



Healthcare stereotype threat, healthcare access, and health outcomes in a probability sample of U.S. transgender and gender diverse adults

Merrily E. LeBlanc^{a,b,*}, Mai-Han Trinh^d, Dougie Zubizarreta^e, Sari L. Reisner^{a,c,d,e}

^a The Fenway Institute, Fenway Health, 1340 Boylston Street, Boston, MA 02215, United States

^b Department of Sociology and Anthropology, Northeastern University, 900 Renaissance Park, 1135 Tremont St, Boston, MA 02120, United States

^c Department of Epidemiology, University of Michigan School of Public Health, 1415 Washington Heights, Ann Arbor, MI 48109, United States

^d Department of Epidemiology, Harvard T.H. Chan School of Public Health, 677 Huntington Avenue, Boston, MA 02115, United States

^e Department of Social and Behavioral Sciences, Harvard T.H. Chan School of Public Health, 677 Huntington Avenue, Boston, MA 02115, United States

ARTICLE INFO

Keywords:

Transgender
Healthcare stereotype threat
Healthcare access
Stereotype threat
Minority patients

ABSTRACT

Background: Health inequities among transgender and gender diverse (TGD) populations are well-documented and may be partially explained by the complex social power dynamics that lead to stigmatization. Healthcare Stereotype Threat (HCST) refers to the fear and threat of being perceived negatively based on identity-related stereotypes and may influence health and healthcare experiences. Few studies have investigated associations of HCST with healthcare access and health outcomes for TGD individuals.

Methods: We analyzed the U.S. Transgender Population Health Survey, a cross-sectional national probability sample of 274 TGD adults recruited April 2016–December 2018. Participants self-reported HCST through a 4-item scale. We estimated prevalence ratios (PR) for the association between HCST and binary healthcare access indicators and health outcomes using Poisson models with robust variance. Prevalence ratios (PR) were estimated using negative binomial models for the association between HCST and number of past-month poor physical and mental health days. Models adjusted for sociodemographics and medical gender affirmation.

Results: The mean age was 34.2 years; 30.9 % identified as transgender men, 37.8 % transgender women, and 31.3 % genderqueer/nonbinary. HCST threat was associated with increased prevalence of not having a personal doctor/healthcare provider (PR = 1.25; 95 %CI = 1.00–1.56) and reporting fair/poor general health vs good/very good/excellent health (PR = 1.92; 95 %CI = 1.37–2.70). Higher HCST was also associated with more frequent past-month poor physical (PR = 1.34; 95 %CI = 1.12–1.59) and mental (PR = 1.49; 95 %CI = 1.33–1.66) health days.

Conclusion: HCST may contribute to adverse healthcare access and health outcomes in TGD populations, though prospective studies are needed. Multilevel interventions are recommended to create safe, gender-affirming healthcare environments that mitigate HCST.

1. Introduction

In the U.S., physical and mental health inequities by gender identity for transgender and gender diverse (TGD) populations relative to cisgender populations are well-documented (Feldman et al., 2021; Institute of Medicine U.S., 2011; James et al., 2016). These inequities may be partially explained by increased exposure to stigma and discrimination for TGD people in society, including in healthcare settings (Cicero et al., 2019; Feldman et al., 2021; Gonzales and Henning-Smith, 2017; Grant et al., 2012; James et al., 2016; Hughto et al., 2015; Poteat et al., 2013). Stigma and discrimination have been shown to not only adversely affect

physical and mental health outcomes (e.g., increase mental distress) but also to disrupt and inhibit access to structural and social resources that could mitigate poor health (e.g., availability of gender-affirming medical care, financial resources) and to (re)produce social inequalities (e.g., negative stereotypes) (Hatzenbuehler et al., 2013; Hughto et al., 2015). A growing body of literature demonstrates that TGD populations may avoid or delay care due to anticipation of stigma and discrimination within healthcare settings (Dolan et al., 2020; Goldenberg et al., 2020; Jaffee et al., 2016; James et al., 2016). Discrimination experienced by TGD people in healthcare settings includes misgendering, lack of provider competency, mistreatment, and refusal of care (James et al., 2016;

* Corresponding author at: The Fenway Institute, Fenway Health, 1340 Boylston Street, 8th Floor, Boston, MA 02215, United States.

