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Individual- and Structural-Level Risk Factors for Suicide Attempts among Transgender Adults

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Abstract

This study assessed individual (i.e., internalized transphobia) and structural forms of stigma as risk factors for suicide attempts among transgender adults. Internalized transphobia was assessed through a 26-item scale including four dimensions: pride, passing, alienation and shame. State-level structural stigma was operationalized as a composite index, including: density of same-sex couples; proportion of Gay-Straight Alliances per public high school; 5 policies related to sexual orientation discrimination; and aggregated public opinion towards homosexuality. Multivariable logistic generalized estimating equation models assessed associations of interest among an online sample of transgender adults (N=1,229) representing 48 states and the District of Columbia. Lower levels of structural stigma were associated with fewer lifetime suicide attempts (AOR 0.96, 95% CI 0.92–0.997), and a higher score on the internalized transphobia scale was associated with greater lifetime suicide attempts (AOR 1.18, 95% CI 1.04–1.33). Addressing stigma at multiple levels is necessary to reduce the vulnerability of suicide attempts among transgender adults.

Keywords

Transgender; suicide attempts; structural stigma; internalized transphobia

INTRODUCTION

The term “transgender” is used to describe individuals whose gender identity differs significantly from the sex they were assigned at birth, and includes individuals assigned male at birth who identify as female, individuals assigned female at birth who identify as male, as well as individuals who describe their gender identity outside of the binary

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categories of male and female (e.g., bigender, genderqueer).[1,2] Limited available research suggests that due to membership in a lower status social group, transgender individuals experience more violence, discrimination, and victimization compared to cisgender (a term used to refer to one's gender identity and/or expression aligning with one's birth sex/gender) individuals.[2–4] Increased risk of stigma-related stressors has also been documented to increase mental health risk factors, such as depression and anxiety, that heighten vulnerability to suicide attempts.[5–7]

Understanding the relationship between stigma and suicide attempts within transgender populations is particularly relevant given that in the United States, the lifetime prevalence of suicide attempts among this group is estimated to be as high as 41.0%,[7] compared to less than 9.0% in the general U.S. population[8] and approximately 10–20.0% among lesbian, gay, and bisexual (LGB) adults.[9] It is important to note that these estimates are based on data from convenience samples of transgender individuals, given the lack of population-based data on transgender populations in the U.S. These disparities highlight the urgent need to better understand the factors that heighten transgender adults' vulnerability to attempted suicide.

Stigma has been conceptualized in the literature as a multi-level construct, ranging from individual to structural levels. One example of stigma at the individual level is internalized transphobia, which can be understood as one's internalization of society's negative attitudes about transgender individuals into the self-concept.[3] Although a few studies[10–12] have adapted items from an existing measure of internalized homophobia[13] for transgender individuals, none, to our knowledge, have measured and assessed associations between internalized transphobia and suicidality.

Interpersonal forms of stigma, in contrast, refer to micro-level interactions that occur between the stigmatized minority and non-stigmatized majority and can include both overt (e.g., victimization, hate crimes) and subtle processes that occur within the context of transgender and cisgender interactions (e.g., not using preferred pronoun or social name). Several studies have documented associations between interpersonal stigma and suicidality among transgender populations.[4,5,14,15] For instance, in a national sample of transgender adults, chronic stigmatizing experiences as a result of being gender variant, including harassment, discrimination, violence and rejection, were correlated with increased vulnerability to attempted suicide.[7] A study of transgender individuals in San Francisco similarly highlighted gender discrimination and physical gender victimization as key risk factors associated with attempted suicide.[4] Moreover, a meta-analysis of HIV prevalence among transgender individuals in the United States found that exposure to transphobia was significantly associated with lifetime suicide attempts.[16]

Building on research documenting the negative health sequelae of exposure to internalized and interpersonal stigma, researchers have begun to document the ways in which supra-individual forms of stigma—termed *structural stigma*—can also disadvantage the stigmatized. Structural stigma refers to societal-level conditions, institutional policies and practices, and cultural norms that constrain the opportunities, resources, and wellbeing of the stigmatized.[17,18] High levels of structural stigma targeting gay and bisexual individuals are

significantly associated with a range of adverse health conditions, including substance use[19] and all-cause mortality,[18] among sexual minority populations. In relation to attempted suicide, lesbian, gay, and bisexual (LGB) youth who live in high-structural stigma environments are more likely to attempt suicide compared to LGB youth who live in low-stigma communities; these relationships are independent of individual-level risk factors.[20] To our knowledge, no literature to date has operationalized and statistically modeled the relationship between structural stigma and attempted suicide among transgender individuals. Further, with few exceptions,[19,21] studies of the relationship between stigma and health rarely include measures of stigma at both the individual and structural level to determine whether these factors independently predict adverse health outcomes.

