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# The Harm in Seeking Care: Assessing the Relationship Between Healthcare Discrimination and Healthcare Avoidance Behaviors in the Past Year and Since the Start of the Coronavirus Pandemic in a Transgender and Gender Independent Sample

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**THE HARM IN SEEKING CARE**
Assessing the Relationship Between Healthcare Discrimination and Healthcare Avoidance
Behaviors in the Past Year and Since the Start of the Coronavirus Pandemic in a Transgender
and Gender Independent Sample


A thesis submitted in partial fulfillment of the requirement of the degree of Master of Science at
Virginia Commonwealth University


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B.A., Mary Baldwin University, Staunton, VA, 2019

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## Acknowledgements

"A person is a person through other persons; you can't be human in isolation; you are human only in relationships". – Desmond Tutu

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**Abstract**

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**Background:** Gender minorities encounter a myriad of barriers to accessing general and gender affirming healthcare. Financial disparities impacting affordability of healthcare costs and insurance-based denials for gender-affirming care are among prominent barriers discussed. Considerations of the prevalence of stigma, discrimination, and erasure of gender minority identities must not be neglected when seeking to understand healthcare accessibility and utilization in this population. Previous researchers have examined gender minority patients' experiences of discrimination in healthcare settings and delaying care due to fear of discrimination. There is a dearth of knowledge about the relationship between lifetime exposure to varied forms of healthcare discrimination and healthcare avoidance behaviors; potentially resulting in health disparities in this population. The purpose of this study was to examine the relationship between perceived lifetime healthcare discrimination and healthcare avoidance in the past year and since the start of the coronavirus pandemic due to anticipated discrimination in

a gender minority sample. This study also evaluated the relationship between perceived healthcare discrimination and anxiety and depressive symptoms in this population. **Method:** The gender minority sample (N = 342) was recruited using an online recruitment platform. Participants responded to inquiries related to their demographic information, experiences of gender identity-related discrimination in healthcare, healthcare utilization, and mental health symptoms. **Results:** The majority (78.1%) of participants reported being exposed to at least one form of healthcare discrimination in their lifetime, though participants reported experiencing an average of almost two and a half ($M$ = 2.43) distinct forms of healthcare discrimination. Most (64.9%) participants reported that the medical forms that healthcare providers asked them to complete were not inclusive of their gender identity at least once in their lifetime and 43.5% reported having to teach a healthcare provider about gender minority identities in order to receive appropriate healthcare. More than a fourth (26.3%) of participants reported avoiding needed healthcare in the past year and 16.1% since the start of the coronavirus pandemic due to anticipated discrimination in healthcare settings because of their gender identity. A majority of the sample scored at or exceeded the clinical thresholds (≥7) on the depression (73%) and anxiety (62%) *Brief Symptom Inventory* subscales. Hierarchical logistic regression analyses showed that healthcare discrimination significantly predicted healthcare avoidance in the past year, $\chi^2$ (1) = 44.14, $p$ < .001, $OR$ = 1.54, 95% CI [1.35-1.75], $p$ < .001, and since the start of the coronavirus, $\chi^2$ (1) = 36.27, $p$ < .001, $OR$ = 1.55, 95% CI [1.34-1.78], $p$ < .001, over and above five demographic variables (age, race, income, insurance coverage, and disability/neurodivergent identity status). Participants were 54% more likely to avoid needed healthcare in the past year and 55% more likely since the start of the coronavirus as their exposure to distinct types healthcare discrimination increased. Healthcare discrimination significantly predicted anxiety,

$\Delta R^2 = .084$, $\Delta F(1, 338) = 32.17$, $p < .001$, and depressive symptoms, $\Delta R^2 = .044$, $\Delta F(1, 338) = 16.09$, $p < .001$, over and above two demographic variables (age and race). **Discussion:** These findings suggest that healthcare avoidance incited by exposure to gender identity-based healthcare discrimination and erasure is a prominent barrier perceived by transgender and gender independent individuals to accessing healthcare generally and during a global pandemic. **Conclusion:** The adoption and implementation of healthcare inclusion initiatives and policies would be supportive of increasing equitable access to and utilization of healthcare for transgender and gender independent individuals.

Keywords: transgender, healthcare discrimination, healthcare utilization, anxiety, depression, Coronavirus

**The Harm in Seeking Care**

Assessing the Relationship Between Healthcare Discrimination and Healthcare Avoidance

Behaviors in the Past Year and Since the Start of the Coronavirus Pandemic in a Transgender

and Gender Independent Sample

**Introduction**

The visibility and prevalence of gender minority individuals has increased in recent

years, leading to the proliferation of empirical research regarding the biological, psychological,

and social experiences of this population. Despite their increased visibility in multiple societal

contexts and in existing health and psychology research literature, gender identity related

discrimination and marginalization is prevalent in almost every institutional, systematic, and

social domain that gender minorities engage with, including healthcare settings. Stigma,

discrimination, and erasure of gender minority identities in healthcare settings serve as central

barriers in accessibility and utilization of healthcare for gender minority patients (Bauer et al.,

2009; Bauer et al., 2014; Bauer et al., 2015; Bradford et al., 2013; Grant et al., 2011; Jaffee et al.,

2016; James et al., 2016; Macapagal et al., 2016; Puckett et al, 2020; Rodriguez et al., 2017;

Seelman et al., 2017; Shires & Jaffee, 2015; White et al., 2015). Gender minority patients

represent a vulnerable tier of health care consumers facing distinct direct and indirect forms of

discrimination in healthcare settings including healthcare providers' lack of knowledge about

gender minority identities and healthcare needs, verbal and physical harassment, abuse, and

denial of care (Bakko & Kattari, 2020; Cruz, 2014; Grant et al., 2011; James et al., 2016,

Rodriguez et al., 2017). Several studies have reported that gender minority individuals delay or

avoid needed healthcare due to fears of discrimination (Cruz, 2014; Grant et al., 2011; Jaffee et

al., 2016; James et al., 2016; Kattari et al., 2019; Lykens et al., 2018; Seelman et al., 2017; White

et al., 2015). To the author's knowledge, no studies have sought to investigate the culmination of various forms of reported lifetime healthcare discrimination as a predictor for healthcare avoidance due to anticipated discrimination in gender minority individuals. The aim of the present study is to evaluate the relationship between reported lifetime healthcare discrimination and healthcare avoidance in the past year and since the start of the coronavirus pandemic due to anticipated discrimination among gender minorities. The present study also seeks to evaluate the relationship between perceived healthcare discrimination and anxiety and depressive symptoms in this population.

**Terminology**

The term gender minority refers to transgender and gender nonconforming individuals whose gender identities, gender roles, and gender expressions do not align with or conform to the gender norms associated with their natal (birth) sex (Hendricks & Testa, 2012). The terms transgender and gender nonconforming (TGNC) are referred to as umbrella terms - this terminology is often considered to be inclusive of and used to signify the vast spectrum of identities that exist within this community, although not all individuals within this community use this terminology to describe their gender identity. In an effort to not reinforce gender binarism (i.e., the idea that gender identity must solely and distinctly conform to assigned natal sex; Krieger, 2020) and to affirm the wholeness and the internal knowing of gender embodied in individuals within this community, I will refer to this population as transgender and gender independent for the remainder of this thesis. The term gender independent has been used in previous literature regarding this population in Canada (Pyne, 2014) and Australia (Zappa, 2017). Transgender and gender independent individuals are those who may have been assigned a female natal sex and identify more closely with masculinity and seek congruity anatomically and

psychologically (FTM), assigned a male natal sex and identify more closely with femininity and seek congruity anatomically and psychologically (MTF), and those individuals who were assigned a male, female, or intersex natal sex and whose gender identities align with neither, both, or an amalgamation of masculinity and femininity who may or may not seek congruity anatomically and psychologically (e.g., gender nonbinary, genderqueer, androgynous, neutrois, etc.). This range of gender identities and conceptualization of the variance in the relationship between natal sex and gender identity varies away from historical constructs regarding gender (American Psychological Association, 2015).

**Prevalence of Transgender and Gender Independent Identities**

In a meta-analysis, Meerwijk & Sevelius (2017) examined national population-based surveys published from 2006 to 2016 to estimate the population size of transgender individuals in the United States. Their study indicated that for every 100,000 adults in the United States that 390 (0.39%) identify as transgender – equating to almost 1 million Americans (Meerwijk & Sevelius, 2017). In a similar analysis of surveys published from 2009 to 2011, with a specific focus on the transgender and gender independent population in Massachusetts, it was estimated that 0.5% of the adult population surveyed (ages 18 to 64 years) identified as transgender and/or gender independent (Conron et al., 2012). These studies depict that there is a significant proportion of individuals in the United States population who have a transgender or gender independent identity. The prevalence of this population may be much higher than previous research has been able to distinguish and articulate due to informational erasure, the prominent use of convenience samples, and the methodological reliance on explicit (self-report) survey measures or on the identification of individuals in this population from medical charts and diagnostic coding within clinical and healthcare settings. Some individuals in this population

may be aware of their gender variance and yet do not identify as a transgender (i.e., transgender is rarely an option given, but even when it is a choice it may not be representative of an individual's gender identity), some may not seek congruity with their gender identity and their anatomy or may not have access to seek the support of medical treatment for congruity and gender affirming procedures, and others may not find that being visible or represented in healthcare settings and research is liberating or even possible.

## Historical Perspective of Gender Identity

Historically in the United States, sex (biological structures of what is categorized as male or female – sex chromosomes, hormones, and internal and external genitalia identified at birth) has been conflated with gender (existing in a role that is girl/woman/female or boy/man/male in accordance with socially designated behavior and personality patterns), and gender roles with gender expression (presentations of masculinity and femininity through physical expressions, clothing, and verbal/physical gestures and behaviors) (American Psychiatric Association, 2013). The conflation and assertions of a biological orientation of sex to gender has resulted in a binary and cisnormative view of gender identity – that gender identity is uniformly aligned with an individual's assigned natal sex and that all people conceptualize their identities in this manner. The APA (2015) defines gender identity as an individual's "deeply felt, inherent sense of being a boy, a man, or male; a girl, a woman, or female or an alternative gender that may or may not correspond to a person's sex assigned at birth or to a person's primary or secondary sex characteristics" (p. 862).

## Gender Dysphoria

The APA's (2013) Diagnostic and Statistical Manual of Mental Disorders 5th edition (DSM-5) acknowledges the variances that individuals experience in gender identity development

and describes the distress that can be associated with gender variance as Gender Dysphoria. Gender dysphoria is defined as the distress that is associated with "a marked incongruence between one's experienced/expressed gender and assigned gender" (APA, 2013). The description of gender dysphoria acknowledges that transgender and gender independent individuals' experiences of distress that are associated with the incongruence felt between their natal sex and gender identity is not stagnant; that the degree of distress that individuals feel may be in some degree impacted by the perceptions or misperceptions (i.e., being misgendered) of others regarding their gender identity and their autonomy in, access to, and use of social, psychological, and/or physical affirmations of their gender identity should they seek it (APA, 2013). The development of the diagnosis of gender dysphoria may have provided transgender and gender independent individuals a route to affirmation, validation, and the ability to access necessary psychological and physical health care and support. However, its inclusion at times has resulted in exploitation, stigma, discrimination, and bias that has impacted transgender and gender independent patient control and serves as a barrier in transgender and gender independent patients' ability to advocate for themselves and for the relationship they would like to have with their minds and bodies (Lev, 2009). Whether or not a transgender or gender independent individual has a gender dysphoria diagnosis or seeks provider or insurance approval for gender affirming mental or physical health interventions (e.g., therapy, hormone replacement therapy, gender affirming surgeries) they should be treated with competent and compassionate care. Health care professionals should rely on standards of care such as the World Professional Association for Transgender Health's (WPATH) *Standards of Care for the Health of Transsexual, Transgender, and Gender Nonconforming people* (Coleman et al., 2012) for guidance, when their organization does not have inclusive and affirming standards to guide them

– rather than continue to perpetuate incompetent, stigmatizing, and discriminatory practices. Stigma and discrimination can have an immensely harmful impact on an individual's health and well-being and may result in minority stress (Frost & Meyer, 2009).