E-mail address: mleblanc@fenwayhealth.org (M.E. LeBlanc).

<https://doi.org/10.1016/j.pmedr.2024.102734>

Received 19 December 2023; Received in revised form 14 April 2024; Accepted 16 April 2024

Available online 16 April 2024

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Kosenko et al., 2013). There are complex social processes underlying these enacted forms of discrimination in clinical care and healthcare settings, embedded within the power structures that privilege cisgender people, such as assumptions and stereotypes about gender identity, and sexuality that permeate standards of care.

Stereotypes can shape perceptions, attitudes, and behaviors toward others, and can also be used to justify negative attitudes and acts of discrimination (e.g., transphobia, cissexism) (Biernat and Dovidio, 2000). Social and cultural labeling of particular social characteristics generates stereotypes and reinforces and perpetuates stigma (Biernat and Dovidio, 2000; Link and Phelan, 2006, 2014). Gender minority stress theory recognizes that TGD people face stigma based on their gender identities, producing distal and proximal stressors that ultimately lead to adverse mental and physical health outcomes (Testa et al., 2015). Distal stressors, or external contributing factors, can include discrimination, prejudice, and social exclusion because of one's minority status. In contrast, proximal stressors stem from internal factors involving cognitive processes such as concealing one's identity, internalizing negative societal attitudes, anticipating rejection, and experiencing stereotype threat (Meyer, 2003). Importantly, there does not need to be an explicit perpetrator of stigma for stereotypes to serve their function in reinforcing social hierarchies (Link and Phelan, 2014).

Stereotype threat is an internal process that occurs when the fear and threat of confirming negative stereotypes associated with one's social identity causes a psychological and physiological response that influences behavior and emotional regulation and leads to negative cognitions and emotions (Aronson et al., 2013; Steele and Aronson, 1995). Stereotype threat has been found to negatively impact physical outcomes (e.g., blood pressure) (Blascovich et al., 2001). Further studies have begun to consider how stereotype threat within patients' healthcare experiences may contribute to physical (Abdou and Fingerhut, 2014; Abdou et al., 2016; Aronson et al., 2013; Burgess et al., 2010; Fingerhut et al., 2022; Maxfield et al., 2021; Singleton et al., 2023) and mental health inequities (Ojeda-Leitner and Lewis, 2021).

Healthcare stereotype threat (HCST) refers to the fear of being reduced to identity-related stereotypes by medical providers, triggering physiological and psychological processes that influence one's behaviors in medical and health-related settings and services (Abdou and Fingerhut, 2014; Aronson et al., 2013; Thorpe et al., 2023). Examining HCST can shed light on how bias and stigma contribute to adverse healthcare experiences and health outcomes for marginalized populations. HCST has been associated with worse health-related outcomes, such as self-rated poorer physical and mental health among lesbian, gay, bisexual and transgender (LGBT) people (Fingerhut et al., 2022; Saunders et al., 2023), and lower healthcare access among Black sexual minority women (Thorpe et al., 2023). Among a sample of LGBT individuals in a mental healthcare setting, high reports of HCST significantly predicted experiencing fear, including feeling tense, jittery, or nervous when communicating with physicians; delays in utilizing mental health services; worse self-reported mental health; and higher negative affect scores (i. e., anxiety, depression) (Ojeda-Leitner and Lewis, 2021). A recent population study assessing differences in the association between HCST and psychological distress for LGBT subgroups found that the effect of HCST on psychological distress was greater in magnitude for TGD individuals than for cisgender gay men (Saunders et al., 2023). Yet, this study did not consider sexual orientation for TGD populations (e.g., TGD people who are lesbian, gay, or bisexual, and have minoritized gender and sexual identities). Further, the association between HCST and healthcare access—structural factors such as access to a regular provider, health insurance, care source, or mental health services access—are understudied and may have implications for future interventional research addressing barriers to care for TGD people. As HCST emerges as a topic in health equity research, further investigation into HCST among TGD people is needed.