To address these current gaps in the literature, this study sought to examine associations between individual and structural forms of stigma with suicide attempts among transgender adults. At the individual level, we hypothesized that those transgender individuals who reported more internalized stigma (i.e. internalized transphobia) would be at greater risk for attempting suicide than transgender individuals who report lower levels of internalized stigma. We further hypothesized that transgender individuals living in states with higher structural-level stigma would have increased vulnerability of attempted suicide compared to those living in low-structural stigma states.

METHODS

Study Population

The present study is a secondary data analysis of a 2003 cross-sectional Internet-based health assessment of transgender adults[22] living in the United States. Participants self-identified as transgender, and comprised a spectrum of gender diverse identities, including transgender, transsexual, crossdresser, bigender, and genderqueer. Participants were recruited via banner advertisements and messages posted on transgender community websites and listserves. The online survey included questions regarding participants' sociodemographics, transgender identity, sexual behavior, substance use, physical health and mental health. The survey took approximately 50 to 60 minutes to complete and participants were compensated with a $30 online gift certificate. To assess participants' eligibility, inconsistent responding, and survey uniqueness, a computerized duplication and cross-validation protocol was implemented to check a variety of factors, including non-unique IP addresses, zip codes, and survey completion time. Surveys that were flagged by this computerized program were further analyzed and depending on assessment were removed from the data set (44 individuals were ultimately removed).[23]

The study protocol was reviewed and approved by the institutional review board (IRB), human subjects committee, at the University of Minnesota. Further information regarding study methods are described elsewhere.[3,22]

Measures

Lifetime and Past 12-month Suicide Attempts—Lifetime suicide attempts were assessed with the question, "Have you ever attempted suicide (tried to kill yourself)?"

Participants were also asked, “How long ago was the last time you attempted suicide (tried to kill yourself)?” We assessed if participants had attempted suicide in the past 12 months by calculating time since last suicide attempt.

Structural Stigma—There was very little state-level variation in transgender-specific policies at the time the study was conducted in 2003, and adequate information on other state-level indicators of structural stigma towards gender minorities (e.g., social attitudes) was also lacking. However, states with policies that protected sexual minorities in 2003 later become states that protected gender minorities,[24,25] and social attitudes towards gender minorities are correlated with attitudes towards sexual minorities.[26] This suggests that structural forms of stigma targeting sexual minorities capture, at least in part, the prejudiced environments surrounding gender minorities. Consequently, we used a previously established measure[20,21] of state-level structural stigma related to sexual minorities as a proxy for structural forms of stigma related to gender minorities.

This measure is comprised of a 4-item composite index. The first variable was a measure of the density of same-sex couples per 1,000 households living in the state, obtained from the 2000 US Census. The second variable was the proportion of public high schools with a gay-straight alliance (GSA) per state. These data were from the Gay, Lesbian, and Straight Education Network (GLSEN) for the year 2006, and the number of public high schools in the state was obtained from the National Center for Education Statistics. The variable was created by dividing the number of gay-straight alliances by the number of public high schools per state. The third variable included 5 state-level policies related to sexual orientation discrimination, including: same-sex marriage; employment non-discrimination laws that are inclusive of sexual orientation; hate crime statutes that are inclusive of sexual orientation; a non-discrimination policy that extended to LGB students and/or a statute banning bullying based on sexual orientation; and joint adoption for same-sex couples. States were coded according to policies and legislation that were in place in 2000, and a summary variable was created adding the 5 policies together. The fourth variable measured public opinion toward citizenship rights for sexual minorities assessed through 41 national opinion polls dating from 1999–2008. Policy-specific opinions were collected for the following areas: gay adoption, hate crimes, health benefits, discrimination in jobs and housing, marriage, sodomy, and civil unions. We used the mean attitude score for each state. Greater detail to the construction of the index available elsewhere.[21]

To create a composite variable for each of these 4 variables, a z-score was calculated for each dimension, which was then summed. The Cronbach’s alpha for the summary score for the 4 components of the composite variable was 0.87, indicating high internal consistency. A principal components analysis resulted in the variables loading onto a single component, with factor loadings ranging from 0.76 to 0.93, providing support for construct validity. The structural stigma variable was then linked to survey responses through participants’ state of residence. There were 1,229 respondents from 48 states (no responses from Montana and South Dakota) and the District of Columbia in the dataset. The composite structural stigma score ranged from a low of −7.56 (North Dakota) to a high of 9.32 (New York), with the lower values indicating less supportive environments (i.e., higher levels of structural stigma).

