to the online survey, which took approximately 45 minutes to complete. Participants had the option to skip any question they did not wish to answer. At survey completion, participants had the chance to enter a raffle for a \$100 Amazon gift card. Participants also had the option to refer friends to the survey for a chance to win an additional \$100 Amazon gift card. Participants were provided the study phone number and email for more information.

Measures

Demographics. Age, sex at birth, gender identity, gender expression/passing, sexual orientation, SES, and other relevant demographic information were assessed. To assess gender identity, participants were asked to rate their gender on two scales: a maleness scale and a femaleness scale (1= *not at all male/female* and 10= *completely male/female*). Although these are individual items, a score of one on maleness and 10 on femaleness likely indicates a primary gender identity of female, while a score of 10 on maleness and one on femaleness likely indicates a primary gender identity of male. Participants who scored low on both scales may be considered a-gendered, while participants who scored high on both scales may be considered androgynous. These scales allow for a continuous measure of gender identity to be used in quantitative analyses. Gender expression/passing was assessed with a single item that asked participants to respond to the statement, “People can tell I’m trans even if I don’t tell them,” on a

four-point Likert scale (1 = *Always* to 5 = *Never*). Higher scores indicate that fewer people can tell they are trans, which suggests they are more likely to pass as cisgender.

Alcohol-Related problems. The Alcohol Use Disorder Identification Test (AUDIT; Saunders, Aasland, Babor, De La Fuente, & Grant, 1993) was used to identify potential hazardous drinking (pattern of drinking that increases risk of harmful consequences), harmful use (alcohol consumption resulting in health consequences), and alcohol dependence. For each of 10 AUDIT items, options range from 0–4 in scoring, with higher scores indicating more problematic alcohol use. A score of eight or higher indicates risk for harmful alcohol use. The AUDIT has demonstrated reliability and validity across numerous studies (e.g., Maisto, Conigliaro, McNeil, Kraemer, & Kelley, 2000; McAleavey et al., 2012).

Suicidality. The Beck Scale for Suicide Ideation (BSI; Beck et al., 1979) measures intensity of attitudes, behaviors, and plans to commit suicide. Each item consists of three alternative statements graded in intensity from zero-two. A total score, ranging from 0-38, is computed by adding the individual item score. Higher scores indicate increased suicidal behavior. The BSI has a high internal consistency of .89 and an inter-rater reliability of .83 (Beck et al., 1979).

NSSI. The Deliberate Self-Harm Inventory (DSHI; Gratz, 2001) measures the type, frequency, duration, and severity of self-harm behavior. The DSHI has an internal consistency of $\alpha = .83$ to $.81$ (Fliege et al., 2006; Gratz, 2001) and adequate test-retest reliability over a period from 2 to 4 weeks ($r = .92, p < .001$). Participants' scores on the frequency questions for each of the 16 items were summed to create a variable of the total frequency of self-harm behavior. A dichotomous self-harm variable was also created by assigning a score of "1" to participants who answered yes to any of the first 16 items on the DSHI. All other participants (i.e., those who did

not answer “yes” to any of the DSHI items) were assigned a score of “0” on this dichotomous self-harm variable. We were unable to use the frequency score in analyses because the variable was skewed. Therefore, we used the dichotomous NSSI variable in our analyses.

Distal trans stress. The Daily Heterosexist Experiences Questionnaire (DHEQ; Balsam, Beadnell, & Molina, 2013) assesses experiences of LGBT minority stress, as well as associated subjective distress. Two subscales were used: The Harassment and Discrimination subscale and the Victimization subscale. The DHEQ has good internal reliability (α 's = .76-.87) and construct and concurrent validity (Balsam et al., 2013). The Experience of Transgender Discrimination (ETD; Poteat, 2012) scale measures experiences of institutional and interpersonal discrimination specific to trans people. The ETD demonstrated good construct validity, and good internal consistency (.81) for each of the two subscales (Poteat, 2012). The subjective distress scale from the DHEQ was used for both measures. The scale ranges from zero to five with the first response indicating the question does not apply to the individual (0 = *Did not happen/not applicable to me*) and all subsequent scores assessing distress related to an experience of discrimination (1= *It happened, and it bothered me NOT AT ALL*, and 5= *It happened, and it bothered me EXTREMELY*). There was a high frequency of zeros (e.g., discrimination experience did not occur), which resulted in low variance. We therefore dichotomized all three of the distal trans stress variables before including them in the latent variable.

Internalized transnegativity. The Transgender Identity Scale (TGIS; Bockting et al., under review) contains 26 items and measures internalized transphobia/transnegativity on four subscales: pride, investment in passing, shame, and alienation from other trans people. Participants respond to each item on a seven-point scale (1 = *Strongly Disagree* to 7= *Strongly Agree*). All four subscales show good validity and reliability with alpha scores between .73 and

.90. A total mean score of all four subscales was computed, with higher scores indicating more internalized transnegativity.

Data Analytic Plan

Preliminary analyses. All data were entered on the web via Qualtrics and downloaded for analyses. We conducted bivariate correlations to investigate potential model covariates including age, gender expression/passing, and gender identity.

Model fitting. Two separate Structural Equation Models (SEM) were conducted to test both the moderation conceptual model and the mediation conceptual model, using Mplus version 7 software (Muthen & Muthen, 1998-2012). Because distal trans stress was measured with multiple indicators (the dichotomous Harassment and Discrimination subscale of the DHEQ, the dichotomous Victimization subscale of the DHEQ, and the dichotomous full scale ETD), it was modeled as a latent variable. Latent variables offer greater statistical power and accuracy than manifest variables (Kline, 2011; Little, 2013).

Second, we tested the two structural models using our a-priori hypotheses about the relationships among the variables (See Figures 2.1 and 2.2). We examined each model's fit using standard indices including chi-square, RMSEA, CFI, and TLI (Kline, 2011). Because absolute fit indices are unavailable for models that involve latent variable interactions (Mooijart & Satorra, 2012; Muthén, 2012), we reported the absolute fit statistics for the moderation model without the interaction. Because relative fit statistics indicate that the addition of interaction terms improves model fit, we can infer that the absolute fit of the model with the interaction is likely similar or better than the model without the interaction. Significant interactions were probed and conditional indirect effects were computed to examine differences between indirect effects at varying levels of the moderators. Although there are no statistical procedures to compare these

two models directly, these analyses allow us to evaluate the merit of each model separately, which addresses the specific aims of this study.

Results

Participant Demographics

A total of 237 participants were included in data analyses. Table 2.1 presents demographic characteristics of the sample. The average age of the sample was 28.00 (6.90), and the majority of participants were Caucasian (73.7%), although a significant portion identified as Multiracial or Mixed Race (16.5%). Approximately 46% of participants reported earning less than \$21,000 per year. Participants selected a variety of sexual orientations, and 47.4% of the sample selected more than one sexual orientation. The average Maleness reported was 5.54 (3.35) and the average Femaleness was 4.20 (3.38). A total of 21 participants (8.9%) endorsed a score of 0 on the Maleness scale and 28 participants endorsed a score of 10 (11.8%). A total of 33 participants endorsed a score of 0 on the Femaleness scale (13.9%) and 19 participants endorsed a score of 10 (8.0%). Only five participants (2.1%) endorsed a score of 0 on both the Maleness and Femaleness scales and two (.8%) participants endorsed a score of 10 on both scales.

Preliminary Analyses

Means, standard deviations, and bivariate correlations are presented in Table 2.2. To determine which covariates to include in our models, we examined bivariate correlations. Age was not significantly associated with our outcome variables and therefore was not included in the model. However, gender expression/passing, degree of maleness, and degree of femaleness were all found to significantly correlate with one or more outcome variables, and were included in the model as covariates.

A total of 100 participants (42.2%) endorsed experiencing some form of harassment according to the Harassment Subscale of the DHEQ, and 30 participants (12.7%) endorsed experiencing some form of victimization according to the Victimization Subscale of the DHEQ. A total of 85 participants (35.9%) endorsed some form of discrimination according to the ETD. Approximately 71% of participants reported having engaged in some form of NSSI at least once in their lifetime. In bivariate correlations, both the harassment and victimization subscales of the DHEQ were positively associated with suicidality and alcohol-related problems. The ETD was positively associated with suicidality and NSSI. Internalized transnegativity was positively correlated with all indicators of distal trans stress. Internalized transnegativity was also significantly and positively correlated with suicidality, but was not associated with NSSI or alcohol-related problems. Finally, suicidality and NSSI were significantly and positively correlated.

Moderation Model

The final moderation model without the interaction represented an overall good fit for the data, $\chi^2 (df = 14) = 16.22, p = .30$; comparative fit index (CFI) = .99; Tucker-Lewis fit index (TLI) = .98; and root mean square error of approximation (RMSEA) = .03 (90% confidence interval [CI]: .00, .07). Both the non-significant chi-square and additional fit indices provided evidence of good model fit. The upper bounds of the RMSEA confidence interval observed fell below the conservative cut-off of .08 (Kline, 2011), lending additional support to the model fit.

The standardized coefficients for the significant paths are presented in Figure 2.3. Hypothesis 1a was not supported, such that distal trans stress was not directly associated with suicidality, alcohol-related problems or NSSI. Hypothesis 1b was partially supported, such that increased internalized transnegativity was significantly associated with increased suicidality, but

was not significantly associated with alcohol-related problems or NSSI. Hypothesis 1c was not supported, such that alcohol-related problems were not significantly associated with suicidality or NSSI.

Hypothesis 1d was partially supported, such that there was a significant interaction between distal trans stress and internalized transnegativity predicting suicidality, but not predicting NSSI or alcohol-related problems. Probing of the significant interaction (Figure 2.4) revealed that suicidality increased as distal trans stress increased, and this relationship was stronger at high levels of internalized transnegativity, compared to mean and low levels of internalized transnegativity.