This study contributes to the limited research on experiences of HCST among TGD populations. Because HCST may have behavioral,

physiological, and psychological manifestations, TGD people may avoid care not only based on past negative experiences, including refusals of care and verbal or physical harassment (Hughto et al., 2015; James et al., 2016), but also due to the fear and threat of confirming negative stereotypes related to their TGD identities. We analyzed the U.S. Transgender Population Health Survey (TransPop), a national probability study of U.S. adults, to examine associations between HCST and health and healthcare access outcomes among TGD respondents.

2. Methods

2.1. Study design and population

TransPop is a cross-sectional nationally representative study of adult respondents comprised of a cisgender sample and a transgender sample, inclusive of nonbinary/genderqueer people who identify themselves as transgender (Krueger et al., 2020). The cisgender sample was excluded for the current study because HCST was only assessed for TGD respondents. The transgender sample was recruited over two periods from April 2016 – August 2016 and from June 2017 – December 2018. Recruitment involved random digit dialing to cellphone and landline users as well as address-based sampling. To identify transgender respondents, the screening process used the two-step method which asked about sex-assigned-at-birth followed by gender identity (Reisner et al., 2014; The GenIUSS Group, 2014). Participants were eligible for the transgender sample if their sex-assigned-at-birth differed from their gender identity, or if they identified as transgender regardless of sex-assigned-at-birth. Other eligibility criteria included an age of 18 years or older, education level above the 6th grade, and ability to complete the self-administered survey in English. Participants read an information sheet prior to beginning the survey, and informed consent was indicated if participants proceeded to complete and submit the questionnaire. The response rates among those initially eligible were 30.3 % and 28.7 % for the first and second recruitment periods, respectively, with a final total sample size of 274 transgender participants. TransPop was approved by the Gallup Institutional Review Board (IRB); University of California, Los Angeles (UCLA) IRB; and IRBs of collaborating institutions through reliance on the UCLA IRB.

2.2. Exposure measurement

Participants reported HCST through a validated 4-item scale modified from Abdou and Fingerhut (2014). The measure asked participants about the extent to which, when seeking healthcare, they (1) worried about being negatively judged because of their gender identity or sexual orientation, (2) worried that evaluations of them would be negatively affected by their gender identity or sexual orientation, (3) worried that diagnoses of their health would be negatively affected by their gender identity or sexual orientation, and (4) worried that they might confirm negative stereotypes about LGBT people. Possible responses were based on a 5-point Likert scale with options ranging from “strongly disagree” to “strongly agree.” The scale had high internal consistency (Cronbach's alpha = 0.90; unweighted). The mean score across the four items was calculated for each participant. Scores ranged from 1 to 5, with higher scores indicating greater HCST.

2.3. Outcome measurement

Healthcare access indicators. Four healthcare access indicators were dichotomized. Participants reported whether they currently had any health insurance, whether they had a usual place to go for healthcare, and whether they had a personal doctor or healthcare provider. Participants also reported whether, in their lifetime, they had ever seen a mental health professional (defined as a “psychiatrist,” “psychologist or social worker,” or “counselor or any other mental health professional”) for problems with emotions, nerves, or alcohol or drug use.