Demographic covariates—Gender identity was coded as male-to-female (MtF) (i.e., assigned male at birth but identifying at least in part with the female gender) or female-to-male (FtM) (i.e., assigned female at birth but identifying at least in part with the male gender). To assess natal sex, participants were asked the following two questions: "The sex that I was assigned at birth (the sex on my original birth certificate) is: Male or Female" and "When I was born, my external genitals were: Male, female, other." To assess gender identity, participants were asked "To what extent do you currently identify as a man?" and "To what extent do you currently identify as a woman?", with response options on a 7-point Likert scale ranging from "Not at all" to "Very strongly."

Additional sociodemographic characteristics assessed included age, race (coded as White versus other), education (coded as high school or less, some college, college or higher), self-reported gross annual household income, and urbanicity (coded as rural/small town versus medium-sized/metropolitan area). Given the skewed distribution of the gross annual income variable, we used the natural logarithm of income for all analyses.

Internalized transphobia—Internalized transphobia was assessed through the 26-item Transgender Identity Survey, which captured four dimensions including pride, passing, alienation and shame. Participants were asked how they felt about being transgender in the last 3 months, and responses were recorded on a 7-point Likert scale ranging from strongly disagree (1) to strongly agree (7). This measure was specifically developed for the larger transgender health study. The initial item pool was developed by asking a clinical sample of transgender individuals about their thoughts and feelings when they felt down or ashamed of being transgender versus when they felt good or proud. These items were refined by a panel of experts with extensive clinical experience working with the transgender population. The initial item pool was then administered to a transgender community sample (N = 430) and subsequently to the online sample that is the focus of this study (N = 1,229). Exploratory and subsequent confirmatory factor analysis resulted in a 26-item scale with internal consistency reliability of .94 (Cronbach's alpha) and test-retest reliability (n = 20) of .93. Furthermore, consistent with moderate to good construct validity, these results indicated that internalized transphobia can be conceptualized as four inter-related dimensions, including, pride, passing, alienation, and shame.[27] A higher scale score indicates more internalized transphobia (i.e., more negative attitudes about one's transgender status).

Statistical Analysis

Sample characteristics were calculated and reported overall and by lifetime suicide attempts (Table 1). Bivariate logistic generalized estimating equation (GEE) models were used to compare characteristics between participants reporting any suicide attempts (lifetime suicide attempts and/or past 12 months suicide attempts) as compared to the full sample.

Using multivariable logistic generalized estimating equation (GEE) models, we assessed whether (1) individual-level stigma (i.e., internalized transphobia) and (2) structural stigma were associated with lifetime and past-12 months suicide attempts among transgender adults. For all analyses, covariates included participant's age, gender, education, race, income and urbanicity. Finally, we assessed the interaction between individual (i.e.,

internalized transphobia) and structural stigma to test for joint effects. A complete case analysis was used for all analyses. All analyses were conducted in Stata 12.0 (StataCorp, College Station, TX).

RESULTS

Among the sample, self-reported lifetime prevalence of attempted suicide was 32.4%, whereas past-12 month prevalence was 6.41%. Male-to-female transgender participants accounted for slightly less than half (46.8%) of lifetime suicide attempts but the majority (66.67%) of attempted suicide in the past 12 months.

Table 2 summarizes results from multivariable models assessing factors associated with lifetime and past-12 month suicide attempts. For the lifetime time frame, in the multivariable model including only sociodemographic factors, male-to-female transgender identity (Adjusted Odds Ratio (AOR): 0.63, 95% Confidence Interval (CI): 0.46–0.85) and being white (AOR: 0.58, 95% CI: 0.43–0.80) were each significantly associated with decreased odds of lifetime suicide attempts. Participants who reported a college education or higher had decreased odds (AOR 0.49, 95% CI 0.31–0.75) of lifetime suicide attempts as compared to participants who had a high school education or less. Additionally, higher levels of internalized transphobia was significantly associated with increased odds of lifetime suicide attempts (AOR 1.18, 95% CI 1.04–1.33).