Mediation Model

The hypothesized mediation model represented an overall good fit for the data, χ^2 ($df = 14$) = 16.22, $p = .30$; comparative fit index (CFI) = .99; Tucker-Lewis fit index (TLI) = .98 ; and the root mean square error of approximation (RMSEA) = .03. (90% confidence interval [CI]: .00, .07). The standardized coefficients for the significant paths are presented in Figure 2.5.

Hypothesis 2a was partially supported, such that increased distal trans stress was significantly directly associated with increased suicidality, but not with alcohol-related problems or NSSI. Increased distal trans stress was significantly directly associated with increased internalized transnegativity, as hypothesized (H2b). Hypothesis 2c was also partially supported, such that increased internalized transnegativity was significantly associated with increased suicidality, but was not significantly associated with alcohol-related problems or NSSI. Hypothesis 2d was partially supported, such that increased alcohol-related problems was significantly associated with increased NSSI, but was not significantly associated with suicidality.

Next, indirect effects were examined for paths from distal trans stress to alcohol-related problems, suicidality, and NSSI through internalized transnegativity (Table 2.3). One indirect effect emerged between distal trans stress and suicidality. Hypothesis 2e was partially supported, such that increased distal trans stress was indirectly associated with suicidality through increased internalized transnegativity. However, there were no significant indirect effects between distal trans stress and alcohol-related problems or NSSI.

Discussion

This study used the Minority Stress Model and the Psychological Mediation Framework to examine associations among distal trans stress, internalized transnegativity, suicidality, NSSI, and alcohol-related problems in a diverse sample of trans adults. Specifically, this study investigated whether internalized transnegativity acted as a moderator (as conceptualized by the Minority Stress Model), a mediator (as conceptualized by the Psychological Mediation Framework), or both, in the relationship between distal trans stress and suicidality, NSSI, and alcohol-related problems. For suicidality, results supported both the moderation and the mediation model. A positive association between distal trans stress and suicidality was stronger among individuals with high internalized transnegativity; thus supporting a moderation effect. Furthermore, increased distal trans stress predicted increased internalized transnegativity, which in turn predicted increased suicidality; thus supporting a mediation effect. For NSSI and alcohol-related problems, no significant associations with distal trans stress or internalized transnegativity were found; refuting both the moderation and mediation hypothesized models for both of the adverse outcomes. Finally, we found a significant association between alcohol-related problems and NSSI, but not suicidality, such that increased alcohol-related problems predicted increased NSSI.

These findings underscore the important role minority stress plays in the high rates of suicidality among trans adults. This study supports previous findings that distal trans stress processes—including verbal and physical harassment and prejudice – directly increase suicidal behaviors (Baams et al., 2013; Bockting et al., 2013; Grant et al., 2011; Perez-Brumer et al., 2015). The current study’s findings also support the Minority Stress Model’s conceptualization of internalized transnegativity as a moderator in the relationship between distal trans stress and suicidality (Meyer, 2000; Hendricks & Testa, 2012). The relationship between distal trans stress and increased suicidality appears to be stronger for trans individuals who have high internalized negative attitudes about being trans, compared to individuals with low internalized transnegativity. It may be that the synergistic effects of high distal trans stress and high internalized transnegativity put an individual at increased risk of suicidality. It is possible that individuals with high internalized transnegativity are less likely to seek support from the trans community to cope with stigma that they face, and thus are more likely to cope using suicidal behavior. Social support has been identified as a protective factor for suicidal ideation and suicide attempts among trans individuals (Bockting et al., 2005; Scourfield et al., 2008; Nemoto et al., 2011). Future research should investigate mechanisms that help explain *why* internalized transnegativity moderates this relationship, including the potential role of social support.

Findings from this study also support the Psychological Mediation Model’s conceptualization of internalized transnegativity as a mediator between distal trans stress and suicidality (Hatzenbuehler, 2009). Intuitively, it makes sense that facing increased stigma as a trans individual would increase exposure to negative attitudes about trans people and thus increase the likelihood of internalizing these negative attitudes. Furthermore, the positive relationship found between internalized transnegativity and suicidality is consistent with

research that shows an association between low self-esteem and suicidality (e.g., Overholser, Adams, Lehnert, & Brinkman, 1995). Although our mediation results are limited by the cross-sectional nature of the survey, results are consistent with longitudinal research conducted with other minority groups that found internalized prejudice to predict increased suicidality (Oexle et al., 2016).

It may be that for some individuals internalized transnegativity acts as a moderator and for other it acts as a mediator between distal trans stress and suicidality. It is also possible that within the same individual internalized transnegativity acts as both a moderator and a mediator. For example, an individual who is bullied in school for being trans may develop internalized transnegativity early in life, which then contributes to increased suicidal ideation (a mediation effect). When this same individual is later faced with discrimination, the effects of the discriminatory event combined with the internalized transnegativity they now possess as a result of their past may together contribute to increased suicidal behaviors (a moderation effect). Future research should use longitudinal methodology to examine the relationships between distal trans stress, internalized transnegativity, and suicidality, over time.

It is notable that we found no significant associations in either the moderation or the mediation model between distal trans stress and NSSI or alcohol-related problems. We also found no significant associations between internalized transnegativity and NSSI or alcohol-related problems. Given that the minority stress theories hypothesize that minority stress impacts both internalizing and externalizing behaviors broadly (Hatzenbuehler, 2009; Meyer, 2000), and that suicidality is consistently found to be associated with NSSI (Klonsky, Muehlenkamp, Lewis, & Walsh, 2011), there is no readily apparent explanation for our null effects. The high rates of NSSI and alcohol-related problems among trans individuals may be better explained by

alternative predictors drawn from the Minority Stress Model and the Psychological Mediation Framework, such as hypervigilance and/or emotion dysregulation. In the general population, emotion dysregulation has consistently been found to explain both NSSI (Klonsky et al., 2011) and alcohol use (e.g., Berking et al., 2011).

Alternatively, it is conceivable that associations between distal trans stress, internalized transnegativity and NSSI are a result of our continuous measure of NSSI being positively skewed, which forced us to use a dichotomous outcome variable, and decreased power. Recruitment of trans individuals who report having engaged in NSSI may produce more variability in NSSI behaviors, providing more power to detect associations among distal trans stress, internalized transnegativity and NSSI. Similarly, a lack of significant findings for alcohol-related problems may be a result of a relatively small percentage of the sample (17.8%) being at risk for hazardous or harmful alcohol use according to the AUDIT. Recruitment of a clinical sample of trans adults may have the power to detect relationships among distal trans stress, internalized transnegativity, and alcohol-related problems.

It is important to note that the vast majority of our sample did not meet the AUDIT cutoff score for hazardous or harmful alcohol use. Most of the research on trans mental health focuses on risk rather than resilience (Bockting et al., 2011; Zucker et al., 2016). Future research should emphasize resilience by focusing on strengths that protect trans individuals from negative mental health outcomes, including alcohol-related problems. A recently developed model, the Health Equity Promotion Model, builds on the Minority Stress Theory and the Psychological Mediation Framework and considers both positive and adverse health-related outcomes among LGBT individuals (Fredriksen-Goldsen et al., 2014). This model considers life course development within a health equity framework to understand LGBT resilience in addition to illuminating

factors that contribute to negative health outcomes. Future research on trans resilience may use the Health Equity Promotion Model as a guiding framework.

In our mediation model, we did find a significant association between alcohol-related problems and NSSI, such that increased alcohol-related problems predicted increased NSSI. This finding is consistent with research in the general population showing a positive relationship between alcohol misuse and NSSI (e.g., Platt, 1991). Our findings were not consistent with research in the general population that shows a significant association between alcohol-related problems and suicidality (Lamis & Malone, 2012). It may be that because trans individuals are a marginalized group, minority stress better accounts for the variance in suicidal behaviors.

Implications

Because internalized transnegativity was found to act as both a moderator and a mediator in the relationship between distal trans stress and suicidality, this study has implications for both societal and individual-level interventions targeting suicidality among trans adults (Hatzenbeuhler, 2009). Interventions at a societal level - including policy changes and psychoeducation on gender identity— may help reduce generalized stigma present in the cultural milieu, and thus help prevent internalized transnegativity. Efforts may also focus on targeting internalized prejudice directly, in individual-level interventions. Because alcohol-related problems were found to predict NSSI in our study, interventions targeting alcohol misuse may help reduce rates of NSSI among trans individuals. Future work is needed to inform the development of trans-specific suicide and NSSI interventions.

Limitations

There are several limitations to the current study that should be considered when interpreting the findings. First, there are weaknesses to online cross-sectional surveys including lacking a

controlled environment, relying on self-report, and making it difficult to infer causal relationships among variables. We also may be less likely to reach rural, low SES, and homeless individuals who do not have access to the internet. The majority of our sample was white/Caucasian and educated. However, our methodology has notable strengths including access to a geographically diverse sample and anonymity, which may have allowed for more honest responses to sensitive questions. Another limitation to the current study is that our sample size was modest, which can result in low power to detect effects and inflated parameter estimates (Button et al., 2013; Zhang et al., 2013). Future research should employ longitudinal designs with larger samples in order to confirm the validity of our findings. Future research should also investigate additional components of the Minority Stress Model and the Psychological Mediation Framework, such as hypervigilance and emotion dysregulation, which may predict NSSI among trans individuals.

Additionally, there is a dearth of research looking at multiple forms of oppression, such as trans individuals of color (Mustanski et al., 2010; Mustanski & Liu, 2013; Xavier et al., 2005) and trans individuals who identify as non-heterosexual (Mathy, 2002). Meyer (2003) indicates that there is a distinction between a single minority identity (e.g., gay and white) and multiple minority identities (e.g., gay men who are ethnic minorities), in that the latter is exposed to double stigma related to their gay identity and their race/ethnicity. Future work would benefit from exploring how the combined effects of gender discrimination and sexual orientation discrimination and/or race discrimination impacts suicidality and NSSI among trans individuals.