Health outcomes. Three health outcomes were included. Participants were asked to describe their general health, with response options of “excellent,” “very good,” “good,” “fair,” and “poor.” General health was dichotomized as fair/poor and good/very good/excellent. Participants reported the number of days, during the past 30 days, in which they had poor physical health (including “physical illness and injury”) and, separately, the number of days in which they had poor mental health (including “stress, depression, and problems with emotions”) (Centers for Disease Control and Prevention, 2014).

2.4. Covariate measurement

Sociodemographics. Age was measured in continuous years. Gender identity was classified as man, woman, and genderqueer/nonbinary. Race/ethnicity was categorized as non-Hispanic/Latine white, non-Hispanic/Latine Black, Hispanic/Latine, and non-Hispanic/Latine another race/ethnicity. Sexual orientation was dichotomized as sexual minority and heterosexual. State of residence was recoded as a categorical variable for U.S. Census region (Northeast, Midwest, South, and West). Participants were classified as living in poverty (<100 % federal poverty level) or not based on their reported household income and number of people in the household, according to weighted 2018 U.S. Census estimates for poverty thresholds (United States Census Bureau, 2022). Education was categorized as high school or lower, some college, college degree, and post-graduate work or degree.

Medical gender affirmation. Participants were asked about medical gender affirmation via survey items from prior national TGD research (Grant et al., 2012). Participants reported whether they had ever received hormone therapy for their gender identity or transition. Participants also selected gender-affirming surgical procedures, from a list of various procedures by sex-assigned-at-birth, that they had ever had; responses were combined into a dichotomous variable for any surgical procedures (yes/no).

2.5. Statistical analysis

We summarized demographic characteristics, HCST, and healthcare access and health outcomes using descriptive statistics. To account for missing data on the exposure, outcome, and covariates, we then applied multiple imputation by chained equations to create twenty imputed datasets. The following analyses were conducted on multiply imputed datasets, with estimates pooled according to Rubin’s rules (Rubin, 1987). We used Poisson models with robust variance to estimate prevalence ratios (PR) and 95 % confidence intervals (95 % CI) for the associations between HCST and dichotomous outcomes of healthcare access indicators and fair/poor general health. We used negative binomial models to estimate prevalence ratios (PR) and 95 % CIs for the associations between HCST and count outcomes of past-month poor physical and mental health days. Adjusted models controlled for age, gender identity, race/ethnicity, sexual minority identity, U.S. Census region, poverty status, education, hormone therapy, and surgical procedures. Sampling weights were applied to account for the complex sampling design and for non-response. Weights were derived based on demographic profiles of transgender individuals in Gallup surveys, and adjusted for non-response on gender identity, age, education, U.S. Census region, race, and ethnicity (Krueger et al., 2020). We used the mice package in R, version 1.3.1093 (P Project for Statistical Computing), to conduct multiple imputation, and SAS, version 9.4 (SAS Institute Inc.) to fit regression models.

3. Results

Weighted prevalences and means for descriptive characteristics of the sample are presented in Table 1. Among the 274 transgender participants, 31 % were men, 38 % were women, and 31 % were genderqueer/nonbinary people. The mean age was 34 years (95 % CI =

Table 1

Descriptive characteristics of transgender and gender diverse adults, TransPop, United States, 2016–2018 (N = 274).