For attempted suicide in the past 12 months, having received a college education or higher was significantly associated with decreased odds (AOR: 0.26, 95% CI: 0.10–0.65) in the multivariable model including only sociodemographic factors. When internalized transphobia was included, a higher level of internalized transphobia was associated with increased odds of attempted suicide in the past 12 months, but this did not reach statistical significance (AOR: 1.11, 95% CI: 0.85–1.46).

Table 3 summarizes the results for the models examining association between state-level structural stigma and lifetime and past 12-month suicide attempts. Lower levels of structural stigma were significantly associated with fewer lifetime suicide attempts (AOR: 0.96, 95% CI: 0.92–0.997), when adjusting for gender identity, age, race, income, education, urbanicity and internalized transphobia. Other factors that were significantly associated with fewer lifetime suicide attempts included male-to-female transgender identity (AOR: 0.59, 95% CI: 0.43–0.80), being white (AOR: 0.57, 95% CI: 0.41–0.78), attaining college education or higher (AOR: 0.50, 95% CI: 0.32–0.78) and reporting higher levels of internalized transphobia (AOR 1.18, 95% CI 1.04–1.33). For multivariable models assessing the relationship between structural stigma and suicide attempts in past 12 months, neither structural stigma nor internalized transphobia remained significantly associated with suicide attempts. In this model, only attaining college education or higher was significantly associated with decreased odds of current suicide attempts (AOR: 0.26, 95% CI: 0.10–0.66).

DISCUSSION

The aim of the present study was to assess individual- and structural-level risk factors for suicide attempts among transgender adults. With over 30% of the sample reporting lifetime

suicide attempts, these results further underscore the high prevalence of lifetime-attempted suicide among male-to-female as well as female-to-male transgender individuals. Our findings demonstrate that the increased odds of attempted suicide among transgender individuals is associated with internalized transphobia, with racial/ethnic minority status, and with lower levels of educational attainment, paralleling the existing literature.[7,28] Previous studies with geographically restricted samples (e.g., sampling participants from one state or city) have produced mixed findings with respect to gender differences, with some highlighting elevated lifetime suicide attempts among male-to-female transgender individuals[13,16] and others observing no differences between male-to-female and female-to-male transgender individuals.[4] While prevalent in both groups, we found that a higher proportion of female-to-male transgender participants attempted suicide across their lifetime as compared to male-to-female transgender individuals, similar to results from the recent National Transgender Discrimination Survey.[7] Additionally, prior research has shown that female-to-male transgender individuals experience greater victimization and have higher levels of lifetime suicidal ideation as compared with their male-to-female counterparts.[6] Thus, living in more stigmatizing communities may further facilitate vulnerability towards experiences of stigma-related stressors, which may then lead to increased suicidal ideation and attempts among female-to-male transgender individuals.

We extend previous literature on risk factors for suicide attempts among transgender populations by addressing sources of stigma at multiple levels of analysis. At the individual level, our results indicated that internalized transphobia was significantly associated with increased odds of suicide attempts in the past 12 months. Although measures to assess interpersonal stigma or expressions of transphobia are available,[4,11,29] no work, to our knowledge, has evaluated the relationship between a measure of internalized transphobia and suicide attempts. Our results suggest the need for future research to investigate transgender individuals' internalized stress and/or discomfort with their own transgenderism to better inform coping and resiliency strategies in existing clinical interventions.

Beyond individual risk factors, this study employed a novel measure of structural stigma that did not rely on participant perceptions in order to assess prejudicial social environments at the state level and linked this measure to suicide attempts. Lower levels of structural stigma were found to reduce the odds of lifetime suicide attempts among transgender adults. Because the timeframes for the exposure (i.e., current structural stigma) and outcome (i.e., lifetime suicide attempts) differed, we also examined associations between current structural stigma and current (i.e., past-12 month) suicide attempts. Although these results did not meet statistical significance, this is likely due to low statistical power, given the small number of past-12 month suicide attempts in this sample (N = 51). Although effect sizes were relatively small, our results suggest that at a population level a reduction in LGB structural stigma may substantially decrease the odds of attempted suicide among transgender individuals. For example, a 5-unit increase in the structural stigma measure (i.e., a 5-unit increase in the supportiveness of the social climate) was associated with a 17% decrease in odds of self-reported lifetime attempted suicide, a significant public health impact.