**Minority Stress Model**

The Minority Stress Model (Meyer, 2003) - initially formulated to consider the minority stress processes of the Lesbian, Gay, and Bisexual population; is facilitative in interpreting why transgender and gender independent individuals experience heightened distress. Applications of the minority stress model have been applied to the transgender and gender independent population (Hendricks & Testa, 2012; Testa et al., 2015). The model examines the three processes through which transgender and gender independent individuals are vulnerable to socially induced stress; distal stressors, interactive proximal stressors, and internalized proximal stressors. Distal stressors are those that are external and observable such as transgender and gender independent individuals' experiences with discriminatory, stigmatized, and violent behaviors in multiple societal domains – to include health care settings (e.g., a doctor or nurse refusing to use the patient's preferred pronoun). Interactive proximal stressors are the processes by which transgender and gender independent individuals develop a heightened vigilance in anticipation and expectation for rejection, discrimination, stigma, and violence (e.g., a heightened fear of verbal harassment in a health care setting due to experiencing or witnessing verbal harassment in the past). Internalized proximal stressors are demonstrative of the psychological processes that occur for transgender and gender independent individuals when they internalize the rejection and negative social demeanors that may result in concealment of their gender identity, internalized transphobia, detrimental mental health outcomes, inefficacious coping strategies such as non-medical use of prescription drugs (Benotsch et al., 2013) or

avoidance of needed health care (Bauer et al., 2014; Jaffee et al., 2016; James et al., 2016; Macapagal et al., 2016; Seelman et al., 2017). Researchers have assessed various facets of minority stress and resilience pathways that may transcend the negative health outcomes that exist as a result of socially induced stress such as elevated self-esteem and identity acceptance, social support, and advocacy for the reduction and/or elimination of stigmatized and discriminatory policies that exist within social systems (Bariola et al., 2015; Barr et al., 2016; Meyer, 2015). The minority stress model has been a predominant conceptual framework through which researchers have explained the heightened levels of stress and adverse health outcomes that transgender and gender independent individuals experience as a result of chronic, complex, and high levels of gender identity-related stigma, prejudice, and discrimination (Flentje et al., 2019; Meyer, 2020).

**Psychological Distress**

A number of empirical studies have articulated noteworthy findings regarding the elevated levels of psychological distress reported by transgender and gender independent individuals related to experiences of minority stress (e.g., discrimination, stigma, and violence) (Barzagan & Galvin, 2012; Bockting et al.., 2013; Clements-Nolle et al., 2006; Dispenza et al., 2012; James et al., 2016; Rotondi et al., 2011; Staples et al., 2018; Tebbe & Moradi, 2016; Testa et al., 2017, 2015). Exposure to minority stress has been found to be related to a myriad of mental health concerns including depression (Barzagan & Galvin, 2012; Bockting et al., 2013; Dispenza et al., 2012; Puckett et al., 2019; Puckett et al., 2020; Rotondi et al., 2011), anxiety (Bockting et al., 2013; Borgogna et al., 2019; Puckett et al., 2019; Puckett et al.., 2020), and suicidality (Clements-Nolle et al., 2006; Dickey & Budge, 2020; James et al., 2016; Staples et al., 2018; Testa et al., 2017). Studies have also explored associations between exposure to

discrimination and internalized stigma (Meyer, 2003; Watson et al., 2019); which when combined with experiences of external discrimination and violence may result in psychological exhaustion, concern for physical and psychological safety, anticipation for future discriminatory experiences, and avoidance of spaces that may result in discrimination and/or victimization (Puckett et al., 2018; Rood et al., 2016). Though researchers have clearly articulated the deleterious psychological distress that transgender and gender independent individuals experience driven by their experiences of discrimination, stigmatization, and marginalization; less is known about the relationship between experiences of health care discrimination and psychological symptoms experienced by this population. The current study aimed to evaluate the relationship between perceived health care discrimination and anxiety and depressive symptoms in a sample of transgender and gender independent individuals.

**Erasure**

Though direct and visible forms of stigma and discrimination are important to consider when examining the ostracism associated with deleterious health outcomes in transgender and gender independent individuals, erasure is an additional distinct function that is supportive in understanding the intricate systematic, structural, and institutional exclusion that makes this population vulnerable in healthcare settings (Bauer et al., 2009). A qualitative analysis conducted by Bauer et al (2009) further conceptualized two distinct ways that erasure in healthcare impacts transgender and gender independent individuals - informational and institutional erasure. Informational erasure refers to the deficit in knowledge advanced about the experiences of transgender and gender independent individuals and the assumption that such knowledge does not exist, when there is evidence of people who have these identities and experiences (Bauer et al., 2009). Informational erasure can also be conceptualized in terms of gender identity data not

being routinely collected in population surveys (e.g., The U.S. Census); in contrast, data on natal sex is often collected in most population and health surveys. Institutional erasure refers to a lack of policy and structure in organizations and systems to at the very least accommodate, protect or affirm gender minorities (e.g., public restrooms and accommodations being designated for men/women, or medical intake forms that utilize binary framing sex categories). Transgender and gender independent individuals' susceptibility to direct and indirect forms of informational and institutional erasure serve as barriers in accessibility and engagement with healthcare (Bauer et al., 2009). The current study aimed to understand this population's experiences of erasure when engaging with healthcare providers.

**Healthcare Discrimination**

Existing studies have reported disturbingly high patterns of societal discrimination in education, housing, employment, legal protection and support, public accommodations, and access to quality healthcare (Grant et al., 2011, James et al., 2016; McCann & Brown, 2017). Grant et al (2011) and James et al (2016) identified inequalities in education and employment as barriers to healthcare access, amidst the discrimination that transgender and gender independent individuals face in healthcare when they are able to access it. Transphobia (i.e., irrational fear and/or hatred of transgender and gender independent individuals) and cisgenderism (i.e., systemic bias based on the idea that all people are cisgender, thereby leading to prejudicial beliefs and behaviors toward transgender and gender independent individuals) contribute to the violence and discrimination that transgender and gender independent individuals are exposed to in structural systems including education, thereby contributing to the inequities this population faces in employment impacting their ability to cover healthcare costs (Grant et al., 2011; James et al., 2016). Rodriguez et al (2017) assessed discrimination in health care settings among

transgender and gender independent identified individuals (N = 6,106) in the United States related to their recognizability as a transgender or gender independent. Almost half (49%) of the participants in the study reported that they are always, most of the time, or some of the time recognized as a transgender and/or gender independent. Experiences of discrimination in health care was reported by 33.1% of the participants. The researchers in the study found that there was a significant relationship between being recognized as transgender and/or gender independent to any extent and perceived discrimination in healthcare settings, with discrimination being most prevalent in participants who reported being recognized as transgender or gender independent always (40.9%) and most of the time (36.9%). In a similar study Shires & Jaffee (2015) examined the factors associated with health care discrimination against FTM identified individuals (N = 1,711) in a secondary analysis of the *National Transgender Discrimination Survey* (Grant et al., 2011). The researchers in the study found that 41.8% of the participants reported verbal harassment, physical assault, or denial of equal treatment and care in a doctor's office or hospital. The researchers in the study also found that being a racial/ethnic minority, sexual minority, having a lower education level, living in a specified non-binary gender identity, using hormonal and surgical treatments, and having identification documents where gender identity and natal sex were not aligned was associated with increased reporting of health care discrimination experiences. The discrimination and disparities articulated in this study were consistent with the findings in James et al.'s (2016) *U.S. Transgender Survey* findings of high levels of mistreatment and discrimination when seeking healthcare among a national sample of transgender and gender independent individuals (N = 27, 715). One-third (33%) of the participants who engaged with a health care provider had at least one negative experience related to being transgender and/or gender independent, with higher negative experiences reported when

participants reported intersecting minority identities. Additionally, James et al (2016) reported that 33% of participants did not see a health care provider when it was necessary due to their inability to afford the care, and 23% of participants reported avoiding health care services when it was necessary in the year prior to the completion of the self-report survey. Although researchers have described the prevalence of individual forms of healthcare discrimination (e.g., refusal or denial of trans-related care) using dichotomous variable responses (e.g., yes or no), to the author's knowledge no studies have evaluated the culmination of varying forms of healthcare discrimination across multiple forms of healthcare discriminatory experiences. The current study investigated the predictability of mental health outcomes and healthcare avoidance behaviors related to perceived healthcare discrimination.

**Healthcare Avoidance**

Researchers have begun to further investigate the avoidance and delaying of engagement in needed care due to the prevalence of stigma, discrimination, and erasure of transgender and gender independent identities in health care (Bauer et al., 2014; Bauer et al., 2015; Bradford et al., 2013; Jaffee et al., 2016; Macapagal et al., 2016; Seelman et al., 2017). Seelman et al (2017) examined whether or not non-inclusive healthcare and fear-based delaying or avoiding healthcare would predict poorer healthcare outcomes in a sample (N = 417) of transgender and gender independent adults in the Rocky Mountain region of the United States. The researchers in the study found that participants who delayed healthcare due to their fear of discrimination had worse general health than those who did not delay care (B = 0.26, p < .05), and that they were also at a 3% greater risk for anxiety and depression symptoms, a 4% greater risk of a past year suicide attempt, and 3% greater risk of past year suicidal ideation. In addition to fear of discrimination, researchers have also reported avoidance or delays in seeking care due to other

factors such as fear of discrimination due to an intersecting sexual minority identity (Macapagal et al., 2016), intersecting cultural identities (Bradford et al., 2013), and perceived provider sensitivity to and knowledge of transgender and gender independent identities and concerns (Bauer et al., 2015; Jaffee et al., 2016). The findings of these studies articulate fear of discrimination and consequent avoidance and delay of care as a dominant factor in health care challenges faced by transgender and gender independent identities. The current study investigated the relationship between perceived healthcare discrimination and avoidance of healthcare due to anticipated discrimination in the past year and since the start of the coronavirus pandemic.

**The Coronavirus Pandemic**

On March 11, 2020 the World Health Organization (WHO) declared the coronavirus outbreak a global pandemic (WHO, 2020). In response to that declaration, U.S. federal and state governments began to close or restrict access to public entities and issue guidance to the public to mitigate the spread of the coronavirus. The Centers for Disease Control and Prevention (CDC) issued guidance to state and local governments, primary and secondary schools, institutions of higher education, nursing homes, and individuals to limit community transmission by discouraging interaction between individuals outside of their homes, advising individuals to practice social distancing when interacting in public spaces, and encouraging the use of face coverings when entering indoor spaces (CDC, 2020*a, b*). In combination with the novelty of the coronavirus pandemic and the marginalization of the Lesbian, Gay, Bisexual, Transgender, and Questioning (LGBTQ+) community there is a dearth of knowledge regarding the impact that the coronavirus has had on the LGBTQ+ population generally. Researchers have highlighted potential individual, structural, and social challenges faced by LGBTQ+ populations in the

context of the coronavirus pandemic (Salerno et al., 2020). Gonzalez et al (2020) evaluated the

mental health needs of LGBT college students in the U.S. during the coronavirus pandemic. The

study found that approximately 60% of the sample (N = 477) reported experiencing

psychological distress, anxiety, and depression during the pandemic. To the author's knowledge,

there have been investigations of the impacts of the coronavirus pandemic on psychological

health outcomes among individuals in this population (Hawke et al., 2021; Hunt et al., 2021;

Kidd et al., 2021; Moore et al., 2021), but none have investigated the physiological health

impacts of the pandemic on transgender and gender independent individuals. The current study

evaluated the relationship between perceived experiences of healthcare discrimination and

avoidance of healthcare due to anticipated discrimination since the start of the pandemic.

**The Present Study**

The aim of the present study was to evaluate the relationship between reported lifetime

healthcare discrimination and healthcare avoidance in the past year and since the start of the

coronavirus pandemic due to anticipated discrimination among transgender and gender

independent individuals. Although previous research has examined this population's experiences

with discrimination in healthcare settings and delaying healthcare due to fear of discrimination,

no studies have examined the culmination of varied forms of discrimination as a predictor for

healthcare avoidance behaviors due to anticipation of discrimination, or psychological distress.

The present study also evaluated the relationship between perceived healthcare discrimination

and anxiety and depressive symptoms in this population.

**Hypothesis 1a-1b:** I hypothesize that perceived healthcare discrimination will

significantly predict past year healthcare avoidance due to anticipated discrimination among

transgender and gender independent individuals. I also hypothesize that perceived healthcare

discrimination will significantly predict past year healthcare avoidance due to anticipated discrimination after accounting for other factors that may contribute to healthcare avoidance behaviors including age, race/ethnicity, income, disability/neurodivergent identity status, and health insurance coverage.

**Hypothesis 2a-2b:** I hypothesize that perceived healthcare discrimination will significantly predict healthcare avoidance since the start of the coronavirus due to anticipated discrimination among transgender and gender independent individuals. I also hypothesize that perceived healthcare discrimination will significantly predict healthcare avoidance since the start of the coronavirus due to anticipated discrimination after accounting for other factors that may contribute to healthcare avoidance behaviors including age, race/ethnicity, income, health insurance coverage, and disability/neurodivergence identity status; and symptoms of coronavirus.

**Hypothesis 3:** I hypothesize that perceived healthcare discrimination will significantly predict anxiety symptoms after accounting for other factors that may predict anxiety symptoms including age and race/ethnicity.

**Hypothesis 4:** I hypothesize that perceived healthcare discrimination will significantly predict depression symptoms after accounting for other factors that may predict depression symptoms including age and race/ethnicity.