	N ^a	Weighted %	(95 % CI)
Demographics			
Age, years: N, Mean (95 % CI)	274	34.2	(32.1, 36.4)
Gender identity			
Man	78	30.9	(23.5, 38.2)
Woman	120	37.8	(30.3, 45.3)
Genderqueer/nonbinary	76	31.3	(23.9, 38.8)
Race/ethnicity			
White, non-Hispanic/Latine	187	56.5	(48.5, 64.5)
Black, non-Hispanic/Latine	21	9.5	(4.8, 14.2)
Hispanic/Latine	26	15.7	(9.4, 22.1)
Another race/ethnicity, non-Hispanic/Latine	40	18.3	(11.8, 24.7)
Sexual orientation			
Heterosexual	58	17.6	(11.9, 23.4)
Sexual minority	213	82.4	(76.7, 88.2)
U.S. Census region			
Northeast	54	18.7	(12.5, 24.9)
Midwest	50	19.9	(13.5, 26.3)
South	71	30.0	(22.6, 37.4)
West	97	31.4	(24.2, 38.5)
Living in poverty	59	25.6	(18.3, 32.8)
Education			
≤ High school	58	44.0	(35.9, 52.2)
Some college	100	31.2	(24.2, 38.2)
College graduate	60	14.3	(9.8, 18.9)
Post-graduate work or degree	52	10.5	(6.7, 14.3)
Medical gender affirmation			
Hormone therapy	131	42.8	(35.0, 50.5)
Surgical procedures	107	34.7	(27.2, 42.2)
Exposure			
Healthcare stereotype threat: N, Mean (95 % CI)	271	3.4	(3.2, 3.6)
Healthcare access outcomes			
Uninsured	24	8.1	(4.0, 12.3)
Do not have place to go for health care	40	19.9	(12.8, 27.0)
Do not have personal doctor/healthcare provider	86	38.9	(31.1, 46.7)
Never seen mental health professional	64	21.8	(15.3, 28.3)
Health outcomes			
Fair/poor general health	69	25.9	(19.0, 32.8)
Poor physical health days: N, Mean (95 % CI)	273	5.3	(4.2, 6.5)
Poor mental health days: N, Mean (95 % CI)	270	12.4	(10.6, 14.1)

Abbreviations: CI, confidence interval.

^a Data were missing for sexual orientation (n = 3, 2.0 %), U.S. census region (n = 2, 1.1 %), living in poverty (n = 15, 7.3 %), education (n = 4, 1.2 %), hormone therapy (n = 3, 1.8 %), surgical procedures (n = 19, 5.3 %), healthcare stereotype threat (n = 3, 1.0 %), uninsured (n = 4, 1.9 %), do not have place to go for health care (n = 53, 19.4 %), do not have personal doctor/healthcare provider (n = 1, 0.1 %), never seen mental health professional (n = 2, 0.6 %), poor physical health days (n = 1, 0.5 %), poor mental health days (n = 4, 2.2 %).

32.10–36.39). Over half of participants were non-Hispanic/Latine White, and a majority were sexual minorities. A quarter were living in poverty, and 44 % of participants had completed a high school level of education or lower. Regarding medical gender affirmation, 43 % of participants had ever received hormone therapy, and 35 % had undergone any surgical procedure related to their gender transition. The mean HCST score was 3.38 (95 % CI = 3.21–3.55).

Results for the associations between HCST and healthcare access outcomes are shown in Table 2. In adjusted analyses, higher HCST was associated with increased prevalence of not having a personal doctor/healthcare provider (PR = 1.25; 95 % CI = 1.00–1.56). Significant associations were not detected between HCST and other healthcare access indicators of being uninsured, not having a usual place for health care, and never having seen a mental health professional. With respect to the health outcome variables (Table 3), higher HCST was associated with almost twice the prevalence of reporting fair/poor general health versus good/very good/excellent health, adjusting for all covariates (PR = 1.92; 95 % CI = 1.37–2.70). Higher HCST was also associated with more frequent poor physical (PR = 1.34; 95 % CI = 1.12–1.59) and mental (PR = 1.49; 95 % CI = 1.33–1.66) health days in the past month.

4. Discussion

In this U.S. nationally representative study, we found that HCST was associated with adverse healthcare access and health outcomes for TGD populations. The behavioral, physical, and psychological sequelae of HCST in this study were not having a personal doctor/healthcare provider, poor self-rated health, and more days per month of both poor physical and mental health. Our findings on HCST and health outcomes contribute to research that highlights the importance of studying the pervasive nature of stigma and stigma-producing mechanisms to improve TGD population health (Hatzenbuehler et al., 2013; Poteat et al., 2013; Hughto et al., 2015), a topic of growing significance amidst increasing sociopolitical threats to TGD health. Future research using prospective study designs is needed to examine how HCST-related processes affect healthcare access, and the physical and mental health of TGD people, with an eye toward interventions.