Conclusions.

In conclusion, both distal and proximal minority stress processes appear to play a significant role in the high rates of suicidality found among trans adults. This is one of the first studies to

empirically test the Minority Stress Model and the Psychological Mediation Framework in an exclusively trans sample, and is the only study to date that tested both of these theories using the same sample. Our findings that internalized prejudice acts as both a mediator and a moderator in the relationship between distal trans stress and suicidality lends support to both theories.

Therefore, both theories have merit in terms of informing interventions for trans suicidality.

Future research should attempt to investigate contextual or individual factors that determine when internalized transnegativity acts as a moderator and when it acts as a mediator. For example, internalized transnegativity may act as a moderator for some trans identity subgroups and a mediator for others.

Distal trans stress and internalized transnegativity did not explain variance in NSSI or alcohol-related problems. It is possible that NSSI and alcohol-related problems may be better explained by other variables proposed in the Minority Stress Model or the Psychological Mediation Framework (e.g., hypervigilance or emotion dysregulation), or variables that are not proposed in these models. In our study, alcohol-related problems appear to be a significant predictor of NSSI among trans adults. Further research is needed to replicate results from this study and to investigate additional mechanisms explaining health-related problems among trans individuals in order to inform effective prevention and treatment efforts.

Brief Conclusions

Studies 1 and 2 coalesce to support previous findings that public health problems - including alcohol misuse, suicidality and NSSI - disproportionately impact trans individuals. Results from Study 1 indicate that overall quantity and frequency of alcohol use and alcohol-related problems were high among a national sample of trans adults, relative to the general population. In addition, our sample of trans adults appeared to be at risk of drinking to cope, which has been found to predict alcohol use and alcohol-related problems in the general population (Kuntsche et al., 2006). Finally, significant and meaningful differences in alcohol behaviors emerged according to gender expression, such that individuals who are occasionally identified as trans appear to be at greatest risk of alcohol misuse, compared to people who are never identified as trans and individuals who are almost always or always identified as trans.

Results from Study 2 confirm prior research that trans individuals experience elevated rates of suicidality and NSSI compared to the general population. More importantly, Study 2 found that minority stress is a potential mechanism explaining high rates of suicidality among trans adults. Specifically, internalized transnegativity was found to both moderate and mediate the relationship between distal trans stress and suicidality, supporting both the Minority Stress Model (Meyer, 2000) and the Psychological Mediation Framework (Hatzenbuehler, 2009). Furthermore, in Study 2, increased alcohol-related problems were found to predict increased NSSI among trans adults.

Several implications can be drawn from the results of these two studies. First, targeting drinking coping motives may help reduce rates of alcohol use and alcohol-related problems among trans adults. Second, not all trans individuals may be equally at risk for health problems such as alcohol misuse. Gender expression appears to play an important role in trans health

outcomes, such that individuals who are less likely to pass as cisgender appear to be at increased risk for alcohol misuse and suicidality. Therefore, prevention efforts may focus on reducing societal stigma related to gender nonconformity, and intervention efforts may first target trans individuals who do not pass as cisgender.

Results from Study 2 suggest that interventions targeted at reducing suicidality among trans adults may focus on internalized transnegativity. Interventions at a societal level - including policy changes and psychoeducation on gender identity— may help reduce generalized stigma present in the cultural milieu, and thus help prevent internalized transnegativity. Efforts may also focus on targeting internalized prejudice directly, in individual-level interventions. For instance, therapists could work with trans clients to challenge extreme or distorted beliefs endorsed on the Transgender Identity Scale, such as being transgender makes me “an outcast or a pervert.” Finally, interventions targeting alcohol misuse may help reduce rates of NSSI among trans individuals.

Although there is an accumulating body of research pointing to substantial health disparities between trans adults and the general population, there is a paucity of work that investigates potential risk and protective factors. Future empirical work is needed to better understand these health disparities so that culturally-tailored interventions can be developed. Existing theoretical models, such as the Minority Stress Theory, the Psychological Mediation Framework, and the Health Equity Promotion Model, can help guide the direction of future investigations. For example, research could examine how the second proximal stress process – hypervigilance – is associated with distal trans stress and suicidality. Additionally, the Psychological Mediation Framework proposes several potential mechanisms explaining the link between distal trans stress and negative mental health outcomes, such as emotion dysregulation and social isolation. Future

work with trans populations should further investigate mechanisms proposed in these minority stress theories to continue to advance our understanding of the etiology of health-related disparities among trans individuals compared to the general population, and to inform prevention and intervention efforts.

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Table 2.1. Study 2 demographic characteristics

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Table 2.3. Study 2 indirect effects from distal trans stress to alcohol problems, NSSI, and suicidality

Table 1.1. *Study 1 Demographic Characteristics*

	<i>N</i> = 317
Age	28.11 (6.94)
Biological Sex	
Male	34.1%
Female	65.0%
Intersex	.9%
Treatment Status (% who have had it)	
Hormone treatment	61.2%
Top/chest/breast Surgery	25.5%
MTF genital surgery	3.1%
FTM hysterectomy	8.0%
FTM genital surgery	0.9%
FTM phalloplasty	0.9%
Race and ethnicity	
Asian or Pacific Islander	3.0%
Hispanic or Latino	5.3%
Black or AA	1.3%
American Indian or Alaska	.3%
White/Caucasian	72.5%
Arab or Middle Eastern	1.0%
Other	.7%
Multiracial or Mixed Race	15.9%
Employed?	
Yes	64.7%
No	35.3%
Education Level	
Less than high school diploma	1.7%

High school diploma	10.3%
Vocational degree	1.7%
Some college	36.1%
Associate's degree	9.6%
Bachelor's degree	27.5%
Master's or doctorate degree	13.2%
Income per year	
\$0.00	4.9%
Less than \$10,999	19.6%
\$11,000-20,999	20.4%
\$21,000-30,999	17.5%
\$31,000-40,999	12.3%
\$41,000-50,999	7.0%
More than \$51,000	18.3%
Relationship Status	
Single (not dating)	32.9%
Dating (not serious)	6.3%
Dating monogomously	21.1%
Married/Partnered	17.8%
Separated/Divorced	1.0%
Polyamorous	5.9%
Other	2.6%
Multiple relationship statuses	12.5%

Note. MTF genital surgery was described as removal of penis and creation of vagina, labia, etc.; FTM hysterectomy included removal of uterus and/or ovaries; FTM genital surgery was described as clitoral release/metoidioplasty/creation of tests; FTM phalloplasty is defined as creation of a penis.

Table 1.2. *Study 1 Sexual Orientation by Gender Identity Cross-tabs (n = 298)*

	FTM	MTF	GNC	Other	Total
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Asexual	1 (1.4%)	0 (0%)	2 (6.9%)	10 (5.8%)	13 (4.2%)
Bisexual	10 (13.5%)	2 (5.7%)	1 (3.4%)	8 (4.7%)	21 (6.8%)
Gay, lesbian, same-gender	5 (6.8%)	8 (22.9%)	0 (0%)	5 (2.9%)	18 (5.8%)
Heterosexual	27 (36.5%)	9 (25.7%)	1 (3.4%)	11 (6.4%)	48 (15.5%)
Pansexual	6 (8.1%)	4 (11.4%)	2 (6.9%)	11 (6.4%)	23 (7.4%)
Queer	5 (6.8%)	2 (5.7%)	7 (24.1%)	28 (16.3%)	42 (13.5%)
Multiple	20 (27.0%)	10 (28.6%)	16 (55.2%)	99 (57.6%)	145 (46.8%)

Note. GNC = Gender nonconforming/Genderqueer

Table 1.3. *Study 1 Drinking Characteristics of the Total Sample*

Drink in past month?				
Yes	75.00%			
No	25.00%			
	<i>N</i>	<i>M</i> (<i>SD</i>)	Min	Max
Total drinks per week	209	7.83 (17.21)	0.00	140.00
Weekly drinking frequency	209	2.21 (2.11)	0.00	7.00
Quantity per day	209	1.12 (2.46)	0.00	20.00
Quantity per drinking day	162	3.42 (8.16)	1.00	89.00
Largest number of drinks	304	4.23(6.51)	0.00	80.00
Frequency of HED	257	1.56 (2.14)	0.00	9.00
SIP – Total Score	259	2.84 (6.32)	0.00	40.00
AUDIT	260	4.40 (6.10)	0.00	40.00
Drinking Coping Motives	204	1.97 (1.06)	1.00	5.00

Note. HED = heavy episodic drinking.

Table 1.4. *Study 1 Alcohol Outcomes According to Sex Assigned at Birth M(SD)*

	Male (n=102)	Female (n=198)	Intersex (n=3)
Total drinks per week	7.54(17.97)	7.99(17.06)	3.33(2.52)
Weekly drinking frequency	2.13(1.94)	2.21(2.18)	2.67(1.53)
Quantity per day	1.08(2.57)	1.14(2.44)	1.11(2.46)
Quantity per drinking day	2.61(2.90)	3.95(10.10)	1.17(.29)
Largest number drinks	5.12(9.04)	3.75(4.73)	4.67(4.62)
Frequency of HED	1.86(1.39)	1.39(2.05)	1.33(1.543)
SIP – Total Score	3.42(6.92)	2.46(5.79)	8.67(15.01)
AUDIT	4.74(6.59)	4.14(5.77)	8.00(10.44)
Drinking Coping Motives	1.99(1.06)	1.93(1.06)	2.00(.87)

Note. We did not perform ANOVA tests because of the small intersex sample size. We performed independent samples t-tests comparing males and females on all alcohol variables. None of the t-tests were statistically significant. Bolding identifies the group within each behavior with the highest mean.