## Method

**Procedures**

The data for this study were derived from participant responses to a survey administered online from June 25 to July 4, 2020. The participants were recruited using Prolific, an online research participant recruitment platform that connects social, economic, and political science researchers with their intended research demographic. Researchers have found that Prolific offers a more transparent and protective research environment for participants and researchers, higher data quality, and higher levels of participant naivety and diversity when compared with other online research recruitment platforms (Palan and Schitter, 2018; Peer et al., 2017). Several steps were taken to ensure the quality of the data collected in this online survey: (a) participants had to complete prescreening demographic information via their Prolific profile to be considered for the study; specifically the information that participants reported regarding their natal sex and current gender identity when creating their initial Prolific research participant profile was used to only invite those that did not identify as cisgender, (b) IP addresses were examined to ensure that participants were in the United States and to support in the identification of any potential duplicate responses, (c) the survey platform included survey protection options that allowed the participants' anonymous Prolific IDs to be recorded for support in identifying potential duplicate responses, (d) participants were required to accurately complete a CAPTCHA challenge to inhibit programmed responses (e.g., participants were prompted to check a box stating "I'm not a robot" and accurately identify items within a gridded photo), and (e) participants were required to answer five questions positioned within the survey to assess their attention to what survey questions were asking of them and had to accurately complete four of the five attention checks to be included in study analysis (e.g., Please select "neither agree nor disagree" for this item.).

These attention checks were also supportive of disqualifying participants who were being potentially impetuous or randomly responding to survey questions.

Participants were required to meet the following criteria to be eligible to participate in this study: (a) be 18 years old or older, (b) identify as transgender or gender independent (e.g., Transgender, Gender non-conforming, Non-binary, Genderqueer, Gender fluid, and other gender identities that vary away from the historical binary lens of gender), (c) have the ability to complete the anonymous self-administered online Prolific survey in English, and (d) have an approval rating of 95 percent or above in prior research studies participated in through the Prolific platform. In total, 368 individuals accessed the online survey after qualifying to participate in the study based on their responses to a Prolific demographic screener questionnaire. Ninety-three percent (n = 342) of the individuals who accessed the survey were retained for this study's analyses. The remaining 7% (n = 26) were disqualified from the study as a result of a variety of factors: inaccurately responding to the CAPTCHA challenge (n = 7), not completing any questions beyond the CAPTCHA challenge (n =5), inaccurately answering more than one of the five attention check questions (n = 1), only completing the portion of the survey not inclusive of gender identity and natal sex questions (n =2), and reporting what would appear to be a cisgender identity – making them ineligible to participate in the study (n = 11).

Participants were prompted to review a consent document prior to accessing the survey (see Appendix A). Once consent was obtained and the CAPTCHA question was accurately answered participants were asked to respond to inquiries regarding demographic information, experiences of gender-related discrimination in healthcare and in other contexts, healthcare engagement or avoidance behaviors, mental health symptoms, resiliency factors, substance use behaviors, and coronavirus impacts. In total, the survey consisted of 112 items (survey

respondents may have engaged with fewer items due to skip patterns throughout the survey) and took participants an average of 13 minutes to complete. Upon completion of the survey participants received compensation for their time in the amount of $1.20. The current study's materials and procedures were approved by Virginia Commonwealth University's Institutional Review Board.

**Sample**

The final sample (N = 342) includes transgender and gender independent respondents from 42 of the United States of America and the District of Columbia. The predicted population for 2019 from the U.S. Census Bureau (2019) was found to be strongly correlated with the number of participants from each state, $r(49) = .95$, $p < .001$. On average, participants were 25.8 years old (*Standard Deviation = 7.2, Range = 18 – 59 years*). The sample reported a diverse range of gender identities. Just over half of the sample identified as either Non-binary (39.2%) or Trans Man (12.3%), and the other half of the sample reported gender identities including Trans Woman, Man, Woman, Gender Fluid, Genderqueer, Gender Non-Conforming, or another identity not listed. A total of 32 participants reported that their gender identity was not listed among the survey options. Examples of the written responses for those participants included: Agender, Bigender, Transmasculine, Transmasculine non-binary, and other individually listed identities (e.g., "Demi-boy", "Demigirl", "Intersex AFAB Trans Masc Non-binary"). An assigned female natal sex was reported by the majority (72.1%) of the sample. Over half of the sample reported a sexual orientation that was either Bisexual (33.3%) or Pansexual (22.8%). A total of 29 participants reported that their sexual orientation was not listed among the survey options. Some examples of the responses participants entered include: Queer, Asexual, and Demisexual. The majority of participants identified as Non-Hispanic White (68.7%) with low

levels of annual income (57% of participants reported that they earned less than $40,000 per year). Slightly less than half of the sample reported that the highest level of formal education they attained was High School (43%) or GED (6.4%). Employment status varied among the sample with over half of the sample being unemployed (33%) or Students (28.9%). The majority of the sample reported having health insurance (80.7%) and were more frequently covered under private healthcare plans (67.4%). More than half of participants indicated that they have primarily lived with parents/siblings (40.4) or a partner (24.0%) during the past year. Sixty-five percent of participants reported that their daily activities are limited in some way due to their physical, mental, or emotional health. Just over half of the sample identified as disabled and/or neurodivergent (52.6%). Though only a small number of participants (n = 33) reported using assistive equipment or technologies (e.g., a mobility device, wheelchair, screen reader, captioning software, etc.) this is important to note. A complete description of demographic information for the sample is presented in Table 1.

**Table 1:** *Sample Demographics*

| Demographic Characteristics | n (%) |
|---|---|
| Assigned Natal Sex | |
| **Female** | 246 (72.1) |
| **Male** | 95 (27.9) |
| Gender Identity | |
| **Non-Binary** | 134 (39.2) |
| **Trans Man** | 42 (12.3) |
| **Trans Woman** | 33 (9.6) |
| **Another Identity not Listed** | 32 (9.4) |
| **Man** | 23 (6.7) |
| **Woman** | 23 (6.7) |
| **Gender Fluid** | 22 (6.4) |
| **Genderqueer** | 21 (6.1) |
| **Gender non-conforming** | 12 (3.5) |
| Sexual Orientation | |

| | |
|---|---|
| **Bisexual** | 114 (33.3) |
| **Pansexual** | 78 (22.8) |
| **Gay** | 61 (17.8) |
| **Asexual** | 45 (13.2) |
| **Another identity not listed** | 29 (8.5) |
| **Heterosexual** | 15 (4.4) |
| Race or Ethnicity | |
| **Non-Hispanic White** | 235 (68.7) |
| **Multiracial/ethnic** | 48 (14.0) |
| **Asian/Asian American** | 21 (6.1) |
| **Hispanic/Latinx** | 20 (5.8) |
| **Black** | 15 (4.4) |
| **Native American** | 2 (.6) |
| **Other race/ethnicity** | 1 (.3) |
| Education Attainment | |
| **Middle School** | 2 (.6) |
| **GED** | 22 (6.4) |
| **High School** | 147 (43.0) |
| **Vocational School** | 5 (1.5) |
| **Associates Degree** | 52 (15.2) |
| **Bachelor's Degree** | 89 (26.0) |
| **Graduate Degree** | 25 (7.3) |
| Employment Status | |
| **Unemployed** | 113 (33.0) |
| **Student** | 99 (28.9) |
| **Employed Part-time** | 77 (22.5) |
| **Employed Full-time** | 59 (17.3) |
| **Other** | 23 (6.7) |
| **Receiving Disability Benefits** | 16 (4.7) |
| **Retired** | 1 (.3) |
| Annual Income | |
| **$0 - $20,000** | 114 (33.3) |
| **$20,001 - $40,000** | 81 (23.7) |
| **$40,001 - $60,000** | 44 (12.9) |
| **$60,001 - $80,000** | 35 (10.2) |
| **$80,001 - $100,000** | 22 (6.4) |
| **$100,000 <** | 46 (13.5) |
| Housing (Past Year) | |
| **With parents/siblings** | 138 (40.4) |
| **With partner** | 82 (24) |

| | |
|---|---|
| **With friends/roommates** | 54 (15.8) |
| **University Housing** | 31 (9.1) |
| **Alone in non-university housing** | 22 (6.4) |
| **Another housing/living arrangement not listed** | 11 (3.2) |
| **In a shelter or experiencing housing instability** | 4 (1.2) |
| Health Insurance Coverage | |
| **Yes** | 276 (80.7) |
| **No** | 66 (19.3) |
| Health Insurance Coverage Type | |
| **Private Insurance** | 186 (67.4) |
| **Public Insurance** | 90 (32.6) |
| Limitations in Daily Activities | |
| **Yes** | 224 (65.5) |
| **No** | 88 (25.7) |
| **Don't Know** | 30 (8.8) |
| Disability/Neurodivergent Identity | |
| **Yes** | 180 (52.6) |
| **No** | 162 (47.4) |
| Assistive Equipment Usage | |
| **Yes** | 33 (9.6) |
| **No** | 302 (88.3) |
| **Don't Know** | 7 (2) |

**Measures**

*Demographics*

Most demographic variables (U.S. state of residence, natal sex, gender identity, sexual

orientation, race or ethnicity, education, employment status, annual income, and housing status)

were categorical. Participants were asked to type their age in a designated space. *State of*

*Residence* was assessed by asking participants to select the state they lived in at the time of

survey completion from a drop-down menu. *Assigned natal sex* was measured with a question

asking participants to report their sex identified at birth; participants could choose male or

female. *Gender identity* data were collected by asking participants to select all gender identity categories that applied to them. Gender identity categories included man, woman, trans man, trans woman, non-binary, genderqueer, gender non-conforming, gender fluid, and another identity not listed (participants were prompted to write their gender identity in a text box if they reported that their gender identity was not listed). *Sexual Orientation* was measured by asking participants to report the sexual orientation category that best described them; the categories included Heterosexual/Straight, Homosexual/Gay, Bisexual, Pansexual, Asexual, and another identity not listed (participants were prompted to write their sexual orientation in a text box when they reported that their sexual orientation was not listed). *Race or Ethnicity* data were collected by asking participants to select all race/ethnicity categories that applied to them. The Race or Ethnicity categories included White, Hispanic/Latino/a, Asian/Asian American, Black/African American, Native American, and another identity not listed (participants were prompted to write their race/ethnicity in a text box if they reported that their race/ethnicity was not included in response choices). A mutually exclusive race/ethnicity variable was created for data analysis purposes, consistent with previous research analyses (Kattari et al., 2019). *Education Attainment* was assessed by asking participants to indicate their highest level of formal education. Response choices for levels of education were: middle school, high school, GED, vocational school, associate's degree, bachelor's degree, and graduate degree. *Employment Status* data was assessed by asking participants to select one the following categories: employed full-time, employed part-time, student, retired, on disability, unemployed, or other employment category not listed (participants were prompted to type in their status of employment if it was not listed). *Annual Income* was assessed by asking participants to indicate their household annual income by selecting one of six categories: $0-$20,000, $20,001-$40,000, $40,001-$60,000, $60,001-

$80,000, $80,001-$100,000, and more than $100,000. *Housing Status* was assessed by asking

participants to indicate where they have primarily lived since the start of the coronavirus by

choosing one of the following responses: university housing, alone or in non-university housing,

with my partner, with friends/roommates, with my parents or siblings, in a shelter or

experiencing housing instability, or another housing/living arrangement not listed. *Health*

*Insurance Coverage* was measured by asking participants if they had health insurance at the time

that the survey was being completed by selecting yes or no. *Health Insurance Coverage Type*

data were assessed by asking participants who indicated that they have health insurance coverage

what type (public or private) of health insurance they have. Participants were provided with

definitions for public and private insurance in an effort to support participants' abilities to

distinguish between the two types of health care coverage. *Disability/Neurodivergent Identity*

data were collected by asking participants indicate whether or not they identify as disabled

and/or neurodivergent. *Limitations in Daily Activities* were measured by asking participants if

any of their daily activities are limited in any way because of their physical, mental, or emotional

health. Responses regarding physical limitation included: yes, no, or don't know. *Assistive*

*Equipment Usage* was measured by asking participants if they use any assistive equipment or

technologies, such as a mobility device, a wheelchair, a special bed, screen reader, or captioning

software. Participants indicated whether they used assistive equipment by choosing from three

response choices: yes, no, or don't know.

*Healthcare Discrimination*

A total of six items were adapted from the healthcare experiences portion of the *2015*

*U.S. Transgender Survey* (James et al., 2016) to assess experiences of healthcare discrimination.