We found a significant association between experiencing HCST and not having a personal doctor/healthcare provider in the healthcare access variables. An ongoing relationship with a healthcare provider can promote continuity of care, increase preventive care and early detection of conditions, and facilitate referrals to meet other healthcare needs (Gray et al., 2018; Levine et al., 2019; Shi, 2012; Starfield et al., 2005; U. S. Department of HHS, 2021). Thus, the elevated prevalence of not having a personal provider for TGD people with higher HCST scores is concerning. There was no significant association of HCST with whether one had health insurance, had a regular place to go for care, or had ever

Table 2

Association between healthcare stereotype threat and healthcare access variables among transgender and gender diverse adults, TransPop, United States, 2016–2018 (N = 274).

	Healthcare access outcomes ^a			
	Uninsured	Do not have place to go for health care	Do not have personal doctor/healthcare provider	Never seen mental health professional
Unadjusted model	PR (95 % CI)	PR (95 % CI)	PR (95 % CI)	PR (95 % CI)
Healthcare stereotype threat	1.36 (0.78, 2.38)	1.20 (0.81, 1.76)	1.37 (1.11, 1.69)	0.70 (0.56, 0.88)
Adjusted model^b	PR (95 % CI)	PR (95 % CI)	PR (95 % CI)	PR (95 % CI)
Healthcare stereotype threat	1.50 (0.89, 2.53)	1.17 (0.77, 1.77)	1.25 (1.00, 1.56)	0.75 (0.56, 1.01)

Abbreviations: PR, prevalence ratio; CI, confidence interval. Bolded text indicates Healthcare Stereotype Threat is statistically significant at alpha 0.05-level.

^a PRs and 95 % CIs were estimated from Poisson regression models with robust variance. Estimates were pooled across 20 multiply imputed datasets.

^b Adjusted for age (continuous), gender identity (man, woman, genderqueer/nonbinary), race/ethnicity (non-Hispanic/Latine white, non-Hispanic/Latine Black, Hispanic/Latine, non-Hispanic/Latine another race/ethnicity), sexual minority status (sexual minority versus heterosexual), U.S. Census region (Northeast, Midwest, South, West), poverty status (living in poverty versus not), education (high school or lower, some college, college degree, post-graduate work or degree), hormone therapy for gender identity or transition (ever received versus never), and gender-affirming surgical procedures (ever received versus never).

Table 3

Association between healthcare stereotype threat and health outcome variables among transgender and gender diverse adults, TransPop, United States, 2016–2018 (N = 274).

	Health outcomes ^a		
	Fair/poor general health	Poor physical health days	Poor mental health days
Unadjusted model	PR (95 % CI)	PR (95 % CI)	PR (95 % CI)
Healthcare stereotype threat	1.70 (1.23, 2.34)	1.27 (1.09, 1.46)	1.57 (1.41, 1.74)
Adjusted model^b	PR (95 % CI)	PR (95 % CI)	PR (95 % CI)
Healthcare stereotype threat	1.92 (1.37, 2.70)	1.34 (1.12, 1.59)	1.49 (1.33, 1.66)

Abbreviations: PR, prevalence ratio; CI, confidence interval. Bolded text indicates Healthcare Stereotype Threat is statistically significant at alpha 0.05-level.

^a PRs and 95 % CIs were estimated from Poisson regression models with robust variance. PRs and 95 % CIs were estimated from negative binomial models. Estimates were pooled across 20 multiply imputed datasets.