Building on the evidence that structural stigma affects the health of sexual minority adults and youth,[18,19] future studies assessing health disparities related to gender minority status should prioritize investigating pathways of stigma at multiple levels, including structural. Specifically, researchers may wish to consider additional measures when assessing the impact of state-level policies on the health of transgender and gender nonconforming individuals, including hate crime laws that list gender identity as a protected class, birth certificate change laws, and attitudes on the rights and legal protections of transgender individuals. Understanding the impact of prejudicial attitudes and policies is crucial to informing structural interventions and legal reforms to improve mental health outcomes among gender minorities.

Several limitations should be considered when interpreting these results. Because there was very little state-level variation in transgender-specific policies at the time the study was conducted in 2003, policies included in our measure reflected the prejudicial environments surrounding sexual minorities, rather than gender minorities. At the same time, such measures are highly correlated (i.e., states with policies that protect sexual minorities later become states that protect gender minorities). For instance, as of 2013, 86% (18/21) of states (plus the District of Columbia) that have passed employment nondiscrimination laws based on sexual orientation also prohibited discrimination based on gender identity.[30] Further, currently there exists no state-level law that protects gender identity but not sexual orientation. This highlights that structural forms of stigma targeting sexual minorities largely, though not exclusively, capture the impact of prejudicial environments surrounding gender minorities. Nevertheless, further research is needed to assess the impact of transgender-specific policies on health outcomes, including suicidality.

Data that comprise the structural stigma measure came from various sources ranging from 2000 to 2008 (given restrictions in data availability), whereas the outcome data were collected in 2003, which may impact the sensitivity of the findings reported here. Despite the discrepancy in time, our state-level construct represents the best possible proxy for anti-LGB prejudicial environments in 2003 when the outcome measure was collected. Nonetheless, to the extent that this measure is not a good proxy for the 2003 climate, our analyses would have suffered from the incorporation of measurement error, which would have reduced our ability to detect significant associations rather than bias our results in the hypothesized direction (i.e., leading us to conclude that lower levels of structural stigma is protective against suicide attempts when in fact it is not). Research indicates that the effect of legislative action on prejudicial attitudes towards transgender individuals may progress gradually[31] highlighting the need for longitudinal studies to assess how changes in community attitudes affect transgender health.

Additionally, these data were derived from a sample recruited online in 2003, responses were self-reported, and study participants may not be representative of the larger transgender population. Moreover, our sample was predominantly Caucasian, which suggests the need to replicate this study with a more racially and ethnically diverse sample. Nonetheless, this study demonstrates the success of internet-based recruitment of gender minorities. Moreover, 48 states in the United States and the District of Columbia were represented in

this sample, providing sufficient variation of structural stigma surrounding gender minorities.

This was a cross-sectional study and, as such, causation cannot necessarily be inferred from observed associations. Finally, our state-level measure of structural stigma may not have adequately captured the differences within states (e.g., protective policies varying by county or local ordinances within states). Future studies should examine relationships between structural stigma and suicide attempts across smaller geographic units of analysis. At the same time, our results are particularly striking, given that the state-level measure of structural stigma represents a distal determinant of suicide attempts; the results presented therefore likely underestimate the impact of structural stigma on suicide attempts among transgender individuals.

CONCLUSION

Due to recent shifts in policies to protect sexual and gender minorities in the United States, the current study represents an important and timely addition to the literature on social determinants of mental health outcomes among transgender populations. These results provide preliminary evidence to suggest that societal-level changes (e.g., state-level policy reform) may influence the prevalence of suicide attempts in transgender individuals. Nonetheless, the mechanisms underlying the relationship between structural stigma and transgender people's health remains inadequately understood. Consequently, these results seek to focus attention on the need to further investigate the multilevel relationship between stigma and health among gender minorities in the United States.

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Table 1

Demographic Characteristics by Full Sample and Restricted to Individuals who Ever Attempted Suicide

	Full Sample (N = 1229)		Any suicide attempt (lifetime) (N = 355)	
	Mean, n	SD, %	Mean, n	SD, %
Gender Identity				
Female-to-Male Transgender	532	43.29	189	53.24
Male-to-Female Transgender	697	56.71	166	46.76
Age	32.74	11.96	30.36	10.26
Race[1]	966	78.60	257	72.39
Education				
High School or less	164	13.43	59	16.62
Some College	597	48.58	190	53.52
College or higher	468	38.08	106	29.86
Gross household annual Income[2]	113	9.41	113	9.41
Urbanicity	5.37	16.73	5.37	16.73
Internalized transphobia[3]	629	51.18	201	56.62
Suicide attempts				
Lifetime	355	32.36	--	--
Past-12 month	51	6.41	51	100.00