Items assessed participants' experiences with varied types of discrimination in healthcare

settings and when engaging with healthcare providers including: having to educate a doctor or healthcare provider about transgender and/or gender independent people in order to receive appropriate care, being denied transgender and/or gender independent care or general health care, being asked unnecessary and/or invasive questions regarding gender identity status that was unrelated to the care being sought, and being verbally or physically harassed or abused. Two additional items were added to assess erasure in healthcare settings. Erasure items assessed participants' experiences with two different forms of erasure in healthcare settings or with healthcare providers including: denial of the use of a preferred name or pronoun, and medical forms and documents not being inclusive of an individually held gender identity. Response choices were adopted from Testa et al's (2015) *Gender Minority Stress and Resilience Measure* (GMSR) and included: "Never", "Yes, Before 18", "Yes, After 18", and "Yes, In the Past Year". Participants could choose multiple response choices if they experienced a specific type of healthcare discrimination at multiple points throughout their lives. Separate summary variables were created for childhood healthcare discrimination, past year healthcare discrimination, and healthcare discrimination that occurred at any point in an individual's lifetime. For each of the summary variables, the total number of events a participant indicated for each distinct time frame (e.g., before age 18, past year, and lifetime) were totaled, yielding scores with a possible range of zero to eight for each variable. This measure had adequate internal consistency (*a = 0.80)* in the present sample.

*Healthcare Avoidance*

A total of two items were adapted from the *2015 U.S. Transgender Survey* (James et al., 2016) to assess healthcare avoidance behaviors in the past year. Three additional items were created to assess healthcare avoidance behaviors since the start of the coronavirus pandemic and

were modeled after the two items adapted from the *2015 U.S. Transgender Survey*. Healthcare avoidance items assessed participants healthcare avoidance behaviors in distinct time frames (e.g., past year and since the start of the coronavirus) due to various factors (cost, anticipated discrimination, and coronavirus exposure). The five healthcare avoidance items included: (1) "Was there a time in the past 12 months when you needed to see a doctor but could not, because of cost?", (2) "Was there a time in the past 12 months when you needed to see a doctor but did not, because you thought you would be disrespected or mistreated as a trans/gender non-conforming person?", (3) "Since the start of the coronavirus pandemic (March 11, 2020), was there a time when you needed to see a doctor but could not, because of cost?", (4) "Was there a time since the start of the coronavirus pandemic when you needed to see a doctor but did not, because you thought you would be disrespected or mistreated as a trans/gender non-conforming person?", (5) "Was there a time since the start of the coronavirus pandemic, when you needed to see a doctor but did not, because you were worried about being exposed to the coronavirus in a healthcare setting?". Participants could select "yes" or "no" to indicate whether or not they had avoided healthcare in the past year and/or since the coronavirus due to anticipated healthcare cost, anticipated discrimination, and/or fear of coronavirus exposure.

*Mental Health Symptoms*

A total of twelve items from the Depression (six items) and Anxiety (six items) subscales of the Brief Symptom Inventory (BSI; Derogatis, 2001) were used to assess symptoms of depression and anxiety that occurred over the past week. Participants were asked to rate each of the twelve items on a 5-point Likert scale, ranging from "not at all" (0) to "extremely" (4) to indicate their experiences over that past seven days. Separate variables for anxiety and depression symptoms experienced over the past week were created. The items for each subscale

were summed for a total score, yielding scores with a possible range of zero to twenty-four for each scale. There was adequate internal consistency for both the Anxiety (*a = 0.89)* and Depression (*a = 0.88)* subscales in the present sample.

*Coronavirus Health-Related Questions*

Two items were adapted from Wang et al (2020) to assess whether participants had been diagnosed with coronavirus by a healthcare provider or if participants had experienced coronavirus symptoms. The two coronavirus health-related questions included: (1) "Have you been told by a healthcare provider that you had the coronavirus (covid-19)?", and (2) "Have you had symptoms that might have been the coronavirus (covid-19) such as fever, cough, sore throat, difficulty breathing, or loss of smell in the past 3 months, but you weren't tested?". Participants who indicated that they had not been diagnosed with coronavirus by a healthcare provider were given the question regarding having experienced coronavirus symptoms. Participants could choose "yes" or "no" to indicate whether or not they had been diagnosed with coronavirus or experienced symptoms of coronavirus, but had not been tested. The complete measure can be found in Appendix B.

**Analyses**

*Model Checking*

Data were examined for missing responses for all variables mentioned in the analyses

herein. It should be noted that there was one participant with missing data on the first two items

of the *Health Discrimination* measure. With the exception of the case mentioned, data from the

full sample were available for analysis for all variables. Preliminary analyses and appropriate

regression assumption checks indicated that all normality, univariate and multivariate outlier,

linearity, homoscedasticity, and multicollinearity assumptions were met. Data analyses included

descriptive statistics, two logistic regression models, and two multiple regression models.

*Hypothesis 1a -1b*

A direct logistic regression analysis was performed to assess whether perceived

healthcare discrimination significantly predicts past year healthcare avoidance due to anticipated

discrimination among transgender and gender independent individuals. A hierarchical logistic

regression analysis was conducted to assess whether perceived healthcare discrimination

significantly predicts past year healthcare avoidance due to anticipated discrimination when

controlling for certain demographic factors. Demographic information including: age, race,

income, insurance coverage, and disability/neurodivergence identity status were entered into the

first step, followed by the lifetime healthcare discrimination variable in the final step of the

model in order to demonstrate that healthcare discrimination can significantly predict past year

healthcare avoidance due to anticipated discrimination above and beyond the demographic

factors included in the analysis.

*Hypothesis 2a – 2b*

A direct logistic regression analysis was conducted to assess whether perceived healthcare discrimination significantly predicts healthcare avoidance since the start of the coronavirus pandemic due to anticipated discrimination among transgender and gender independent individuals. A hierarchical logistic regression analysis was conducted to assess whether perceived healthcare discrimination significantly predicts healthcare avoidance since the start of the coronavirus pandemic due to anticipated discrimination when controlling for certain demographic factors. Demographic information including: age, race, income, insurance coverage, and disability/neurodivergence identity status were entered into the first step of the model, followed by lifetime healthcare discrimination variable entered in the final step of the model in order to demonstrate that healthcare discrimination can significantly predict healthcare avoidance due to anticipated discrimination since the start of the coronavirus pandemic above and beyond the demographic factors included in the analysis.

*Hypothesis 3*

A hierarchical multiple regression was computed to assess whether perceived healthcare discrimination significantly predicts anxiety symptoms when controlling for certain demographic factors among transgender and gender independent individuals. Demographic information including age and race were entered into the first step, followed by the lifetime healthcare discrimination variable entered into the final step of the model to demonstrate that healthcare discrimination can significantly predict anxiety symptoms above and beyond age and race.

*Hypothesis 4*

A hierarchical multiple regression was computed to assess whether perceived healthcare discrimination significantly predicts depression symptoms when controlling for certain

demographic factors among transgender and gender independent individuals. Demographic information including age and race were entered into the first step, followed by the lifetime healthcare discrimination variable entered into the final step of the model to demonstrate that healthcare discrimination can significantly predict depression symptoms above and beyond age and race.

**Results**

*Healthcare Discrimination*

The degree to which transgender and gender independent participants reported experiencing discrimination in healthcare settings throughout the lifespan varied across specific healthcare discrimination items, though the majority (78.1%) of the sample reported experiencing at least one of the eight forms of healthcare discrimination that this study examined in their lifetime; with an overall sample average of almost two and a half ($M = 2.43$) distinct forms of healthcare discrimination being reported by participants. At least once in their lifetime, most (64.9%) participants reported that the medical forms that a doctor or other healthcare provider asked them to complete were not inclusive of their gender identity, 42.5% reported that they had to teach a doctor or other healthcare provider about transgender and gender independent identities so that they could receive the appropriate healthcare, 35.7% reported that a doctor or other healthcare provider refused to use the pronouns or name that they requested to be used when they were referred to, and 32.7% reported being asked unnecessary and/or invasive questions about their transgender or gender independent status that were not related to the reason for their visit. The participants who reported that they had not been exposed to healthcare discrimination throughout their lifetime represented a minority proportion (21.9%) of the sample. The complete results for the eight items of the of lifetime healthcare discrimination variable can be found in table 2.

**Table 2:** *Healthcare Discrimination*

| Healthcare Discrimination Items: | Never Occurred. | Occurred before age 18. | Occurred after age 18. | Occurred within the past year. | Occurred at least once in Lifetime. |
|---|---|---|---|---|---|
| *I had to teach a doctor or other health care provider about trans/gender non-conforming people so that I could get appropriate care.* | N = 196 57.5% | N = 48 14.1% | N = 111 32.6% | N = 58 17.0% | N = 145 42.5% |
| *A doctor or other health care provider refused to give me trans/gender non-conforming-related care.* | N = 268 78.6% | N = 31 9.1% | N = 50 14.7% | N = 20 5.9% | N = 73 21.4% |
| *A doctor or other health care provider refused to give me other health care (such as physical exam, flu, diabetes).* | N = 311 90.9% | N = 11 3.2% | N = 22 6.4% | N = 9 2.6% | N = 31 9.1% |
| *A doctor asked me unnecessary/invasive questions about my trans/gender non-conforming status that were not related to the reason for my visit.* | N = 230 67.3% | N = 34 9.9% | N = 85 24.9% | N = 36 10.5% | N = 112 32.7% |
| *A doctor or other health care provider used harsh or abusive language when treating me.* | N = 281 82.2% | N = 28 8.2% | N = 36 10.5% | N = 19 5.6% | N = 61 17.8% |
| *I was verbally harassed in a health care setting (such as hospital, office, clinic).* | N = 277 81.0% | N = 23 6.7% | N = 44 12.9% | N = 15 4.4% | N = 65 19.0% |
| *A doctor or other health care provider refused to use the pronouns or name that I requested to be used.* | N = 220 64.3% | N = 47 13.7% | N = 93 27.2% | N = 46 13.5% | N = 122 35.7% |

| *The medical forms or documents that a doctor or other health care provider asked me to complete did not include my gender identity.* | N = 120 35.1% | N = 108 31.6% | N = 180 52.6% | N = 127 37.1% | N = 222 64.9% |
|---|---|---|---|---|---|

*Healthcare Avoidance*

Reported healthcare avoidance in the past year and since the start of the coronavirus pandemic varied across rationales for avoidance of needed healthcare (i.e., cost, anticipated discrimination, and fear of coronavirus exposure). Avoidance of needed healthcare due to healthcare costs in the past year was reported by just under half (46.8%) of participants, and healthcare avoidance since the start of the coronavirus pandemic was reported by 30.1% of participants. Over a quarter (26.3%) of participants reported avoiding needed healthcare in the past year and 16.1% since the start of the coronavirus pandemic due to anticipated discrimination in healthcare settings because of their transgender or gender independent identity. A third (36.3%) of participants reported avoiding needed healthcare since the start of the coronavirus pandemic due to fears of coronavirus exposure in a healthcare setting. The complete results for the healthcare avoidance variable can be found in table 3.

**Table 3:** *Healthcare Avoidance*

| **Healthcare Avoidance Items:** | **Yes** | **No** |
|---|---|---|
| *Was there a time in the past 12 months when you needed to see a doctor but could not because of cost?* | N = 160 46.8% | N = 182 53.2% |
| *Was there a time in the past 12 months when you needed to see a doctor but did not because you thought you would be disrespected or mistreated as a trans/gender non-conforming person?* | N = 90 26.3% | N = 252 73.7% |
| *Since the start of the coronavirus pandemic (March 11, 2020), was there a* | N = 103 | N = 239 |

| | | |
|---|---|---|
| *time when you needed to see a doctor but could not because of cost?* | 30.1% | 69.9% |
| *Was there a time since the start of the coronavirus pandemic when you needed to see a doctor but did not because you thought you would be disrespected or mistreated as a trans/gender non-conforming person?* | N = 55<br><br>16.1% | N = 287<br><br>83.9% |
| *Was there a time since the start of the coronavirus pandemic, when you needed to see a doctor but did not because you were worried about being exposed to the coronavirus in a health care setting?* | N = 124<br><br>36.3% | N = 218<br><br>63.7% |

*Mental Health Symptoms*

Predominately, the sample reported moderately high levels of depressive ($M$ = 10.85, $SD$ = 5.97) and anxiety symptoms ($M$ = 8.97, $SD$ = 5.65) based on their scores on the BSI depression and anxiety subscales (Derogatis, 2001). The majority (73%) of participants scored at or above the clinical threshold on the depression subscale. Over half (62%) of participants scored at or above the clinical threshold ($\geq$7) on the anxiety subscale.

*Coronavirus Health-Related Questions*

The majority (99.1%) of the sample reported that they had not been diagnosed with the coronavirus by a healthcare provider, while .9% ($n$ = 3) participants reported having been told by a healthcare provider that they had the coronavirus. A fourth (25.4%) of the participants ($n$ = 339) who reported that they had not been diagnosed with the coronavirus reported that they had experienced symptoms that might have been the coronavirus in the three months prior to participating in the study (e.g., fever, cough, sore throat, difficulty breathing, or loss of smell), but had not been tested for the coronavirus. The majority (74.6%) of participants who reported that they had not been diagnosed with the coronavirus reported that they had not experienced symptoms that might have been the coronavirus.