^b Adjusted for age (continuous), gender identity (man, woman, genderqueer/nonbinary), race/ethnicity (non-Hispanic/Latine white, non-Hispanic/Latine Black, Hispanic/Latine, non-Hispanic/Latine another race/ethnicity), sexual minority status (sexual minority versus heterosexual), U.S. Census region (Northeast, Midwest, South, West), poverty status (living in poverty versus not), education (high school or lower, some college, college degree, post-graduate work or degree), hormone therapy for gender identity or transition (ever received versus never), and gender-affirming surgical procedures (ever received versus never).

seen a mental health professional in our study. These null associations suggest that structural barriers related to healthcare access may be more salient for TGD populations than HCST in healthcare access and resources (Feldman et al., 2021). For example, research has shown that TGD people frequently utilize emergency rooms or urgent care clinics, thus receive treatment from the point-of-care provider available (Willging et al., 2019). Additional research is needed to understand HCST and structural factors in TGD healthcare access.

In response to HCST, TGD people may avoid situations that appear threatening, including healthcare interactions, potentially preventing individuals from developing a relationship with a trusted provider and accounting for this study’s healthcare access finding (Abdou and Fingerhut, 2014; Abdou et al., 2016; Aronson, et al., 2013; Burgess et al., 2010; Singleton et al., 2023). There is a growing recognition of the necessity to educate health professionals on sexual and gender minority health needs and to address bias and discrimination when caring for patients (Casanova-Perez et al., 2022; Dubin et al., 2018; Gonzales and

Henning-Smith, 2017; Keuroghlian et al., 2017; Korpaisarn and Safer, 2018; Morris et al., 2019; Phelan et al., 2017; Streed and Davis, 2018). TGD patients who experience discrimination are more likely to delay or avoid care, with a higher avoidance rate among those who have to educate their doctors about TGD identities (Jaffee et al., 2016; James et al., 2016). Providers with inadequate training on gender-affirming care may draw on cultural scripts that perpetuate biases (Shuster, 2021). For example, the experience of gender-related medical misattribution and invasive questioning, a phenomenon also known as “trans broken arm syndrome,” demonstrates the propensity for bias among medical practitioners who incorrectly reduce a patient’s health issue to stereotypes associated with TGD identities (Wall et al., 2023). This may include incorrectly assuming psychological distress, mental illness, and confusion; hyperfocusing on biological and physical components of transition; and being dismissive of one’s gender identity (Howansky et al., 2021; Wall et al., 2023). Interventions to increase clinician knowledge about TGD health may aid in mitigating the impacts of HCST that create barriers to having a personal provider for TGD populations.

Regarding health outcomes, our study found that experiences of higher HCST were associated with almost twice the prevalence of reporting fair/poor general health versus good/very good/excellent health in TGD people. Higher HCST was also associated with more frequent poor physical and mental health days in the past month. Mental and physical health can be compromised when an individual is exposed to stigma-related processes like proximal (internal) stressors (Meyer, 2003; Hughto et al., 2015). Previous stereotype threat research in various minority populations demonstrates associations with negative health, including a higher number of reported poor physical health days as well as increased hypertension, psychological distress and negative mental health, and risk of symptom cluster (anxiety, depression, and fatigue) among post-mastectomy breast cancer patients (Abdou et al., 2016; Fingerhut et al., 2022; Li et al., 2017; Ojeda-Leitner and Lewis, 2021). Our findings align with recent scholarship demonstrating that higher levels of HCST are associated with poorer self-rated health and psychological distress among sexual and gender minority subgroups; specifically, the impact of HCST on health outcomes was worse for TGD respondents compared to cisgender gay men (Saunders et al., 2023), underscoring the need for further inquiry into the role of HCST for TGD populations.