[1] Race corresponds to White with non-White as reference group

[2] Natural log of gross household annual income

[3] A higher score indicates more internalized transphobia (i.e., more negative attitudes about one's transgender status)

Abbreviations: SD, standard deviation; %, percent

Table 2

Individual-Level Factors Associated with Lifetime and Past-12 Month Suicide Attempts

	Lifetime Suicide Attempts (n = 1060)				**Past-12 Month Suicide Attempts (n = 766)**			
			Multivariable				Multivariable	
	AOR	95% CI	AOR	95% CI	AOR	95% CI	AOR	95% CI
Gender Identity[1]	**0.63**	**0.46–0.85**	**0.60**	**0.44–0.81**	1.47	0.73–2.97	1.44	0.71–2.91
Age	0.99	0.97–1.00	0.99	0.97–1.00	0.99	0.96–1.02	0.99	0.96–1.02
Race[2]	**0.58**	**0.43–0.80**	**0.57**	**0.42–0.79**	0.66	0.33–1.31	0.65	0.33–1.29
Education								
High School or less	ref	--	ref	--	ref	--	ref	--
Some College	0.68	0.46–1.02	0.69	0.46–1.04	0.58	0.27–1.23	0.58	0.27–1.29
College or higher	**0.49**	**0.31–0.75**	**0.50**	**0.32–0.78**	**0.26**	**0.10–0.65**	**0.26**	**0.10–0.65**
Gross annual household income[3]	1.00	0.90–1.10	1.00	0.90–1.10	0.90	0.74–1.09	0.90	0.74–1.09
Urbanicity	0.87	0.64–1.18	0.87	0.64–1.19	1.26	0.68–2.36	1.27	0.68–2.37
Internalized transphobia[4]	--	--	**1.18**	**1.04–1.33**	--	--	1.11	0.85–1.46

[1] Gender identity corresponds to male-to-female transgender, with female-to-male transgender as reference group

[2] Race corresponds to White, with non-White reference group

[3] Natural log of gross annual household income

[4] A higher score indicates more internalized transphobia (i.e., more negative attitudes about one's transgender status)

Bolded text signifies p-value ≤ 0.05;

Abbreviations: OR, odds ratio; AOR, adjusted odds ratio; CI, confidence interval

Table 3

State-level Structural Stigma and Suicide Attempts

	Lifetime Suicide Attempts (n = 1060)				**Past-12 Month Suicide Attempts (n = 766)**			
			Multivariable				Multivariable	
	AOR	95% CI	AOR	95% CI	AOR	95% CI	AOR	95% CI
Gender Identity[1]	**0.61**	**0.45–0.83**	**0.59**	**0.43–0.80**	1.49	0.74–3.01	1.45	0.71–2.94
Age	0.99	0.97–1.00	0.99	0.98–1.00	0.99	0.96–1.02	0.99	0.96–1.02
Race[2]	**0.58**	**0.42–0.80**	**0.57**	**0.41–0.78**	0.66	0.33–1.31	0.64	0.33–1.28
Education								
High School or less	ref	--	ref	--	ref	--	ref	--
Some College	0.67	0.45–1.00	0.69	0.46–1.03	0.58	0.28–1.24	0.58	0.28–1.24
College or higher	**0.49**	**0.31–0.75**	**0.50**	**0.32–0.78**	**0.26**	**0.10–0.66**	**0.26**	**0.10–0.66**
Gross annual household income[3]	1.00	0.90–1.11	1.00	0.90–1.11	0.90	0.74–1.09	0.90	0.74–1.09
Urbanicity	0.84	0.62–1.14	0.85	0.62–1.15	1.27	0.68–2.38	1.27	0.68–2.39
Stigma								
Structural Stigma	**0.96**	**0.92–0.999**	**0.96**	**0.92–0.997**	1.01	0.92–1.10	1.00	0.92–1.10
Internalized Transphobia[4]	--	--	**1.18**	**1.04–1.33**	--	--	1.11	0.85–1.46

[1] Gender identity corresponds to male-to-female transgender, with female-to-male transgender as reference group

[2] Race corresponds to White, with non-White as reference group

[3] Natural log of gross annual household income

[4] A higher score indicates more internalized transphobia (i.e., more negative attitudes about one's transgender status)

Bolded text signifies p-value ≤ 0.05;

Abbreviations: OR, odds ratio; AOR, adjusted odds ratio; CI, confidence interval