*Hypothesis 1a-1b: Past Year Healthcare Avoidance Analyses*

A direct logistic regression analysis was conducted to assess whether perceived healthcare discrimination significantly predicted past year healthcare avoidance due to anticipated discrimination among the transgender and gender independent sample. A test of the full model against a constant only model was significant, $\chi^2(1, N = 342) = 54.69, p < .001$, Nagelkerke $R^2 = .22$; indicating that healthcare discrimination as a sole predictor reliably distinguished between participants who did and did not avoid healthcare in the past year. According to Wald's criterion, healthcare discrimination was further affirmed as a significant predictor of past year healthcare avoidance due to anticipated discrimination, $\chi^2(1) = 46.67, p < .001$. The change in odds associated with a one-unit change in score on the healthcare discrimination measure was 1.52 (95% CI = 1.35-1.71), indicating that higher exposure to healthcare discrimination was associated with a 52% increase in the likelihood of past year healthcare avoidance.

A hierarchical logistic regression analysis (see table 4) was conducted to assess whether perceived healthcare discrimination significantly predicted past year healthcare avoidance due to anticipated discrimination when controlling for five demographic factors. Demographic information including: age, race, income, insurance coverage, and disability/neurodivergence identity status were entered into the first step of the model, followed by the lifetime healthcare discrimination variable entered in the final step of the model. When the five demographic variables were entered into the model and tested against the constant only model, they significantly predicted past year healthcare avoidance, $\chi^2 (5) = 13.39\ p = .02$, Nagelkerke $R^2 = .056$, accounting for 5.6% of the variance. At the initial step of the model, disability/neurodivergence identity status was a significant independent predictor of past year

healthcare avoidance $\chi^2$ (1) = 8.46, $p$ = .004, $OR$ = 2.13, 95% CI [1.28-3.54]. When the healthcare discrimination variable was entered into the model a test of the full model against the constant only model significantly improved prediction of past year healthcare avoidance, $\chi^2$ (6) = 65.01, $p$ < .001, Nagelkerke $R^2$ = .25, indicating that together age, race, income, insurance coverage, disability/neurodivergent identity status, and healthcare discrimination reliably distinguished between those who did or did not avoid needed healthcare in the past year, accounting for 25% of the variance. Healthcare discrimination, $\chi^2$ (1) = 44.14, $p$ < .001, $OR$ = 1.54, 95% CI [1.35-1.75], $p$ < .001, significantly predicted healthcare avoidance in the past year over and above the five demographic variables. For each one point increase in healthcare discrimination exposure, participants were 54% more likely to avoid needed healthcare in the past year due to anticipating discrimination.

**Table 4:** *Past Year Healthcare Avoidance*

| Variable & Step | OR | CI | B | S.E. | p |
|---|---|---|---|---|---|
| **Step 1:** | | | | | |
| Age | .97 | (.93-1.00) | -.034 | .019 | *ns* |
| Race | .83 | (.48-1.42) | -.188 | .276 | *ns* |
| Income | .92 | (.79-1.06) | -.082 | .075 | *ns* |
| Health Insurance | 1.46 | (.76-2.81) | .377 | .335 | *ns* |
| Disability | 2.13 | (1.28-3.54) | .756 | .260 | *.004* |
| **Step 2:** | | | | | |
| Healthcare Discrimination | 1.54 | (1.35-1.75) | .430 | .065 | *<.001* |

*N = 342, ns = not significant*

*Hypothesis 2a-2b: Healthcare Avoidance Since the Start of the Coronavirus Analyses*

A direct logistic regression analysis was conducted to assess whether perceived healthcare discrimination significantly predicted healthcare avoidance since the start of the coronavirus pandemic due to anticipated discrimination. A test of the full model against a constant only model was significant, $\chi^2(1, N = 342) = 46.73$, $p < .001$, Nagelkerke $R^2 = .22$; indicating that healthcare discrimination as a sole predictor reliably distinguished between participants who did and did not avoid needed healthcare since the start of the coronavirus pandemic due to anticipated discrimination. According to Wald's criterion, healthcare discrimination was further affirmed as a significant predictor of healthcare avoidance since the start of the coronavirus pandemic due to anticipated discrimination, $\chi^2(1) = 41.14$, $p < .001$. The change in odds associated with a one-unit change in score on the healthcare discrimination measure was 1.55, 95% CI = [1.36-1.78], indicating that higher exposure to healthcare discrimination increased the likelihood of healthcare avoidance since the start of the coronavirus pandemic by 55%.

A hierarchical logistic regression analysis (see table 5) was conducted to assess whether perceived healthcare discrimination significantly predicted healthcare avoidance since the start of the coronavirus pandemic due to anticipated discrimination when controlling for five demographic factors. Demographic information including: age, race, income, insurance coverage, and disability/neurodivergence identity status were entered into the first step of the model, followed by the lifetime healthcare discrimination variable entered in the final step of the model. When the five demographic variables were entered into the model and tested against the constant only model, they significantly predicted healthcare avoidance since the start of the coronavirus, $\chi^2 (5) = 14.98$, $p = .01$ Nagelkerke $R^2 = .07$. At the initial step of the model

disability/neurodivergent identity $\chi^2$ (1) = 9.58, $p$ < .002, $OR$ = 2.77, 95% CI [1.45-5.28] was a significant individual predictor of healthcare avoidance since the start of the coronavirus pandemic. When the healthcare discrimination variable was entered into the model a test of the full model against the constant only model significantly improved prediction of healthcare avoidance since the start of the coronavirus pandemic, $\chi^2$ (6) = 55.68, $p$ < .001, Nagelkerke $R^2$ = .26, indicating that together age, race, income, insurance coverage, disability/neurodivergent status, and healthcare discrimination reliably distinguished between those who did or did not avoid needed healthcare since the start of the coronavirus pandemic, accounting for 26% of the variance (accounting for 19% more in variance than the first step of the model). Healthcare discrimination, $\chi^2$ (1) = 36.27, $p$ < .001, $OR$ = 1.55, 95% CI [1.34-1.78], $p$ < .001, significantly predicted healthcare avoidance since the start of the coronavirus pandemic over and above the five demographic variables. For each one point increase on the healthcare discrimination measure, participants were 55% more likely to avoid needed healthcare since the start of the coronavirus pandemic. Having a disability/neurodivergent identity $\chi^2$ (1) = 3.90, $p$ = .048, $OR$ = 2.01, 95% CI [1.01-4.04] decreased in its significance as an independent predictor of healthcare avoidance since the start of the coronavirus pandemic due to anticipated healthcare discrimination at this step.

**Table 5:** *Healthcare Avoidance Since Start of the Coronavirus*

| Variable & Step | OR | CI | B | S.E. | *p* |
|---|---|---|---|---|---|
| **Step 1:** | | | | | |
| Age | .98 | (.93-1.02) | -.024 | .023 | *ns* |
| Race | .88 | (.46-1.70) | -.125 | .333 | *ns* |
| Income | .85 | (.70-1.02) | -.164 | .096 | *ns* |

| | | | | | |
|---|---|---|---|---|---|
| Health Insurance | 1.35 | (.63-2.93) | .303 | .393 | *ns* |
| Disability | 2.77 | (1.45-5.29) | 1.020 | .329 | *.002* |
| **Step 2:** | | | | | |
| Health Discrimination | 1.55 | (1.34-1.78) | .435 | .072 | *<.001* |

*N = 342, ns = not significant*

*Hypothesis 3: Anxiety Symptoms Analysis*

A hierarchical multiple linear regression analysis (see table 6) was conducted to assess whether perceived healthcare discrimination significantly predicted anxiety symptoms when controlling for two demographic factors. Demographic information including age and race were entered into the first step of the model, followed by lifetime healthcare discrimination entered in the final step of the model. When age and race were entered into the model, they significantly predicted anxiety symptoms, $F(2, 339) = 5.34$ $p = .005$, $R^2 = .031$. This initial model shows that only 3.1% of reported anxiety symptoms could be predicted by knowing a participant's age or race. Older participants reported fewer anxiety symptoms, compared with younger participants. Compared to Non-Hispanic white participants, People of Color scored 1.28 points lower, on average, in anxiety symptoms than Non-Hispanic whites. When the healthcare discrimination variable was added to the model, it significantly improved the prediction of anxiety symptoms over and above the two demographic variables, $\Delta R^2 = .084$, $\Delta F(1, 338) = 32.17$, $p < .001$. All variables together significantly predicted anxiety symptoms, $F(3, 338) = 14.61$, $p < .001$, $R^2 = .115$. The final model shows that 11.5% of the variance in reported anxiety symptoms could be predicted by knowing an individual's age, race, and lifetime healthcare discrimination exposure. Healthcare discrimination ($B = .745$, $t(338) = 5.67$, $p < .001$) significantly predicted anxiety

symptoms over and above age and race. For every one unit change on the healthcare

discrimination measure, a participants depression score increased by .75.

**Table 6:** *Anxiety Symptoms*

| Variable & Step | $R^2$ | $R^2$ Change | B | S.E | *t* |
|---|---|---|---|---|---|
| **Step 1:** | .031 | .031** | | | |
| Age | | | -.123 | .042 | -2.90** |
| Race | | | -1.276 | .658 | -1.94* |
| **Step 2:** | .115 | .084*** | | | |
| Healthcare Discrimination | | | .745 | .131 | 5.67*** |

*N = 342, \*p <.05; \*\*p <.01; \*\*\*p < .001*

*Hypothesis 4: Depressive Symptoms Analysis*

A hierarchical multiple regression analysis (see table 7) was conducted to assess whether

perceived healthcare discrimination significantly predicted depressive symptoms when

controlling for two demographic factors. Demographic information including age and race were

entered into the first step of the model, followed by the lifetime healthcare discrimination entered

in the final step of the model. When age and race were entered into the model, they significantly

predicted depressive symptoms, $F(2, 339) = 6.91$, $p = .001$, $R^2 = .039$. This initial model shows

that only 3.9% in reported depressive symptoms could be predicted by knowing a participant's

age or race. Older participants reported fewer depressive symptoms, compared with younger

participants. Compared to Non-Hispanic white participants, People of Color scored .30 points

lower, on average, in depressive symptoms than Non-Hispanic whites. When the healthcare

discrimination variable was added to the model, it significantly improved the prediction of

depressive symptoms over and above the two demographic variables, $\Delta R^2 = .044$, $\Delta F(1, 338) =$

16.09, $p < .001$. All variables together significantly predicted depressive symptoms, $F(3, 338) =$ 10.17, $p < .001$, $R^2 = .083$. The final model shows that 8.3% of the variance in reported depressive symptoms could be predicted by knowing an individual's age, race, and lifetime healthcare discrimination exposure. Healthcare discrimination ($B = .567$, $t(338) = 4.01$, $p < .001$) significantly predicted depressive symptoms over and above age and race. For every one unit change on the healthcare discrimination measure, a participants depression score increased by .57. In this step of the model, age ($B = .-.185$, $t(338) = -4.21$, $p < .001$) was a significant individual predictor of depressive symptoms, while race ($B= -.486$, $t(338) = -.714$, $p = .475$) was not a significant individual predictor.

**Table 7:** *Depressive Symptoms*

| Variable & Step | $R^2$ | $R^2$ Change | B | S.E. | $t$ |
|---|---|---|---|---|---|
| **Step 1:** | .039 | .039** | | | |
| Age | | | -.166 | .045 | -3.71*** |
| Race | | | -.301 | .693 | -.44 |
| **Step 2:** | .083 | .044*** | | | |
| Healthcare Discrimination | | | .567 | .141 | 4.01*** |

*N = 342, , *p <.05; **p <.01; ***p < .001*

*Exploratory Analyses: The potentiality of Disability/Neurodivergent Status as a Moderator*

An exploratory hierarchical logistic regression moderation analysis was conducted to evaluate the influence of disability/neurodivergent status on the relationship between perceived healthcare discrimination and past year healthcare avoidance due to anticipated discrimination. Prior to analyses, the independent (healthcare discrimination) and moderation (disability/neurodivergent status) variables were centered and a product term was created as

recommended by Baron & Kenny (1986). Perceived healthcare discrimination significantly predicted past year healthcare avoidance due to anticipated discrimination, $\chi^2$ (1) = 42.85, $p <$ .001, $OR$ = 1.51, 95% CI [1.33-1.71]. Disability/neurodivergent identity status, $\chi^2$ (1) = 2.96, $p =$ .085, $OR$ = 1.65, 95% CI [.93-2.92] did not significantly predict past year healthcare avoidance due to anticipated discrimination. The association between perceived healthcare discrimination and past year healthcare avoidance due to anticipated discrimination was not moderated by disability/neurodivergent status, $\chi^2$ (1) = .86, $p$ = .353, $OR$ = .89, 95% CI [.69-1.14].