Our results demonstrate an association between HCST, healthcare access, and health outcomes among TGD populations prior to the start of the latest era of sociopolitical threats toward TGD well-being and health. The escalation of anti-trans policies and stigma-producing anti-trans rhetoric underscore the need for continued research on the role of HCST among TGD communities. Further, sexual and gender minorities of color have reported increased experiences of discrimination and stereotyping in healthcare compared to their white and heterosexual TGD peers, related to intersecting experiences of cissexism, heterosexism, and racism (Agénor et al., 2022; Cicero et al., 2019; Hudson, 2019) and are also subjected to increased anti-trans related threats and harm (Human Rights Campaign, 2021). To prevent reinforcing and perpetuating stereotypes associated with TGD patients, future research should explore unique and complex stereotypes, heeding both historical and contemporary sociopolitical contexts, to better understand how HCST manifests and affects the health of these diverse communities.

4.1. Limitations

These findings should be interpreted in the context of study limitations. First, this study was cross-sectional, so we can only observe an association between variables rather than a causal relationship. These findings could be subject to reverse causation, namely lower levels of HCST could be caused by better health or by having a regular doctor. Second, due to the small sample size, we could not look at subgroup differences, specifically, intersectional experiences of HCST in healthcare access and health outcomes; further research should explore

associated stereotypes of TGD people who hold multiple minoritized racial, ethnic, and gender identities). Lastly, and related to measuring multiple marginalization, the HCST scale in this study asked participants about HCST related to “gender identity or sexual orientation”; thus, we are not able to disentangle whether HCST reported by TGD respondents was specifically due to gender identity, sexual orientation, or both. Additional research using longitudinal studies, mixed-methods, and qualitative approaches is needed to better understand the relationship between HCST, healthcare access and health outcomes for TGD people.

4.2. Future implications

Healthcare providers can play a critical role in reducing and mitigating stigma and stereotypes associated with TGD identities and TGD-related health concerns through intentional inclusion and affirmation efforts. Social, psychological, medical, and legal gender affirmation in healthcare contexts is vital to support TGD individuals and communities (Reisner et al., 2016). Utilizing gender-affirming practices during appointments, such as asking only medically relevant questions, validating TGD identity, and finding ways to highlight the patient’s resiliency, can support TGD self-esteem (Goldenberg et al., 2019; Lambrou et al., 2020; Wall et al., 2023; Reisner et al., 2016). Creating affirming clinical spaces and waiting rooms, and educating providers, administrative, and medical staff can also minimize environmental cues that invoke stereotype threat (Goldenberg et al., 2019; Kcomt et al., 2020; Lambrou et al., 2020; Lelutiu-Weinberger et al., 2016; Radix, 2020). Lastly, countering harmful narratives in health, medicine, and research that produce and reproduce stigma has been identified as a strategy to minimize stereotype threat (Steele, 2011) and is a documented health-related research priority among TGD community health center patients (LeBlanc et al., 2022).

4.3. Conclusion

Contemporary threats toward TGD communities spanning social, medical, legal, and educational spheres can lead to stigmatization (Das et al., 2023; Redfield et al., 2023; Warling and Keuroghlian, 2022). Thus, TGD people may feel the threat and fear of confirming negative stereotypes associated with their gender identity, particularly in the domain of healthcare, healthcare experiences, and health outcomes. These study findings can be used to better conceptualize and respond to TGD health inequities by providing insight into the power of stigma and through its practical application, including incorporating HCST research findings into clinical practice.

Financial disclosure

None to disclose.

CRedit authorship contribution statement

Merrily E. LeBlanc: Writing – original draft, Conceptualization. **Mai-Han Trinh:** Writing – review & editing, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Dougie Zubizarreta:** Writing – review & editing, Conceptualization. **Sari L. Reisner:** Writing – review & editing, Visualization, Validation, Supervision, Funding acquisition.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

The data for the U.S. Transgender Population Health Survey (TransPop) is available within Inter-university Consortium for Political and Social Research (ICPSR)

Acknowledgements

NA.

Funding

Dr. Reisner was partly supported by the Eunice Kennedy Shriver National Institute of Child Health and Human Development (R01HD090468) (PI: Meyer).

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