Table 1.5. *Study 1 Select Alcohol Outcomes Across 14 Gender Identities (dichotomized) M(SD).*

Endorsed identity <i>somewhat or strongly</i>	<i>n</i> = 260	Quantity per drinking day	Frequency HED	SIP- Total score	AUDIT	Coping motives
Transgender	249	3.34(8.29)	1.51(2.12)	2.64(5.90)	4.18(5.62)	1.96(1.06)
Transsexual	158	3.55(9.36)	1.83(2.42)	2.72(5.78)	4.37(6.02)	2.12(1.1)
FTM	158	3.85(10.15)	1.45(2.11)	2.56(5.57)	4.24(5.46)	1.97(1.08)
MTF	71	2.64(3.14)	2.03(2.35)	3.39(7.04)	4.46(6.09)	2.05(1.10)
Intersex	25	2.82(4.01)	2.26(2.46)	4.81(9.11)	7.72(8.54)	2.49(1.22)
Gender	140	2.77(3.30)	1.42(2.05)	3.03(6.34)	4.68(6.79)	1.99(1.04)
Genderqueer	123	2.89(3.44)	1.60(2.21)	3.37(6.86)	5.36(7.36)	2.03(1.04)
Androgynous	110	3.07(3.63)	1.72(2.37)	3.92(7.43)	5.65(7.65)	2.09(1.07)
Feminine male	77	2.67(3.17)	1.56(2.08)	3.99(7.16)	5.79(7.69)	2.33(1.18)
Masculine female	49	2.86(3.45)	1.86(2.32)	4.02(7.48)	5.47(6.31)	1.99(.88)
Third gender	53	2.76(3.69)	1.30(2.17)	2.70(6.80)	3.77(6.11)	2.02(1.13)
Cross dresser	30	3.56(4.71)	2.42(2.83)	5.70(10.4)	6.53(9.71)	2.37(1.07)
Drag performer	19	2.50(1.64)	2.68(2.80)	5.14(6.25)	6.26(4.75)	2.31(1.18)
Two-spirit	57	2.94(3.51)	2.00(2.49)	3.92(7.64)	5.40(7.18)	2.38(1.20)

Note. Because gender identity groups were not mutually exclusive, inferential statistics could not be performed here. Bolding identifies the group within each behavior with the highest mean.

Table 1.6. *Study 1 Alcohol outcomes Across 4 Gender Identity Subgroups M(SD).*

	FTM (n=71)	MTF (n=31)	GNC (n=29)	Other (n=172)
Total drinks per week	6.22 (13.73)	9.18 (10.57)	13.33 (26.41)	7.83 (17.21)
Drinking frequency	1.82 (1.81)	3.00 (2.31)	2.83 (2.09)	2.13 (2.15)
Quantity per day	.89 (1.96)	1.31 (1.51)	1.90 (3.77)	1.06 (2.54)
Quantity per drinking day	4.38 (13.78)	2.58 (1.72)	3.50 (4.01)	3.15 (5.86)
Largest number drinks	3.15 (3.63)	4.90 (4.71)	4.10 (4.90)	4.53 (7.81)
Frequency HED	1.44 (1.88)	2.62 (2.64)	1.40 (1.89)	1.43 (2.13)
SIP – Total Score	2.13 (6.04)	4.30 (7.18)	4.27 (8.67)	2.62 (5.75)
AUDIT	3.48 (4.04)	5.00 (5.50)	6.00 (8.86)	4.46 (6.42)
Coping Motives	1.87 (1.07)	2.23 (1.27)	1.82 (.84)	1.99 (1.06)

Note. GNC = Gender nonconforming/Genderqueer; ANOVA tests were performed to assess for significant differences in drinking behaviors across gender identity subgroups. There were no significant differences between groups across any of the alcohol variables. Bolding identifies the group within each behavior with the highest mean.

Table 1.7. *Study 1 Alcohol Outcomes According to Gender Expression (“People can tell I’m trans even if I don’t tell them”) M(SD)*

	Always/Most of the time (n=43)	Sometimes (n=83)	Occasionally (n=84)	Never (n=87)
Total drinks per week	11.21(21.96)	3.58(5.69)	11.47(21.14)	7.11(17.80)
Drinking frequency ^{adf**}	2.69(2.25)	1.46(1.53)	3.17(2.40)	1.80(1.88)
Quantity per day	1.60(3.14)	.51(.81)	1.64(3.02)	1.02(2.54)
Quantity per drinking day	3.13(3.18)	2.24(1.72)	3.13(3.65)	5.09(14.88)
Largest number drinks	3.91(4.22)	3.65(4.28)	5.58(9.97)	3.51(4.63)
Frequency HED	2.03(2.25)	1.45(2.05)	1.90(2.43)	1.18(1.84)
SIP – Total Score ^{df**}	4.23(8.64)	1.77(3.30)	4.60(7.70)	1.62(5.46)
AUDIT ^{df**}	5.36(7.11)	3.70(3.99)	6.46(8.64)	2.81(3.43)
Coping Motives ^{cf**}	2.39(1.22)	1.95(1.06)	2.18(1.12)	1.63(.82)

Note. ANOVA tests were performed to assess for significant differences in drinking behaviors across gender expression. Post hoc Tukey tests were used to identify post hoc pairwise differences. Significant post hoc pairwise differences are indicated by a superscript. For example, ^a indicates a significant post hoc difference when comparing individuals who reported “Always/Most of the Time” compared to individuals who reported “Sometimes.” Bolding identifies the group within each behavior with the highest mean.

^aAlways/Most of the Time-Sometimes. ^bAlways/Most of the Time-Occasionally. ^cAlways/Most of the Time-Never. ^dSometimes-Occasionally. ^eSometimes-Never. ^fOccasionally-Never.

*p<.05 **p<.01

Figure 2.1. Study 2 Hypothesized Moderation Model

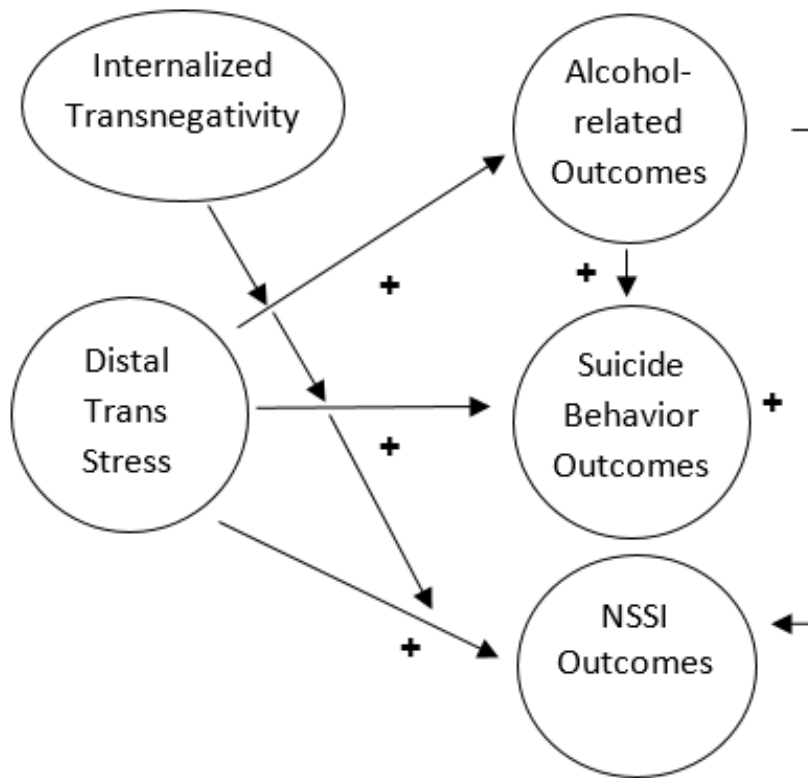


Figure 2.2. Study 2 Hypothesized Mediation Model

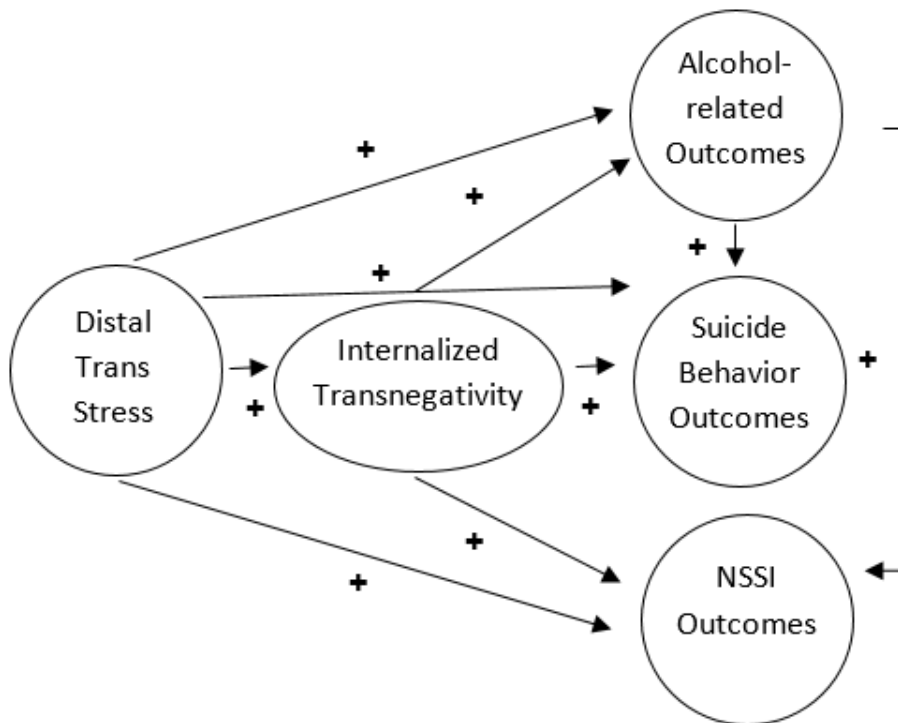


Table 2.1. *Study 2 Demographic Characteristics*

	<i>N</i> = 237
Age	28.00 (6.90)
Biological Sex	
Male	33.9%
Female	64.8% %
Intersex	1.3%
Gender Identity	
0 Maleness	8.9%
10 Maleness	11.8%
0 Femaleness	13.9%
10 Femaleness	8.0%
0 Maleness and Femaleness	2.1%
10 Maleness and Femaleness	.8%
Sexual Orientation	
Asexual	3.4%
Bisexual	6.0%
Gay, Lesbian	4.3%
Heterosexual	14.7%
Pansexual	8.6%
Queer	14.2%
Other	1.3%
Multiple sexual orientations	47.4%
Race and ethnicity	
Asian or Pacific Islander	2.5%
Hispanic or Latino	4.7%
Black or AA	1.3%
American Indian or Alaska	.4%