An exploratory hierarchical logistic regression moderation analysis was conducted to evaluate the influence of disability/neurodivergent status on the relationship between perceived healthcare discrimination and healthcare avoidance since the start of the coronavirus pandemic due to anticipated discrimination. Prior to analyses, the independent (healthcare discrimination) and moderation (disability/neurodivergent status) variables were centered and a product term was created as recommended by Baron & Kenny (1986). Perceived healthcare discrimination, $\chi^2$ (1) = 35.36, $p <$ .001, $OR$ = 1.53, 95% CI [1.33-1.76] and disability/neurodivergent identity status, $\chi^2$ (1) = 3.95, $p$ = .047, $OR$ = 2.19, 95% CI [1.01-4.73] significantly predicted healthcare avoidance since the start of the coronavirus pandemic due to anticipated discrimination. The association between perceived healthcare discrimination and healthcare avoidance since the start of the coronavirus pandemic due to anticipated discrimination was not moderated by disability/neurodivergent status, $\chi^2$ (1) = .02, $p$ = .900, $OR$ = .98, 95% CI [.74-1.30].

**Discussion**

The aim of this study was to evaluate the relationship between lifetime exposure to varied forms of healthcare discrimination and four variables: (1) healthcare avoidance behaviors in the past year due to anticipated discrimination, (2) healthcare avoidance behaviors since the start of

the coronavirus pandemic due to anticipated discrimination, (3) anxiety symptoms, and (4) depressive symptoms in a transgender and gender independent sample. Consistent with prior research that has conveyed prevalence estimates of the barriers that exist for the transgender and gender independent population in accessing healthcare, (Grant et al., 2011; James et al., 2016; Macapagal et al., 2016; Rodriguez et al., 2017; Shires & Jaffee, 2015) the results of this study make apparent the pervasiveness of exposure to healthcare discrimination and convey its deleterious relationship with psychological health and healthcare engagement behaviors in this population. The majority (78.1%) of participants reported experiencing at least one of the eight forms of healthcare discrimination that this study examined in their lifetime.

The results of this study reveal the lifetime exposure to various forms of discrimination in healthcare settings that is endemic to the transgender and gender independent individual's experience. Specifically, this study provides evidence of the direct (e.g., refusal of care) and indirect (e.g., non-inclusive medical forms and/or unnecessary and invasive questions) forms of healthcare discrimination that this population is exposed to. Exposure to healthcare discrimination might diminish the trust in healthcare institutions and providers that may be imperative to patient engagement in care (e.g., preventative care), patient trust in provider recommendations (e.g., vaccinations), and improving patient health outcomes (e.g., disease management). To seek or require healthcare involves psychological and physical vulnerability, as individuals seek care when they are incapable of providing care for themselves. Although individuals seek healthcare for a myriad of reasons (e.g., illness prevention, disease management, physical trauma and injury, psychological support, etc.), common reasons why individuals might seek or require healthcare are solace and healing.

The results of this study provide evidence of transgender and gender independent patients experiences in healthcare settings that may have the potential to be physically and psychologically harmful. This is evident in the participants' reporting of medical forms not being inclusive of their gender identity (64.9%) at least once in their lifetime. Medical forms are often the first form of communication that a patient is given to convey their identities, past illnesses, diagnoses, health behaviors, etc. If a patient's gender identity is not included on medical forms, this may potentially result in a patient's negative appraisal of their belongingness in healthcare settings. The exclusion of transgender and gender independent individuals' identities on medical forms and records may be associated with the lack of knowledge that healthcare providers have about these patients, their intersecting identities, and their health behaviors. This may explain why 42.5% of the participants reported having to teach a healthcare provider about transgender and gender independent people in order to receive appropriate care at least once in their lifetime. Although participants who reported harsh or abusive language (17.8%) being used by a healthcare provider, and/or that they were harassed in a healthcare setting (19%) represented the minority of the sample, this form of discrimination would be considered to be profoundly harmful to encounter in any setting – but especially in a healthcare setting. In addition to engagement in healthcare avoidance behaviors, transgender and gender independent individuals may conceal their gender identities to avoid the discrimination they anticipate encountering in healthcare settings, which has healthcare accessibility (e.g., STI testing, gender affirming care, etc.) and outcome (e.g., receiving inappropriate care) implications (Bauer et al., 2009; Cruz, 2014).

The results of this study substantiate *Hypothesis 1a-1b*, which predicted that perceived healthcare discrimination would significantly predict past year healthcare avoidance due to

anticipated discrimination after accounting for other factors that might impact healthcare avoidance behaviors (e.g., age, race/ethnicity, income, disability/neurodivergent status, and health insurance coverage). More concretely, independent of an individual's age, race/ethnicity, income level, disability/neurodivergent identity, and/or whether or not they have health insurance coverage, their lifetime exposure to healthcare discrimination predicted avoiding needed healthcare in the past year when they anticipated encountering gender identity-based discrimination. Findings indicate that higher levels of lifetime exposure to varied forms of healthcare discrimination significantly increases the likelihood that transgender and gender independent individuals will avoid needed healthcare due to anticipation of gender identity-based discrimination in healthcare settings. Although the prevalence of exposure to healthcare discrimination and its relationship to healthcare avoidance behaviors have been well documented (Bauer et al., 2014; Bauer et al., 2015; Bradford et al., 2013; Jaffee et al., 2016; Macapagal et al., 2016; Seelman et al., 2017), these results empirically advance the knowledge about the harmful impacts that exposure to healthcare discrimination has on this population. This study evaluated healthcare avoidance behaviors due to anticipation of discrimination based on eight forms of healthcare discrimination encountered at least once in the lifetime of participants. This knowledge makes apparent the considerable toll that healthcare discrimination has on transgender and gender independent individuals in instances when they must consider the potential risks of seeking or avoiding varied forms of healthcare beyond gender affirming care (e.g., preventative, chronic disease management, gynecological and reproductive, etc.) when it is needed. Healthcare avoidance behaviors have been found to have adverse impacts on the physical and psychological health of transgender and gender independent individuals (Seelman et al., 2017). Individuals who delay or avoid seeking healthcare may experience health disparities

that contribute to morbidity and mortality. In particular, associations between delaying needed healthcare and delays in cancer diagnosis (Céspedes et al., 2020; Langlands et al., 2002), cancer prognosis (Zhang et al., 2015), and early mortality in cancer patients (Biagi et al, 2011; Hanna et al., 2020; Raphael et al., 2016) have been documented. The disparities in rates of morbidities and disabilities reported by transgender and gender independent individuals compared to cisgender individuals (Fredriksen-Goldsen et al., 2014; Witten, 2014) may be related to health avoidance behaviors and/or the discrimination they are exposed to in healthcare settings.

The results of this study support *Hypothesis 2a-2b,* which predicted that perceived healthcare discrimination would significantly predict healthcare avoidance behaviors since the start of the coronavirus due to anticipated discrimination after accounting for other factors that might impact healthcare avoidance behaviors (e.g., age, race/ethnicity, income, disability/neurodivergent status, and health insurance coverage). More explicitly, independent of an individual's age, race/ethnicity, income level, disability/neurodivergent identity, and/or whether or not they have health insurance coverage, their lifetime exposure to healthcare discrimination predicted avoiding needed healthcare since the start of the coronavirus when they anticipated encountering discrimination based on their gender identity. The results of the analyses performed to test this hypothesis indicate that higher levels of lifetime exposure to varied forms of healthcare discrimination are significantly associated with an increase in the likelihood that transgender and gender independent individuals will avoid needed healthcare even during a global pandemic due to anticipation of gender identity-based discrimination in healthcare settings. As previously noted, prior research has documented the prevalence of exposure to healthcare discrimination and its relationship to healthcare avoidance behaviors; these results empirically advance the knowledge about the harmful impacts that lifetime

exposure to healthcare discrimination has on this population by evaluating the healthcare avoidance behaviors since the start of the coronavirus due to anticipation of discrimination based on the culmination of varied forms of healthcare discrimination. This knowledge demonstrates that discriminatory encounters in healthcare settings in addition to the anticipation for similar encounters is associated with transgender and gender independent patients' appraisal of their access to varied types of care including being tested and/or treated for the coronavirus when symptoms are present, or when they have been exposed to someone who has tested positive for the coronavirus. Healthcare avoidance is predominately viewed as a behavior that involves risk at an individual level, but avoiding needed healthcare (e.g., being tested and/or treated for the coronavirus, getting a vaccine in an attempt to mitigate the spread of the coronavirus, etc.) presents a public health concern during a global pandemic.

The results of this study substantiate *Hypotheses 3 and 4,* which predicted that perceived healthcare discrimination would be significantly associated with anxiety and depressive symptoms after accounting for other factors that might predict anxiety symptoms including age and race/ethnicity. More explicitly, independent of an individual's age and/or race/ethnicity, their lifetime exposure to healthcare discrimination is a stronger predictor of their anxiety and depressive symptoms. These results indicate that higher levels of lifetime exposure to varied forms of healthcare discrimination is significantly associated with an increase in anxiety and depressive symptoms in transgender and gender independent individuals. Although previous research has articulated the elevated levels of psychological distress reported by this population related to discrimination (Barzagan & Galvin, 2012; Bockting et al.., 2013; Clements-Nolle et al., 2006; Dispenza et al., 2012; James et al., 2016; Rotondi et al., 2011; Staples et al., 2018; Tebbe & Moradi, 2016; Testa et al., 2017, 2015), these results empirically advance the

knowledge about the harmful relationship between lifetime exposure to varied forms of healthcare discrimination and this population's psychological health.

*Implications for Clinical Practice*

These findings have significant implications for clinical practice. The centrality of healthcare discrimination in transgender and gender independent individuals' healthcare avoidance behaviors, elevated rates of disabilities, morbidities, and psychological distress can be nullified. Healthcare discrimination is not only a malleable barrier to this population's access to healthcare and/or the quality of the care they are able to receive, it also contradicts the ethical principles that healthcare professionals subscribe to. The American Medical Association (AMA; 2016) has adopted nine "*Principles of Medical Ethics*" that serve to be standards of honorable conduct for healthcare professionals. The AMA's (2016) principles hold that healthcare professionals have an ethical imperative not limited to seeking advancements in science and medical education, but also to providing access to competent medical care that is encompassing of human dignity to "*all people*". Although, healthcare professionals are obligated to follow laws, they are also encouraged to "*recognize a responsibility to seek changes in those requirements which are contrary to the best interests of the patient*" (AMA, 2016).  Healthcare providers who engage and/or are complicit in the eight forms of direct or indirect healthcare discrimination that this study evaluated are in direct violation of such principles.

The adoption of several healthcare initiatives aiming to improve healthcare accessibility for transgender and gender independent individuals may serve to mitigate the harmful impacts associated with the insidious messages that convey disregard for the health of these individuals. Healthcare institutions and providers can ensure that the barriers of transphobia and cisnormativity are replaced with a conceptualization of gender as a nonbinary construct. It is

imperative that healthcare providers attend to their individual appraisals and biases about gender identity and expression, as such biases and appraisal may impact the quality of care they provide to transgender and gender independent patients. Healthcare institutions have an obligation to ensure that whether or not providers value cultural humility (Patallo, 2019), that any knowledge deficits related to the healthcare needs of transgender and gender independent patients are attended to. Healthcare institutions can ensure that the entirety of healthcare teams (e.g., intake staff, billing staff, and providers) are provided with the training and educational materials necessary to provide quality care for and promote respectful dialogue with this population about their healthcare needs. Transgender and gender independent patients are not obligated nor should they be burdened with providing education to their healthcare providers in order to have their healthcare needs be met.

It is critical that healthcare institutions utilize inclusive documentation methods (i.e., intake forms and electronic health records). The use of inclusive intake forms and electronic records would allow patients to disclosure their gender identity and/or the manner in which their gender identity intersects with their bodies, for clear documentation and dissemination to their healthcare teams. Health providers should be aware of and attend to the preferred names, gender identity terms, and pronouns (e.g., zir, ze, Mx, he, she, xe, they) that transgender and gender independent patients regard as most representative of their identities.

The health status and/or concerns of transgender and gender independent patients may be amalgamated by multiple points of their intersecting identities and may or may not be linearly associated with their gender identity. All healthcare institutions, including university and community health clinics that provide gender affirming healthcare services (e.g., prescribing and/or managing hormone replacement therapies) to transgender and gender independent patients

must not neglect the other healthcare needs of these patients. Engaging transgender and gender independent patients in a manner that encompasses integrated healthcare services may be supportive of an increase in their healthcare utilization and better health outcomes as seen in other patient populations (Martin et al., 2014).

Affordability must also be considered when attempting to address accessibility disparities in healthcare faced by this population. Healthcare institutions must not neglect the healthcare needs of uninsured or underinsured transgender and gender independent patients, and consider their vulnerability to employment and healthcare insurance discrimination. The implementation of confidential processes by which transgender and independent patients can report their healthcare experiences is an important step in healthcare institutions accepting the obligation to ensure that healthcare is accessible to these patients. It is imperative that this population's healthcare experiences are captured, including those experiences that may be facilitative of healthcare utilization and avoidance to inform prevention and intervention methods. Collaborative and coordinated action within and outside of healthcare institutions is required to ameliorate the healthcare accessibility barriers (e.g., economic inequities, discrimination, and erasure) that are extraordinarily onerous for the transgender and gender independent population.