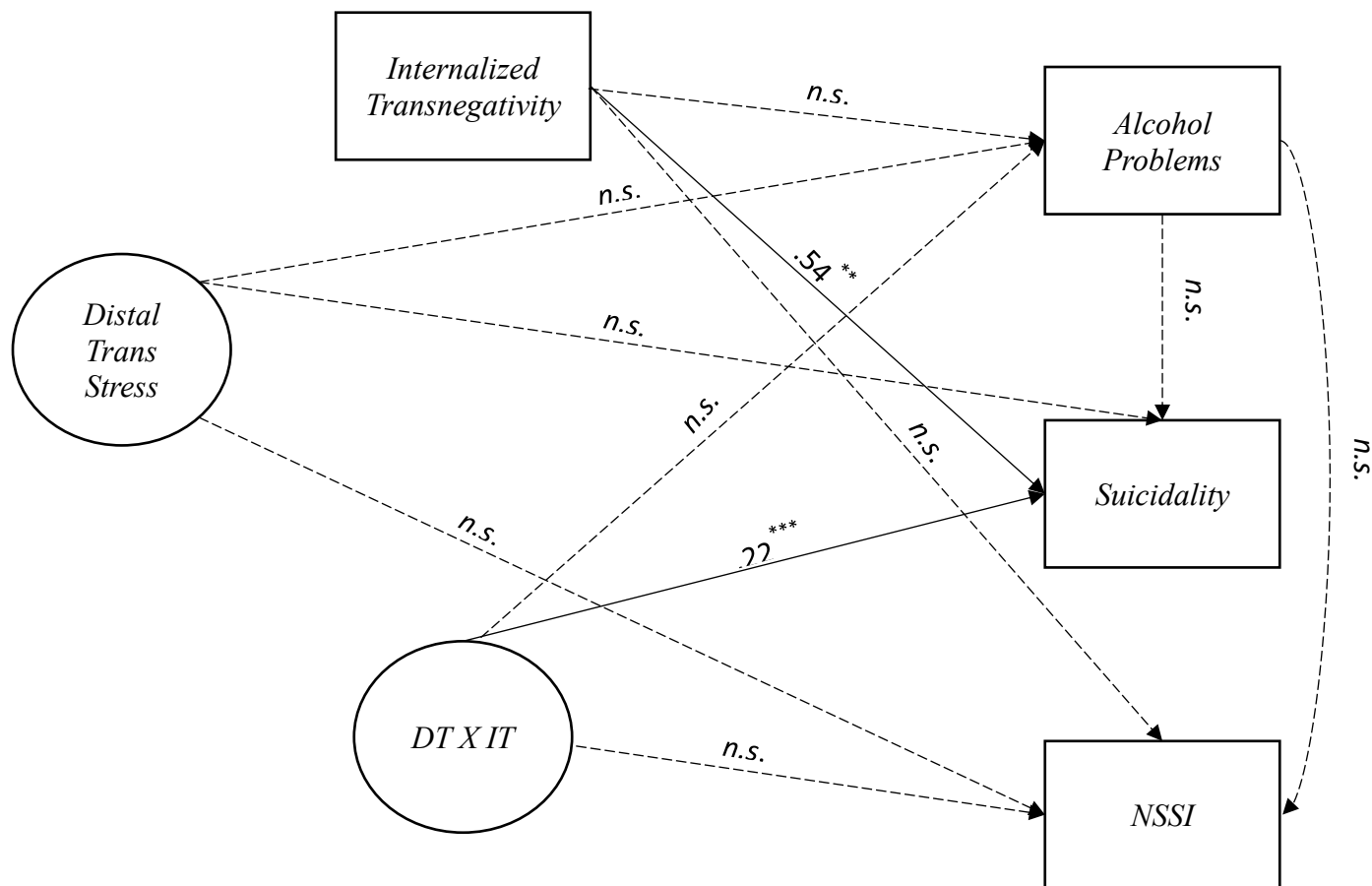
White/Caucasian	73.7%
Arab or Middle Eastern	0%
Other	.8%
Multiracial or Mixed Race	16.5%
Education Level	
Less than high school diploma	.4%
High school diploma	9.8%
Vocational degree	1.7%
Some college	36.3%
Associate's/Bachelor's degree	37.2%
Master's or doctorate degree	13.5%
Income per year	
\$0.00	5.9%
Less than \$10,999	17.3%
\$11,000-20,999	22.3%
\$21,000-30,999	18.6%
\$31,000-40,999	11.4%
\$41,000-50,999	6.4%
More than \$51,000	18.2%
Relationship Status	
Single (not dating)	33.9%
Dating (not serious)	5.5%
Dating monogomously	22.0%
Married/Partnered	16.5%
Separated/Divorced	.8%
Polyamorous	6.8%
Other	2.5%
Multiple relationship statuses	11.9%

Table 2.2. Study 2 Bivariate Correlations among Observed Study Variables (N= 237)

Variable	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Gender Expression/Passing	—	.22**	-2.10**	-.48**	-.12	-.18**	-.01	-.30**	-.04	-.08
2. Maleness	.22**	—	-.74**	-.23**	-.05	-.06	-.04	-.14*	.10	.02
3. Femaleness	-.21**	-.74**	—	.23**	.11	.05	.02	.14*	-.15*	.03
4. Distal Stress- Harassment (binary)	-.48**	-.23**	.23**	—	.55**	.53**	.18**	.39**	.09	.16*
5. Distal Stress – Victimization (binary)	-.12	-.05	.11	.55**	—	.40**	.14*	.28**	.12	.14*
6. Distal Stress – ETD (binary)	-.18**	-.06	.05	.53	.40**	—	.17**	.31**	.13*	.01
7. Internalized Transnegativity	-.01	.04	.02	.18**	.14*	.17**	—	.36**	.06	-.01
8. Suicidality	-.30**	-.14*	.14*	.39**	.28**	.31**	.36**	—	.29**	.10
9. NSSI	-.04	.10	-.15*	.09	.12	.13*	.06	.29**	—	.11
10. Alcohol Problems	-.08	.02	.03	.16*	.14*	.01	-.01	.10	.11	—
<i>M</i>	3.71	5.54	4.20	.42	.13	.36	3.62	7.43	.71	4.54
<i>SD</i>	1.09	3.35	3.38	-	-	-	1.10	7.77	-	6.31

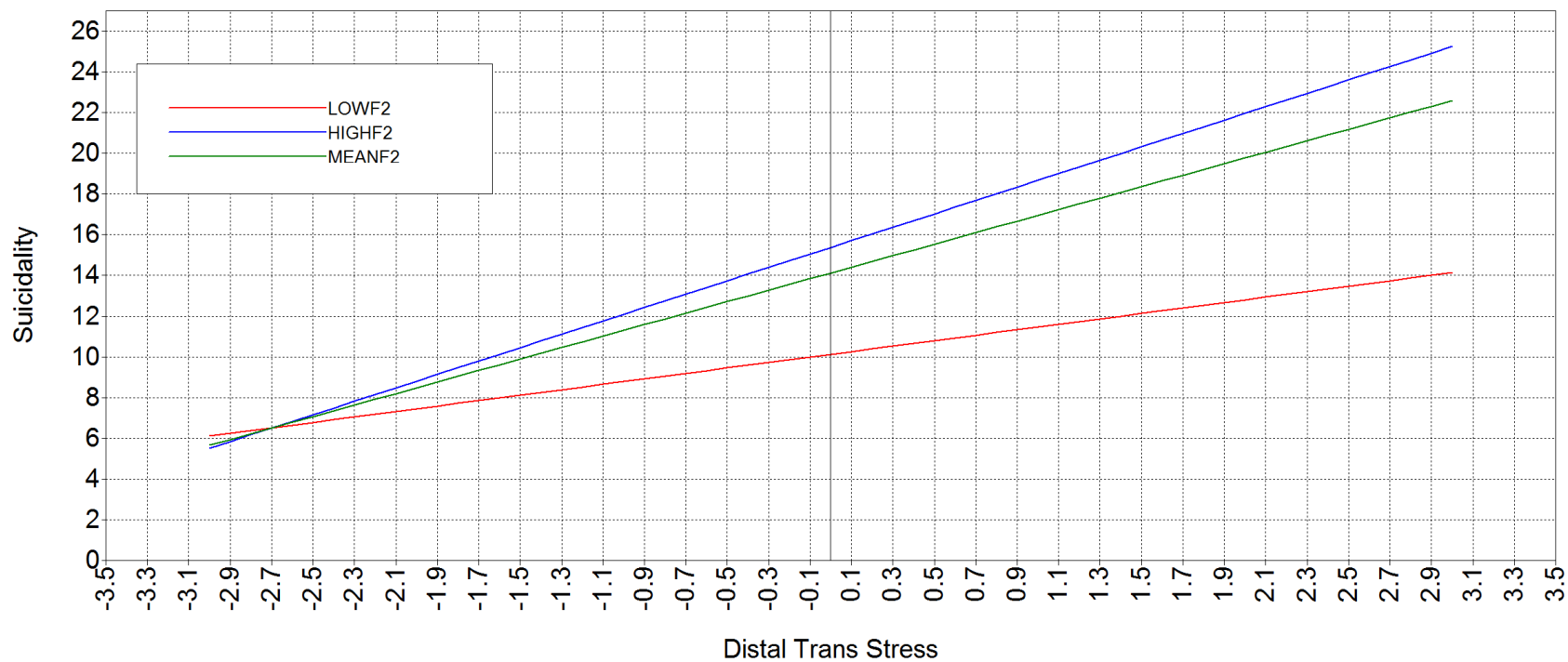
Note. * $p < .05$. ** $p < .01$. *** $p < .001$.

Figure 2.3. Study 2 Final Moderation Model



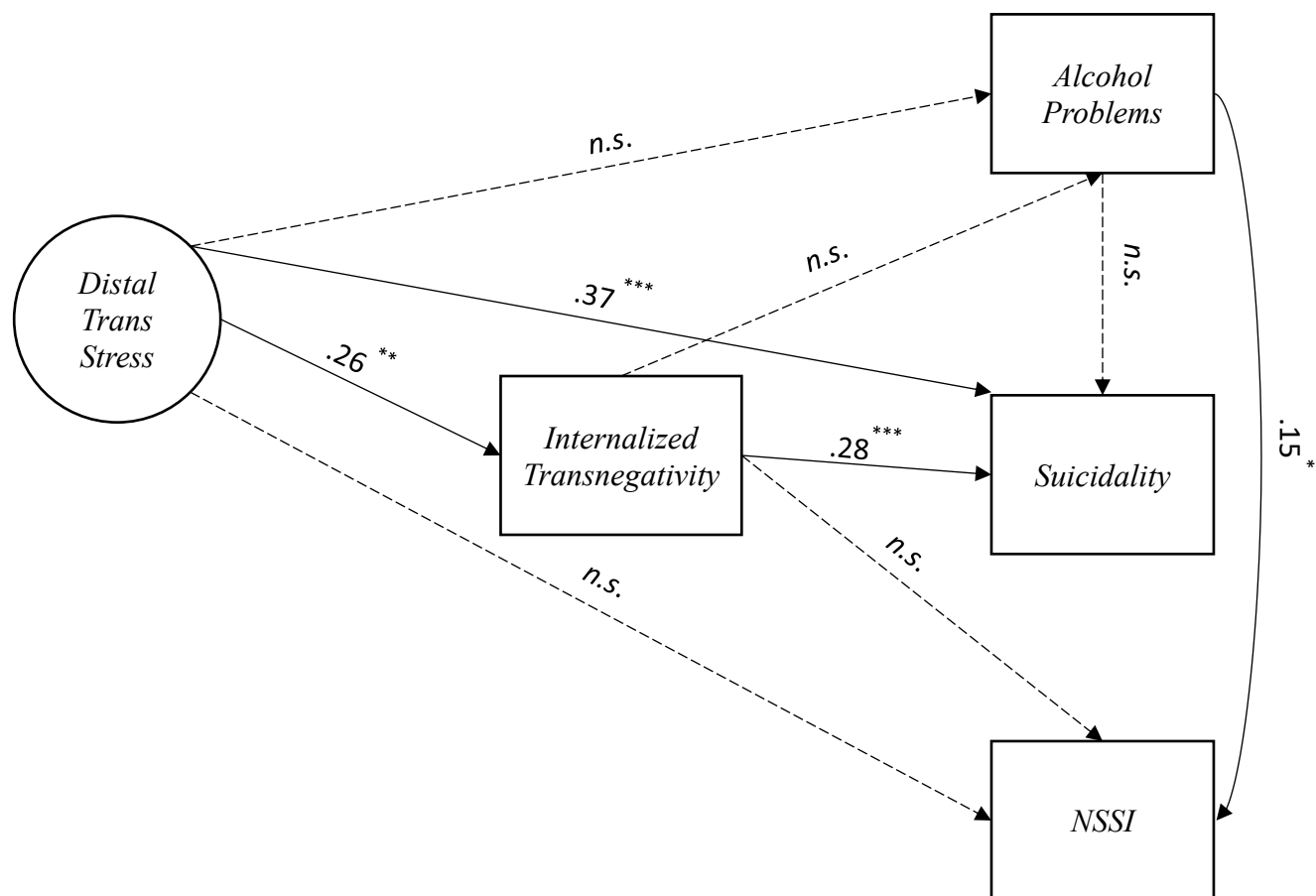
Note. * $p < .05$, ** $p < .01$, *** $p < .001$. DT X IT = Distal Tran Stress x Internalized Transnegativity interaction. Estimates shown are standardized. For ease of presentation, observed indicators of latent variables and pathways with covariates are not shown.

Figure 2.4. Study 2 Interaction Plot



Note. LOWF2 = Low Internalized Transnegativity (-1SD); HIGHF2 = High Internalized Transnegativity (+1SD); MEANF2 = Mean Internalized Transnegativity

Figure 2.5. Study 2 Final Mediation Model



Note. * $p < .05$, ** $p < .01$, *** $p < .001$. Estimates shown are standardized. For ease of presentation, observed indicators of latent variables and pathways with covariates are not shown.

Table 2.3. *Indirect Effects from Distal Trans Stress to Alcohol Problems, NSSI, and Suicidality*

Indirect Paths	Standardized	
	Estimate	95% C.I.
Distal Tran Stress to NSSI (Total Indirect)	.03	-.02, .09
Via alcohol problems	.02	-.01, .05
Via internalized transnegativity	.01	-.03, .06
Via internalized transnegativity to alcohol problems	-.00	-.01, .00
Distal Trans Stress to Suicidality (Total Indirect)	.08*	.02, .14
Via alcohol problems	.01	-.01, .02
Via internalized transnegativity	.07*	.02, .13
Via internalized transnegativity to alcohol problems	.00	-.00, .00

Note. C.I. = confidence interval; NSSI = Non-Suicidal Self-Injury

* $p < .01$

CURRICULUM VITAE

JENNIFER STAPLES

University of Washington

jennmstaples@gmail.com

EDUCATION /TRAINING

- 2016 - 2017 **Durham VAMC** (APA-accredited)
Clinical Psychology Intern
Training Director: Keith Shaw, Ph.D.
- 2011- 2017 **University of Washington, Seattle, WA** (APA-accredited)
Clinical Psychology Candidate
Dissertation defended
Ph.D. expected 2017; Advisor: William George, Ph.D.
M.S., Clinical Psychology
- 2006 - 2009 **University of Vermont, Burlington, VT**
Bachelor of Arts in Psychology
Summa cum Laude
GPA 3.98

HONORS, SCHOLARSHIPS, GRANTS AND RECOGNITION

- Spring 2016 **Psychology Department Scholar Fellowship**, UW (\$19,000)
Competitive award for dissertation research
- Summer 2015 **Kinsey Student Research Grant**, Kinsey Institute (\$1000)
- Spring 2015 **Robert C. Bolles Graduate Student Fellowship**, UW (\$1250)
- Winter 2015 **Basic Psychological Science Research Grant**, APA (\$1000)
- Winter 2015 **Graduate Student Travel Award**, UW (\$500)
Graduate School Fund for Excellence and Innovation (GSFEI)
- Spring 2013 **Graduate Student Travel Award**, UW (\$500)
Graduate School Fund for Excellence and Innovation (GSFEI)
- Spring 2013 **Student Merit Award**, Research Society on Alcoholism (RSA)
- Spring 2009 **Phi Beta Kappa Honor Society**, University of Vermont

Fall 2006-Spring 2009	University of Vermont Dean's List Honor
Fall 2008	American Institution for Foreign Study Affiliate Scholarship , for academically adept students with leadership potential
Fall 2007-Spring 2009	Dwight Family Scholarship , University of Vermont, for academic excellence
Fall 2007	Department of Residential Life Award , University of Vermont, for outstanding academic achievement
Spring 2006	Hofstra University Provost's Scholar , for 4.0 GPA

CLINICAL EXPERIENCE

Therapies Trained In:

- Dialectical Behavior Therapy (DBT)
- Prolonged Exposure for trauma (PE)
- Cognitive Processing Therapy (CPT)
- Prolonged Exposure (PE)
- Cognitive Behavioral Couples Therapy (CBCT)
- Integrated Behavioral Couples Therapy (IBCT)
- Motivational Interviewing (MI)
- Cognitive Restructuring
- Behavioral Activation (BA)
- Exposure Therapy
- Functional Analytic Psychotherapy (FAP)

Assessments Trained In:

- Minnesota Multiphasic Personality Inventory (MMPI)
- Personality Assessment Inventory (PAI)
- Million Clinical Multiaxial Inventory (MCMI)
- Wechsler Abbreviated Scale of Intelligence (WASI)
- Wechsler Adult Intelligence Scale-Fourth Edition (WAIS-IV)
- Wechsler Test of Adult Reading (WTAR)
- Repeatable Battery for the Assessment of Neuropsychological Status (RBANS)
- Delis-Kaplan Executive Function System (D-KEFS)
- Dementia Rating Scale (DRS)
- Structured Clinical Interview for DSM Disorders-II (SCID-II)
- STABLE Dynamic Sex Offender Risk Assessment
- Test of Memory Malingering (TOMM)

08/2016-Present **LGBTQI Wellness Groups Facilitator**
Durham VA Medical Center, Durham, NC

Co-creator, co-facilitator

Supervisor: Kelly Caron, Ph.D.

- Conducted phone screens with LGBTQI veterans to determine eligibility/interest in wellness groups
- Co-led biweekly wellness group for LGBTQ veterans
- Co-led biweekly wellness group for TQI veterans

03/2016-Present

Women's Health Clinic

Durham VA Medical Center, Durham, NC

Psychology Intern

Supervisor: Kelly Caron, Ph.D.