*Implication for Policy*

Individual, societal, and institutional bias, stigma, and discrimination persist due to the existence of policies that restrict transgender and gender independent individuals' rights, including their right to access healthcare. The findings of this study provide evidence for the imperativeness of legislating healthcare policy protections and repealing the policies that sanction the erasure and discrimination that transgender and gender independent individuals are exposed to in healthcare settings. The U.S. Supreme Court recently ruled that employers cannot

fire transgender and gender independent individuals based on their gender identity (U.S. Equal Opportunity Commission, 2020). Still, this population remains vulnerable to local, state, and federal legislative and regulatory aggressions that further stigmatize, criminalize, delegitimize, and dehumanize the embodiment of a transgender and gender independent identity.

According to the American Civil Liberties Union (ACLU; 2021), dozens of states will introduce legislation seeking to prohibit and restrict rights and protections for transgender and gender independent citizens before the end of 2021. Legislatures are also seeking to advance religious rights and protections for individuals, schools, and healthcare institutions to be discriminatory based on gender identity (ACLU, 2021). These religious exemption bills have the potential to exacerbate the harmful impacts of the healthcare avoidance behaviors exhibited by this population, as Catholic and other religious healthcare institutions are prominent in U.S. healthcare.

This study makes clear the prevalence of denial of gender affirming care at varying developmental stages, with 21.4% of the participants reporting that they experienced this form of healthcare discrimination at least once in their lifetime, and 9.1% reporting that they had been denied gender affirming care before age 18. These findings are consistent with the current proposals of legislation being advanced and/or passed to prohibit healthcare for transgender and gender independent youth (ACLU, 2021). The Alabama Senate recently passed the *"Vulnerable Child Compassion and Protection Act"* (i.e., Alabama Senate Bill 10), which would prohibit transgender and gender independent youth from receiving gender affirming care if passed by the Alabama House of Representatives committee on Health and signed by the governor – Kay Ivey (ACLU, 2021).

Policies that make explicit the illegality of healthcare discrimination in all of its forms (including denial of care) must be enacted to ensure that this population is not physically or psychologically harmed further by the inaccessibility and underutilization of healthcare associated with discrimination and erasure. This study provides evidence of the informational and institutional erasure that transgender and gender independent healthcare consumers are exposed to, as 64.9% of this sample reported that medical intake forms were not inclusive of their gender identities. Robust policy must be enacted to require local, state, and federal healthcare institutions and organizations to capture the intersecting identities of transgender and gender independent healthcare consumers, and to respond to their healthcare needs. Healthcare institutions and organizations whose research and operations are partially or fully funded by public funds should be obligated to identify health risks, outcomes, and disparities associated with transgender and gender independent constituents. The deficit of local, state, and federal policy protections regarding transgender and gender independent healthcare provides a gateway for proposed legislation to be distinctly reflective of the healthcare needs of the transgender and gender independent community.

*Limitations and Implication for Future Research*

While this study may elucidate the chronicity of the indiscriminate forms of lifetime healthcare discrimination experienced by this population and its harmful associations with healthcare avoidance behaviors and psychological distress, there were limitations that must be considered. This study utilized a cross-sectional survey design, which did not allow for causal inferences. Longitudinal cohort studies should be employed to expand knowledge regarding: (a) transgender and gender independent identity development and healthcare accessibility barriers, and/or facilitators; (b) relationships that might exist between facilitators and/or barriers to

healthcare accessibility and health behaviors, and outcomes across varied developmental stages. This study used an online and non-probability sampling method, thereby lessoning its representativeness of the diversity that exists among the transgender and gender independent population, despite its geographical representativeness of the U.S; the most marginalized tier (e.g., those who are most economically vulnerable) of this population were unable to be accessed. However, this study was able to capture the experiences of transgender and independent individuals in a manner that sought to minimize the potential coronavirus exposure and potential anxiety symptoms experienced by participants that might be associated with fear of further stigmatization and discrimination associated with their gender identity status. Future studies should strive to utilize probability sampling to support: (a) generalizability of the results to the full spectrum of identities held within this population; (b) exploration of other social identity factors that may contribute to healthcare accessibility, avoidance, and outcomes in this population. While this study was able to capture the prevalence of healthcare discrimination and healthcare avoidance behaviors associated with the discrimination faced in healthcare settings by this population, it did not investigate discriminatory experiences with and avoidance of distinct types of healthcare settings/providers (e.g., gynecology, oncology, endocrinology, psychology). Future studies should engage transgender and gender independent individuals in quantitative and qualitative inquiries about their exposure to and avoidance of distinct forms of erasure and discrimination within specific divisions of healthcare. This study garnered information about participants intersecting identities with disabilities/neurodivergence and found it to be a predictor of healthcare avoidance, but did not inquire about participant diagnoses of specific chronic mental and/or physical health conditions. Future research should evaluate distinct health conditions as potential moderators of the relationship between healthcare discrimination and

utilization in this population. Healthcare discrimination was found to be a significant predictor of anxiety symptoms among this sample. However, this study did not investigate the potentiality for an association between anxiety with healthcare avoidance behaviors and/or distrust in healthcare institutions in this population. Knowledge about the varying facilitators and/or barriers to utilization or underutilization of healthcare would be supportive of future research encompassing controlled trial experiments regarding the efficacy of healthcare interventions to address the poor healthcare outcomes seen in this population.

**Conclusion**

Notwithstanding these limitations, this study provides information that is critical to understanding the health behaviors and subsequent health implications for the transgender and gender independent population. This study provides evidence of the persistence of myriad institutional, structural, and ideological barriers to this population's ability to access healthcare with associations of deleterious health behaviors (e.g., avoidance) generally and amidst a global pandemic, and psychological distress. This study has various applied implications for healthcare institutions, providers, researchers, legislators, and LGBTQ+ community organizations in the advancement of targeted intervention strategies (e.g., institutional, clinical, and policy) to mitigate health disparities in this population. Future research directions should include further exploration into the specific barriers (e.g., erasure themes) and facilitators (e.g., access to integrated healthcare) of healthcare utilization at various stages throughout the transgender and gender independent individual's lifespan.

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**Appendix A.**

## RESEARCH PARTICIPANT INFORMATION AND CONSENT FORM

**STUDY TITLE: Discrimination and Health in Gender Minority Individuals**

**VCU INVESTIGATOR: Eric Benotsch, Ph.D.**

You are being invited to participate in a research study.

Your participation is voluntary. You may decide not to participate in this study. If you do participate, you may withdraw from the study at any time. Your decision not to take part or to withdraw will involve no penalty. You may print out a copy of this sheet to keep.

**Why is this study being done?**

The purpose of this research study is to learn more about discrimination experiences and health behaviors in gender minority individuals.

**What will happen if I participate?**

In this study you will be asked to complete a questionnaire. The questionnaire asks about discrimination experiences, resiliency factors, stress, loneliness, psychiatric symptoms, substance use, use of health care services, and demographic information. Additional questions will ask about the impact the coronavirus (COVID-19) pandemic has had on your life. There are also questions that check if you are paying attention. You will need to answer these questions correctly to receive payment.

The survey will take about 10 minutes to complete.

**What are the risks and benefits of participating?**

Sometimes answering questions about these subjects causes people to become upset. Some questions will ask about private things like substance use. You do not have to answer any questions you do not want to answer and you may leave the study at any time. Participation in research might involve some loss of privacy. We will not ask your name or any other information that will identify you, but there is a small risk that someone outside the research study could see and misuse information about you.

**WILL I BE PAID TO PARTICIPATE IN THE STUDY?**

You will be paid $1.20 to participate in the study.

**CAN I STOP BEING IN THE STUDY?**

You can stop being in this research study at any time.

**HOW WILL INFORMATION ABOUT ME BE PROTECTED?**

VCU has established secure research databases and computer systems to store information and to help with monitoring and oversight of research. Your information may be kept in these databases but are only accessible to individuals working on this study or authorized individuals who have access for specific research related tasks.

**WHOM SHOULD I CONTACT IF I HAVE QUESTIONS ABOUT THE STUDY?**

> The investigator named below is the best person(s) to contact if you have any questions, complaints, or concerns about your participation in this research:
>
> **Eric Benotsch, 804-828-0133 or ebenotsch@vcu.edu**

If you have general questions about your rights as a participant in this or any other research, or if you wish to discuss problems, concerns or questions, to obtain information, or to offer input about research, you may contact:

Virginia Commonwealth University Office of Research
800 East Leigh Street, Suite 3000, Box 980568, Richmond, VA 23298
(804) 827-2157; https://research.vcu.edu/human_research/volunteers.htm

Do not consent unless you have had a chance to ask questions and have received satisfactory answers to all of your questions.

Please indicate if you consent to participate:

_I consent and wish to take part in the study.
_I do NOT consent and wish to withdraw

**Appendix B.**

<div align="center">

**SURVEY MEASURE**

</div>

**Please indicate how much you agree with the following statements:**

|  | Strongly Disagree | Disagree | Neither agree nor disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| I feel part of a community of people who share my gender identity. | 0 | 1 | 2 | 3 | 4 |
| I feel connected to other people who share my gender identity. | 0 | 1 | 2 | 3 | 4 |
| When interacting with members of the community who share my gender identity, I feel like I belong. | 0 | 1 | 2 | 3 | 4 |
| I'm not like other people who share my gender identity. | 0 | 1 | 2 | 3 | 4 |
| I feel isolated and separate from other people who share my gender identity. | 0 | 1 | 2 | 3 | 4 |
| Please select neither agree nor disagree for this item. | 0 | 1 | 2 | 3 | 4 |

**Testa et al, 2015.** (Community Connectedness subscale of Gender Minority Stress and Resilience Measure).

**Derogatis, 2001 (Depression and Anxiety subscales of Brief Symptom Inventory)**
*Please check the number of the response that best describes <u>how much that problem has bothered you in the past **7 days, including today**</u>:*

| In the past 7 days, how much were you distressed by: | Not at all | A little bit | Moderately | Quite a bit | Extremely |
|---|---|---|---|---|---|
| Feeling no interest in things | **0** | **1** | **2** | **3** | **4** |
| Nervousness or shaking inside | **0** | **1** | **2** | **3** | **4** |
| Feeling lonely | **0** | **1** | **2** | **3** | **4** |
| Feeling tense or keyed up | **0** | **1** | **2** | **3** | **4** |
| Feeling blue | **0** | **1** | **2** | **3** | **4** |
| Suddenly scared for no reason | **0** | **1** | **2** | **3** | **4** |
| Feelings of worthlessness | **0** | **1** | **2** | **3** | **4** |
| Spells of terror or panic | **0** | **1** | **2** | **3** | **4** |
| Feeling hopeless about the future | **0** | **1** | **2** | **3** | **4** |
| Feeling so restless you couldn't sit still | **0** | **1** | **2** | **3** | **4** |

| | | | | | |
|---|---|---|---|---|---|
| Please select "a little bit" for this item. | **0** | **1** | **2** | **3** | **4** |
| Thoughts of ending your life | **0** | **1** | **2** | **3** | **4** |
| Feeling fearful | **0** | **1** | **2** | **3** | **4** |

**Hays & DiMatteo, 1987. (8-item UCLA loneliness scale)**
**Please indicate how often you feel the way described in each of the following statements:**

| | **Never** | **Rarely** | **Sometimes** | **Often** |
|---|---|---|---|---|
| I lack companionship. | Never | Rarely | Sometimes | Often |
| There is no one I can turn to. | Never | Rarely | Sometimes | Often |
| I am an outgoing person. | Never | Rarely | Sometimes | Often |
| I feel left out. | Never | Rarely | Sometimes | Often |
| I feel isolated from others. | Never | Rarely | Sometimes | Often |
| I can find companionship when I want it. | Never | Rarely | Sometimes | Often |
| I am unhappy being so withdrawn. | Never | Rarely | Sometimes | Often |
| People are around me but not with me. | Never | Rarely | Sometimes | Often |

**The questions in this scale ask about your feelings and thoughts during THE LAST MONTH. In each case, please indicate by checking HOW OFTEN you felt or thought a certain way. (Cohen & Williamson, 1988. Perceived Stress Scale - 4)**

| | Never | Almost Never | Sometimes | Fairly Often | Very Often |
|---|---|---|---|---|---|
| In the last month, how often have you felt that you were unable to control the important things in your life? | **0** | **1** | **2** | **3** | **4** |
| In the last month, how often have you felt confident about your ability to handle your personal problems? | **0** | **1** | **2** | **3** | **4** |
| In the last month, how often have you felt things were going your way? | **0** | **1** | **2** | **3** | **4** |
| In the last month, how often have you felt difficulties were piling up so high that you could not overcome them? | **0** | **1** | **2** | **3** | **4** |

**Benotsch et al, 2013, 2015**
**Please indicate how much you have used the following in the past 3 months:**

|  | None | Once or Twice | Several Times | At least every week |
|---|---|---|---|---|
| **Alcohol** | 1 | 2 | 3 | 4 |
| **Cigarettes/Cigars** | 1 | 2 | 3 | 4 |
| **E-cigarettes/Juul/E-vaporizor** | 1 | 2 | 3 | 4 |
| **Marijuana/Cannabis/Pot** | 1 | 2 | 3 | 4 |
| **Ecstasy** | 1 | 2 | 3 | 4 |
| **Methamphetamine** | 1 | 2 | 3 | 4 |
| **Cocaine (powder or crack)** | 1 | 2 | 3 | 4 |
| **Club drugs (e.g., Ketamine/"Special K", Poppers/"Rush", GHB, Rohypnol/"roofies")** | 1 | 2 | 3 | 4 |
| **Heroin** | 1 | 2 | 3 | 4 |
| **Any other recreational drugs (list) _____** | 1 | 2 | 3 | 4 |

**Miech et al., 2018 (Items adapted from Monitoring the Future study)**

To "vape" is to use a device such as a vape-pen, an e-cigarette, an e-hookah, or e-vaporizer to inhale a mist into the lungs. Have you ever vaped, even once in your lifetime?

Yes     No

(If no, skip the rest of the questions on this page)
(If Yes)

On how many occasions (if any) have you vaped NICOTINE in your <u>lifetime</u>?

0 Occasions     1-2 Occasions          3-5 Occasions          6-9 Occasions  10-19 Occasions
20-39 Occasions        40 or More Occasions

On how many occasions (if any) have you vaped MARIJUANA in your <u>lifetime</u>?

0 Occasions     1-2 Occasions          3-5 Occasions          6-9 Occasions  10-19 Occasions
20-39 Occasions        40 or More Occasions

On how many occasions (if any) have you vaped NICOTINE during the <u>last 3 months</u>?

0 Occasions     1-2 Occasions          3-5 Occasions  6-9 Occasions          10-19 Occasions
20-39 Occasions        40 or More Occasions

On how many occasions (if any) have you vaped MARIJUANA during the <u>last 3 months</u>?

0 Occasions     1-2 Occasions          3-5 Occasions  6-9 Occasions          10-19 Occasions
20-39 Occasions        40 or More Occasions

**Benotsch et al, 2013, 2015**

In your lifetime, have you <u>ever</u> used a prescription medication (e.g., Vicodin, Xanax)
***WITHOUT*** *a doctor's prescription*?

                                                                                    Yes     No

(If No, skip the rest of the questions on this page)

(If Yes)

**Please indicate how much you have used the following in the past 3 months:**

|  | **None** | **Once or Twice** | **Several Times** | **At least every week** |
|---|---|---|---|---|
| Pain Medications / Opioids (e.g., Oxycontin, Vicodin) WITHOUT a doctor's prescription | 1 | 2 | 3 | 4 |
| Sedatives (e.g., Restoril, Ambien) WITHOUT a doctor's prescription | 1 | 2 | 3 | 4 |
| Anxiety Medications (e.g., Xanax, Valium) WITHOUT a doctor's prescription | 1 | 2 | 3 | 4 |
| Stimulants (e.g., Ritalin, Adderall) WITHOUT a doctor's prescription | 1 | 2 | 3 | 4 |

In your lifetime, have you ever used alcohol at the same time as prescription medication used without a doctor's prescription?

                                                                    Yes
                                                                    No

In your lifetime, have you ever used recreational drugs (e.g., ecstasy, cocaine) at the same time as prescription medication used without a doctor's prescription?
                        Yes                No

On March 11, 2020, the World Health Organization declared that the coronavirus (COVID-19) outbreak had reached pandemic status.  Since the start of the coronavirus pandemic, has the amount of substances you use changed?
No
Yes

(If Yes) How has your use of substances changed since the start of the coronavirus pandemic?
It has increased a lot
It has increased somewhat
It has increased slightly
It has decreased slightly
It has decreased somewhat
It has decreased a lot

**In this section gender expression means how masculine/feminine/androgynous one appears to the world based on many factors such as mannerisms, dress, personality, etc.  Testa et al, 2015.**

**Please check all that apply (for example you may check both "yes, after age 18" and "in the past year" if both are true for you).**

|  | **Never** | **Yes, before age 18** | **Yes, after age 18** | **Yes, in the past year** |
|---|---|---|---|---|
| I have had difficulty getting medical or mental health treatment (transition-related or other) because of my gender identity or expression. |  |  |  |  |
| Because of my gender identity or expression, I have had difficulty finding a bathroom to use when I am out in public. |  |  |  |  |
| I have experienced difficulty getting identity documents that match my gender identity. |  |  |  |  |
| I have had difficulty finding housing or staying in housing because of my gender identity or expression. |  |  |  |  |
| I have had difficulty finding employment or keeping employment, or have been denied promotion because of my gender identity or expression. |  |  |  |  |

**(Gender-Related Discrimination subscale of Gender Minority Stress and Resilience Measure).**

The next section asks some additional questions about the coronavirus (COVID-19) pandemic.
**(Wang et al., 2020)**

Where do you receive information about COVID-19? Check all that apply
- o  Television
- o  Online News Media
- o  Social Media
- o  Government website
- o  Family or friends
- o  Other sources (please specify)

How often do you receive information on COVID-19?
- Less than once a week
- Multiple times a week
- Daily
- Multiple times a day

(If selected "social media" in first question on this page).

How often do you see memes that have health information about COVID-19 in them?
- Less than once a week
- Multiple times a week
- Daily
- Multiple times a day

How satisfied are you with the amount of health information available about the coronavirus (COVID-19)?
1. Not satisfied at all
2. Not very satisfied
3. Somewhat satisfied
4. Very satisfied
5. Do not know

Have you been told by a health care provider that you had the coronavirus (COVID-19)?

Yes     No

(If No, ask next two questions)

Have you had symptoms that might have been the coronavirus (COVID-19) such as fever, cough, sore throat, difficulty breathing, or less of smell in the last 3 months but you weren't tested?

Yes     No

How would you rate your likelihood of contracting the coronavirus (COVID-19) during the current outbreak?
1. Not at all likely
2. Not very likely
3. Somewhat likely
4. Very likely
5. Do not know

Adapted from Coronavirus Anxiety Scale (CAS) Lee, S. A. (2020). Coronavirus anxiety scale: A brief mental health screener for COVID-19 related anxiety. *Death Studies*, 1-9.

| How often have you experienced the following over the last **7 days, including today**? | Not at all | A little bit | Moderately | Quite a bit | Extremely |
|---|---|---|---|---|---|
| I felt dizzy, lightheaded or faint, when I read or listened to news about the coronavirus. | 0 | 1 | 2 | 3 | 4 |
| I had trouble falling or staying asleep because I was thinking about the coronavirus. | 0 | 1 | 2 | 3 | 4 |
| I felt paralyzed or frozen when I thought about or was exposed to information about the coronavirus. | 0 | 1 | 2 | 3 | 4 |
| Please select "a little bit" for this item. | 0 | 1 | 2 | 3 | 4 |
| I used alcohol or other drugs to help me get through the fear and/or anxiety caused by the coronavirus. | 0 | 1 | 2 | 3 | 4 |

To date, about how many people have died due to the coronavirus (COVID-19) in the United States?

Please provide your best estimate: _____

Since the start of the coronavirus pandemic, how much have you engaged in social / physical distancing?

None
Some of the time
Most of the time
All of the time

In the <u>last month</u>, how much have you engaged in social / physical distancing?

> None
> Some of the time
> Most of the time
> All of the time

Have any of these things happened to you, as a trans / gender non-conforming person, when you went to see a doctor or health care provider? **Please check all that apply (for example you may check both "yes, after age 18" and "in the past year" if both are true for you). (Items adapted from 2015 Transgender Survey. James et al. (2016).)**

| | Never | Yes, before age 18 | Yes, after age 18 | Yes, in the past year |
|---|---|---|---|---|
| I had to teach a doctor or other health care provider about trans/gender non-conforming people so that I could get appropriate care. | | | | |
| A doctor or other health care provider refused to give me trans/gender non-conforming-related care. | | | | |
| A doctor or other health care provider refused to give me other health care (such as physical exam, flu, diabetes). | | | | |
| A doctor asked me unnecessary/invasive questions about my trans/gender non-conforming status that were not related to the reason for my visit. | | | | |
| A doctor or other health care provider used harsh or abusive language when treating me. | | | | |
| I was verbally harassed in a health care setting (such as hospital, office, clinic). | | | | |
| A doctor or other health care provider refused to use the pronouns or name that I requested to be used. | | | | |
| The medical forms or documents that a doctor or other health care provider asked me to complete did not include my gender identity. | | | | |

Was there a time **in the past 12 months** when you needed to see a doctor but could not because of cost?
Yes
No


Was there a time in the **past 12 months** when you needed to see a doctor but did not because you thought you would be disrespected or mistreated as a trans/gender non-conforming person?
Yes
No

**Since the start of the coronavirus pandemic (3/11/20),** was there a time when you needed to see a doctor but could not because of cost?
Yes
No

Was there a time **since the start of the coronavirus pandemic** when you needed to see a doctor but did not because you thought you would be disrespected or mistreated as a trans/gender non-conforming person?
Yes
No

Was there a time **since the start of the coronavirus pandemic,** when you needed to see a doctor but did not because you were worried about being exposed to the coronavirus in a health care setting?
Yes
No

(If Yes) What symptoms were you experiencing? _____

What is your age? _____ years

What was your sex identified **at birth**?          Male   Female

How do you identify your gender **now**?          Man                         (Check all that apply)
                                                  Woman
                                                  Trans Man
                                                  Trans Woman
                                                  Non-binary
                                                  Genderqueer
                                                  Gender non-conforming
                                                  Gender fluid
                                                  Another identity not listed_____

What state do you live in?  (drop-down menu of states):


Which best describes you? (check all that apply)
 Black/African-American
 Asian/Asian-American
 Hispanic/Latino(a)
 Native American
 White
 Another identity not listed_____


What is your highest level of formal education?

    Middle school
    High school
    GED
    Vocational school
    Associate's Degree
    Bachelor's Degree
    Graduate Degree (Master's, Doctorate, etc.)


What is your employment status?  (check all that apply)

    Employed full time
    Employed part time
    Student
    Retired
    On disability
    Unemployed
    Other_____

Has your employment situation changed since the start of the coronavirus pandemic (3/11/20)?

Yes
No

(If Yes) How has your employment situation changed since the coronavirus pandemic? (check all that apply)

    Lost my job
    Had my hours and/or pay reduced
    Had my hours and/or pay increased
    Was previously unemployed but now have a job
    I am now working remotely
    Other_____

In the past year where have you primarily lived?

    University housing
    Alone in Non-University housing
    With my partner
    With friends / roommates
    With my parents / siblings
    In a shelter or experiencing housing instability
    Another housing/living arrangement not listed_____

Since the start of the coronavirus pandemic has where you live changed?

Yes
No

(If yes)

Since the start of the coronavirus pandemic where have you primarily lived?

    University housing
    Alone in Non-University housing
    With my partner
    With friends / roommates
    With my parents / siblings
    In a shelter or experiencing housing instability
    Another housing/living arrangement not listed_____

Which best describes you?

Heterosexual/Straight
Homosexual/Gay
Bisexual
Pansexual
Asexual
Another identity not listed_____

To what degree are you open (out) with your transgender identity in your personal / social life including with friends and family?
1 None of the time
2
3
4
5
6
7 All of the time

To what degree are you open (out) with your transgender identity in your work / professional life including with coworkers or classmates?
1 None of the time
2
3
4
5
6
7 All of the time
(Adapted from Transgender Identity Survey, Bockting et al., 2020)

Do you currently have health insurance?
Yes
No

(If Yes)
What type of health insurance do you have?

Private Insurance *(Includes: Plans through employers, federal employee plans, plans from the Marketplace, plans through parents or partners, plans through universities)*

Public Insurance *(Includes: Military insurance (Tricare), Medicaid, Medicare, Veteran's benefits)*

Are any of your daily activities limited in any way because of your physical, mental, or emotional health?

Yes
No
Don't Know

Do you use any assistive equipment or technologies, such as a mobility device, a wheelchair, a special bed, a screen reader, or captioning software?

Yes
No
Don't Know

Do you identify as disabled and/or neurodivergent?

Yes
No


What is your household annual income?

__ $0 - $20,000
__ $20,001 - $40,000
__ $40,001 - $60,000
__ $60,001 - $80,000
__ $80,001 - $100,000
__ More than $100,000


Please let us know if you have any feedback about this study. If you do not have feedback, you can skip this question and click the following link to be redirected back to the Prolific site.

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