- Provide evidence-based individual and group therapy for veterans with complex presenting concerns and multiple diagnoses, with an emphasis on military sexual trauma. Interventions utilized include full model Dialectical Behavior Therapy (DBT), Prolonged Exposure (PE), and Cognitive Behavioral Therapy (CBT).
- Participate in weekly DBT consultation meetings and weekly interprofessional consultation meetings.
- Conduct psychodiagnostic assessments with women veterans from multiple eras with complex clinical presentations
- Co-lead weekly DBT skills groups

03/2016-Present

Mental Health Clinic

Durham VA Medical Center, Durham, NC

Psychology Intern

Supervisors: Tracey Carson, Ph.D. and Jeff White, Ph.D

- Provide evidence-based individual treatment for veterans with a diversity of mental health diagnoses (e.g., DBT, Exposure Therapy)
- Provide Integrative Behavioral Couples Therapy (IBCT) for couples with a variety of presenting concerns.
- Conduct diagnostic interviews for veterans with complex mental health presentations, and write integrated reports.

08/2016-03/2017

OEF/OIF/OND Clinic

Durham VA Medical Center, Durham, NC

Psychology Intern

Supervisor: Sara Boeding, Ph.D.

- Conducted psychodiagnostic and treatment planning sessions
- Provided evidence-based individual, couples, and group therapy for OEF/OIF/OND veterans returning from deployment. Interventions utilized include full model Dialectical Behavior Therapy (DBT), Cognitive Processing Therapy (CPT), and Cognitive Behavioral Couples Therapy (CBCT).
- Participated in weekly DBT consultation team meetings and weekly interprofessional consultation meetings.

- Participated in weekly consultation calls for CPT provider status.

08/2016-03/2017

Acute Mental Health Clinic

Durham VA Medical Center, Durham, NC

Psychology Intern

Supervisor: Brandon Irvin, Ph.D.

- Provided individual and group therapy for veterans hospitalized for acute crises. Primary interventions utilized are Cognitive Behavioral Therapy and Dialectical Behavior Therapy.
- Co-led a weekly social skills training group and led a weekly positive psychology group.
- Conducted personality, cognitive, and neuropsychology evaluations to inform treatment plans.
- Participated in weekly interprofessional treatment team meetings.

06/2015-06/2016

Psychological Services and Training Clinic

University of Washington

Intake Coordinator

Supervisor: Corey Fagan, Ph.D.

- Provided triage and support for clients requesting mental health services
- Administered phone assessments and assigned clients to appropriate therapists
- Supervised staff therapists under the guidance of a licensed psychologist
- Provided clinical support to staff therapists and crisis intervention

10/2015-05/2016

Sex Offender Treatment Program (SOTP)

Monroe Correctional Complex, Twin Rivers Unit

Practicum Student therapist

Supervisor: Christine Gomes, Psy.D.

- Co-facilitated 3-hour, weekly CBT groups with incarcerated male sex offenders
- Administered neuropsychological assessments to incarcerated male sex offenders, and wrote assessment reports
- Administered STABLE dynamic sex offender risk assessments to sex offenders entering the treatment program, and wrote individual treatment plans

06/2014-05/2016

Dialectical Behavior Therapy (DBT) Practicum

University of Washington

Practicum Student Therapist

Supervisors: Marsha Linehan, Ph.D.; Shari Manning, Ph.D.; Erin Miga, Ph.D.; Elizabeth LoTempio, Psy.D.; Adam Payne, Ph.D.

- Provided assessments and comprehensive DBT to adult and adolescent outpatients with primary diagnosis of Borderline Personality Disorder

- Led DBT skills groups for adolescents with BPD characteristics and their parents/guardians
- Attended weekly consultation meetings with Marsha Linehan, Ph.D.
- Reviewed training videos provided by Marsha Linehan, Ph.D. weekly

09/2014-12/2014 **Clinical “Buddy”**

- Mentored junior graduate student regarding clinical skills
- Engaged in role-plays and provided feedback

11/2012-06/2016 **Psychological Services and Training Center Practicum**

University of Washington

Student Therapist

Supervisors: Corey Fagan, Ph.D.; Peter Doyle, Ph.D.; Dorsey Green, Ph.D.; Ruth Herman-Dunn, Ph.D.; Jane Simoni, Ph.D.; Matt Goldenberg, Psy.D.; Peter Fehrenbach, Ph.D.

- Diagnostically assessed presenting problems
- Administered assessments including MMPI and eMini and provided feedback on outcomes
- Provided evidence-based therapy to clients including prolonged exposure, behavioral activation, and exposure therapy
- Attended weekly group supervision on site for first year
- Attended one-to-one hourly supervision with doctoral level supervisors

9/2013-06/2013 **Functional Analytic Psychotherapy (FAP) Practicum**

University of Washington

Practicum Student

Supervisor: Mavis Tsai, Ph.D.

- Attended two hour-long weekly group FAP training sessions
- Completed year long course work and training in FAP treatment implementation with a co-founder of FAP, Mavis Tsai

09/2011-06/2013 **Alcohol and Drug Education Coordinator (ADEC)**

University of Washington

Individual and group therapist

Supervisor: Jason Kilmer, Ph.D.

- Facilitated weekly education and intervention groups with mandated college students
- Utilized motivational interviewing, the Brief Alcohol Screening and Intervention for College Students (BASICS) and the Alcohol Skills Training Workshop (ASTW).
- Held individual therapy sessions with more at risk students
- Assisted with training and supervising the incoming ADEC

SPECIALIZED TRAINING

- 10/2016 **Integrative Behavioral Couple's Therapy (1 day)**
Tracy Carson, Durham, NC
- 8/2016 **Cognitive Processing Therapy (3 days)**
Carolina Clancy, Durham, NC
- 9/2016 **Prolonged Exposure (2 days)**
Kate Berlin and Kelly Caron, Durham, NC
- 9/2016 **Dialectical Behavior Therapy (2 days)**
Kelly Caron and Sara Boeding, Durham, NC
- 10/2014 **Behavioral Tech Dialectical Behavior Therapy Intensive (5 days)**
Nicholas Salsman and Jennifer Waltz, Gillette, WY
- 8/2014 **Zen Mindfulness Retreat for Graduate Students in Clinical Psychology and
Other Health Care Providers (5 days)**
Marsha Linehan, Eatonville, WA
- 07/2013 **Marsha Linehan's Suicide Prevention (2 days)**
University of Washington, Seattle, WA
- 04/2012 **Functional Analytic Psychotherapy (1 day)**
Robert Kohlenberg and Mavis Tsai, Seattle, WA
- 07/2011 **Clinical Personality Assessment: MMPI (20 hours)**
Ron Smith, Seattle, WA
- 09/2011 **Brief Alcohol Screening and Intervention for College Students (1 day)**
Jason Kilmer and Mary Larimer, Seattle, WA

SUPERVISION EXPERIENCE

- 11/2015-05/2016 Department of Psychology, University of Washington
Clinical Supervisor, Psychological Services and Training Center
Vertical Supervisor: Corey Fagan, Ph.D.

INVITED TALKS AND WORKSHOPS

- Staples, J.** (2017, July). Treating Transgender and Gender Non-Conforming Veterans: An Introduction to Culturally Competent Care. Training provided to Durham VA Medical Center staff psychologists and trainees, Durham, NC.

- Staples, J.** (2016, May). Overview and Essence of Dialectical Behavior Therapy. In W. George (Instructor), *Clinical Psychology*. Guest Lecture, UW.
- Staples, J.** (2016, May). Treating Transgender and Gender Non-Conforming Clients: An Introduction to Culturally Competent Care. Training provided to Sexual Offender Treatment Program therapists at Twin Rivers Unit, Monroe Correctional Complex, Monroe, WA.
- Staples, J.** (2016, April). Treating Transgender and Gender Non-Conforming Clients: An Introduction to Culturally Competent Care. Continuing education training provided to Marsha Linehan's Behavioral Research and Therapy Clinic, UW.
- Staples, J.** (2016, April). Treating Transgender and Gender Non-Conforming Clients: An Introduction to Culturally Competent Care. Part II. Continuing education training provided to Evidenced Based Treatment Center of Seattle, Seattle WA.
- Staples, J.** (2016, April). Sex, Gender, and Transgender. In N. McNichols (Instructor), *Human Sexuality*. Guest Lecture, UW.
- Staples, J.** (2016, March). Treating Transgender and Gender Non-Conforming Clients: An Introduction to Culturally Competent Care. Part I. Continuing education training provided to Evidenced Based Treatment Center of Seattle, Seattle WA.
- Staples, J.** (2016, February). Contraception. In N. McNichols (Instructor), *Human Sexuality*. Guest Lecture, UW.
- Staples, J.** (2015, July). Suicidality and Non-Suicidal Self-Injury among Transgender Individuals. In H. Carroll (Instructor), *Health Psychology*. Guest Lecture, UW.
- Staples, J.** (2015, June). The biosocial theory of borderline personality disorder. In M.M. Linehan (Chair), *Real Change is possible*. Continuing education training provided to therapists in the community, Seattle, WA.
- Staples, J.** (2014, November). Exposure Therapy for Blood and Injection Specific Phobia. In H. Granato (Instructor). *Introduction to Clinical Psychology*. Guest Lecture, UW.

PEER-REVIEWED PUBLICATIONS

- Staples, J.,** Bird, E., Master, T., & George, W. H. (in press). Considerations for culturally competent research with transgender adults: A qualitative analysis.
- Staples, J.,** Eakins, D., Nielsen, L., George, W. H., Stappenbeck, C. A., Cue Davis, K., & Norris, J. (2016). Sexual functioning and disclosure of sexual assault: The mediating role of trauma symptomatology. *Journal of Sexual Medicine*, *13*, 1562-1569.

Stappenbeck, C. A., George, W. B., **Staples, J.**, Nguyen, H., Davis, K. C., Kaysen, D., ...Kajumulo, K. F. (2016). In-the-moment dissociation, emotional numbing, and sexual risk: The influence of sexual trauma history, trauma and anxiety symptoms, and alcohol intoxication. *Psychology of Violence, 6*, 586-595.

Douglas, H. A. C., Heleniak, C., Witkiewitz, K., Lewis, M., Eakins, D., **Staples, J.**, Andersson, C., Berglund, M., & Larimer, M. (2016). Effects of parental monitoring on alcohol use in the US and Sweden: A brief report. *Addictive Behaviors, 63*, 89-92.

George, W. H.,...**Staples, J. M.** (2016). Partner pressure, victimization history, and alcohol: Women's condom-decision abdication mediated by mood and anticipated partner reaction. *AIDS and Behavior, 20*, 134-146.

Staples, J. M., George, W. H., Stappenbeck, C. A., Cue Davis, K., Norris, J., & Heiman, J. (2015). Alcohol myopia and sexual abdication among women: Examining the moderating effect of child sexual abuse. *Addictive Behaviors, 41*, 72-77.

Staples, J., Rellini, A. H., & Roberts, S. (2012). Avoiding experiences: Sexual dysfunction in women with a sexual abuse history in childhood and adolescence. *Archives of Sexual Behavior, 41*(2), 341-350.

UNDER REVIEW

Staples, J., George, W. H., Bryan, A., & Neilson, E. The role of minority stress in suicidality and non-suicidal self-injury among transgender adults. Manuscript under review.

Staples, J., Neilson, E., George, W. H., Flaherty, B., & Davis, K. A descriptive analysis of alcohol use behaviors across gender identity subgroups within a sample of transgender adults. Manuscript under review.

MANUSCRIPTS IN PREPARATION

Brill, C., George, W. H., & **Staples, J.** Sexual predictors of women who experience oral rape. Manuscript in preparation.

Staples, J., Bird, E., & Gregg, J. Sexual functioning and sexual distress among a diverse sample of transgender adults. Manuscript in preparation.

CONFERENCE PRESENTATIONS

Staples, J., Neilson, E. C., Bryan, A., & George, W. H. The role of minority stress in suicidal ideation and non-suicidal self-injury among transgender adults. Poster to be presented at ABCT, 2017, San Diego, CA.

Staples, J., Bird, L., Masters, T., & George, W. H. (2017) *Considerations for culturally sensitive research with transgender adults: A qualitative analysis*. Poster presented at Society for Sex Therapy and Research, Montreal, Canada.

Stappenbeck, C. A., George, W. B., **Staples, J.,** Nguyen, H., Davis, K. C., Kaysen, D., ...Kajumulo, K. F. (2016). *In-the-moment dissociation, emotional numbing, and sexual risk: The influence of sexual trauma history, trauma and anxiety symptoms, and alcohol intoxication*. Poster presented at International Society for Traumatic Stress Studies, New Orleans, LA.

Staples, J., Eakins, D., Nielsen, L., George, W. H., Stappenbeck, C. A., Cue Davis, K., & Norris, J. (2015). *Sexual functioning and disclosure of sexual assault: The mediating role of trauma symptomatology*. Oral podium presentation presented at International Society for the Study of Women's Sexual Health, Austin, TX.

George, W. H.,...**Staples, J. M.** (2015). *Partner pressure, victimization history, and alcohol: Women's condom-decision abdication mediated by mood and anticipated partner reaction*. Poster presented at International Academy of Sex Research, Toronto, Canada.

Staples, J., George, W. H., & Stappenbeck, C. A. (2013). *Alcohol myopia and sexual abdication: Examining the moderating effect of child sexual abuse*. Poster presented at the Research Society on Alcoholism, Orlando, FL.

Staples, J., & George, W. H. (2013). *Understanding the relationship between childhood sexual abuse and risky-sexual decision making: The role of sexual arousal*. Poster presented at the Society for Research in Child Development, Seattle, WA.

Staples, J., & Rellini, A. H. (2010). *Pursuing and distancing on the relationship between childhood trauma and adult sexual function*. Poster presented at the Society for Sex Therapy and Research, Boston, MA.

ADDITIONAL PRESENTATIONS

Staples, J. (2016). *Minority Stress: Understanding alcohol use and suicidality in transgender adults*. Oral presentation given to Durham VA psychologists and trainees, Durham VA Medical Center, Durham, NC.

Horton, L., & **Staples, J.,** Wegner, R., & George, W. (2015). *Does sexual assault severity predict drinking motives in female heavy episodic drinkers?* Poster presented at the University of Washington Undergraduate Research Symposium.

Staples, J. (2014). *Minority Stress: Understanding alcohol use and suicidality in transgender adults*. Oral presentation given at the prospective student research festival, University of Washington, Seattle, WA.

RESEARCH EXPERIENCE

- 08/2016-Present **LGBT Program Development**
 Durham VA Medical Center, Durham, NC
Mentors- Kelly Caron, Ph.D., and Jay Gregg, Ph.D.
- Helped coordinate and develop LGBT veteran services, including LGBTQI Wellness Groups
 - Provided consultation to VA providers regarding LGBT care
 - Educated VA staff by providing training on culturally competent treatment of LGBT patients
- 07/14-07/2016 **Trans* Health Project - Dissertation**
 Department of Psychology, University of Washington
Principal Investigator
 “The Role of Minority Stress in Alcohol Behaviors, Suicidality, and Non-suicidal Self-Injury Among Transgender Adults”
- Designed study and prepared Institutional Review Board materials
 - Mentored undergraduate research assistants on developing study website, recruitment, using Qualtrics for data collection, and data cleaning
 - Prepared manuscripts for publication
- 06/15- 09/15;
 06/14-12/14;
 06/13-03/14 **Project FRESH: Female Relationship Experiences and Sexual Health**
 Department of Psychology, University of Washington
Graduate Research Assistant
 Principal Investigator: William George, Ph.D.
- Prepared materials for the Institutional Review Board
 - Supervised alcohol administration procedures
 - Prepared manuscripts for publication
 - Facilitated journal club meetings with undergraduate research assistants.
 - Mentored undergraduate research assistants.
- 06/12-09/12 **Project ATLAS: Center for the Study of Health and Risk Behaviors**
 Department of Psychiatry, University of Washington
Graduate Research Assistant
 Principal Investigator: Mary Larimer, Ph.D
- Contacted participants for longitudinal follow-up
 - Manuscript preparation
 - Developed scoring syntax for data analysis

- 07/10-07/11 **Sexual Health Research Clinic**
 Department of Psychology, University of Vermont
Clinical Outcome Study Coordinator
 Principal Investigator: Alessandra Rellini, Ph.D
- Helped develop a therapist and client treatment manual to treat sexual dysfunction utilizing cognitive-behavioral techniques
 - Prepared materials for the Institutional Review Board
 - Organized recruitment of participants and managed screening procedures
- 01/09-06/11 **Sexual Health Research Clinic**
 Department of Psychology, University of Vermont
Research Assistant and Lab Coordinator
 Principal Investigator: Alessandra Rellini, Ph.D
- Assisted with administrative tasks including data entry and management
 - Screened, scheduled and worked directly with participants in collecting psycho-physiological data concerning emotional and sexual responses
 - Measured and analyzed psycho-physiological data collected with Biopac system (i.e., EKG and vaginal pulse amplitude)
 - Read and reviewed articles for peer review for scientific journals

TEACHING EXPERIENCE

- 09/2015-06/2016 **Psychological Services and Training Center**
 University of Washington
Clinic Teaching Assistant
- Assist the Clinic Director with the Clinical Methods class, Ethics class, CBT class and the Clinical Colloquium
 - Syllabus preparation and organization
 - Supervising and demonstrating intakes
 - Reading and evaluating intake summaries
 - Demonstrating and giving feedback on role-plays
 - Co-led group supervision of graduate students with the Clinic Director
 - Provide support and supervision to second year students (hold weekly office hours)
- 01/2016-06/2016; **Human Sexuality**
 03/2014-6/2014; University of Washington
 01/2015-3/2015 *Teaching Assistant*
- Led exam review sessions to help students understand course material
 - Created exams
 - Mentored undergraduate TA

- 01/2015-06/2015 **Introduction to Psychology**
University of Washington
Teaching Assistant
- Led exam review sessions to help students understand course material
 - Graded short-essay exams
 - Held two weekly office hours to answer student questions
- 09/2014-05/2015 **Functional Analytic Psychotherapy (FAP)**
University of Washington
Teaching Assistant
- Modeled FAP exercises for graduate students
 - Co-led the class in the instructor's absence

PROFESSIONAL AFFILIATIONS

- 02/2013- Present American Psychological Association (APA)
09/2015-Present APAGS Committee on Sexual Orientation and Gender Diversity listserv
06/2014-05/2016 Research Society for Alcoholism (RSA)
06/2014-05/2015 Association for Behavioral and Cognitive Therapies Addictive Behaviors Sig

JOURNAL REVIEWS

- 09/2014 **Ad Hoc reviewer**
Archives of Sexual Behavior
- 07/2009 **Ad Hoc reviewer**
Journal of Sexual Medicine

SERVICES

- 09/2016 – Present **Diversity Committee**
Durham VA monthly meeting for psychology staff and trainees
- 05/2015- 06/2016 **Diversity Steering Committee**
Liaison between faculty and graduate students to disseminate information on department, faculty, and graduate training issues
- 07/2013- 05/2016 **Graduate Psychology Action Committee**
Adult Clinical Area Representative
- 03/2014- 05/2016 **Gender Diversity**
Volunteer facilitator of support groups for parents of transgender youth

Updated 7/28/17