

ABSTRACT

MUHIGABA, PERUSI BAZIMAZIKI. To be Black, Transgender and Gender Nonconforming (TGNC), and Navigate Care: An Examination of Visual Conformity, Health Care Discrimination, and Health Care Access and Utilization among Black and White TGNC Adults (Under the direction of Dr. Vanessa V. Volpe).

Black transgender and gender nonconforming (TGNC; i.e., those whose gender identity does not align with the one assigned at birth) individuals experience structural inequities that impact their health (i.e., health inequities). Previous literature suggests that these inequities are linked to marginalization at the intersections of racism and cissexism. Visual conformity, the degree to which a TGNC individual is perceived to be cisgender or not recognizable as TGNC, has been found to be associated with health care access and utilization, which are necessary for the management of one's health. Visual conformity is known to differ by TGNC gender identity and may differ by race due to racialized Western notions of gender. As such, associations between visual conformity and health care outcomes may differ by intersectional position (i.e., race and gender identity combination) and be explained by experiences of trans-specific health care discrimination, a commonplace phenomenon for TGNC individuals. Guided by the theoretical frameworks of the Health Equity Promotion Model and quantitative analytic intersectionality, the current study utilized data from 771 Black and 21,948 White TGNC participants of the 2015 United States Transgender Survey to examine a moderated model of health care utilization (i.e., having a doctor's visit in the past year) and moderated mediation models of health care access (i.e., having a primary care provider) and utilization (i.e., care avoidance due to fear of trans-specific healthcare discrimination) in both weighted and unweighted analyses. Weighted logistic regression results indicated that there were differences in the associations between visual conformity and healthcare outcomes by intersectional position. Contrary to prior research, the current study revealed that there are contexts in which visual

conformity also diminishes outcomes, particularly for Black transfeminine and transmasculine individuals. For example, more visual conformity was associated with both increased odds of having a doctor's visit and decreased odds of having a primary care provider for Black transfeminine individuals. As such, there may be both benefits and risks of not being recognizable as a TGNC individual as it relates to navigating health care. Additionally, bootstrapped mediation analyses revealed that health care discrimination only mediated the association between visual conformity and health care engagement (i.e., care avoidance) for White gender nonconforming individuals, which suggests that there may be unique impacts for this intersectional position group. The findings from the current study highlight the need for research, particularly longitudinal and qualitative, to more closely examine health and health care at the intersections of multiple forms of systemic marginalization and the need for health equity efforts (e.g., interventions, medical education) that are tailored and considerate of the heterogenous experiences of TGNC individuals.

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To be Black, Transgender and Gender Nonconforming (TGNC), and Navigate Care: An Examination of Visual Conformity, Health Care Discrimination, and Health Care Access and Utilization among Black and White TGNC Adults

by
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DEDICATION

To my parents, Assumpta and Bazim, my brother, Claude, my fiancé, Jordan, and our sweet angel baby dog, Marceline. Thank you for your love, endless support, and encouragement.

BIOGRAPHY

Perusi Bazimaziki Muhigaba was born in Jersey City, New Jersey and raised in the Triad area of North Carolina. They, and their brother, Claude, are the proud child of Rwandan immigrants, Assumpta Kagaba and Bazim Benson, and proud grandchildren of Felix Kagaba, Peruth Sabune, Marie Mukamurekezi, and Papias Gashumba. Perusi entered the Applied Social Psychology Ph.D. program at North Carolina State University in 2019 after working in clinical data abstraction and graduating with a Bachelor's degree in Psychology from the University of North Carolina at Chapel Hill. They worked under the mentorship of Dr. Vanessa Volpe and were a member of the Black Health Lab. Perusi's research focuses on health care for Black transgender and gender non-conforming individuals. Specifically, their work aims to understand and improve health care experiences and outcomes for this population.

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To be Black, Transgender and Gender Nonconforming (TGNC), and Navigate Care: An Examination of Visual Conformity, Health Care Discrimination, and Health Care Access and Utilization among Black and White TGNC Adults

Transgender and gender nonconforming (TGNC) individuals are those with gender identities that are incongruous with the sex they were assigned at birth (Flores et al., 2016). This population is harmed by cissexism, a system of marginalization that benefits those who are cisgender, defined as those with gender identities that align with their sex assigned at birth (Hughes et al., 2022; King et al., 2020). Cissexism creates structural inequities for TGNC individuals (e.g., high rates of unemployment, housing instability, and poverty) that create unjust differences in health (i.e., health inequities; Braveman, 2019; King et al., 2022; Institute of Medicine, 2011; Zarwell et al., 2022). Indeed, TGNC individuals report more chronic conditions, more disabilities, and worse overall mental and physical health than cisgender individuals (Baker, 2019; Downing & Przedworksi, 2018; Fredriksen-Goldsen et al., 2022).

Additionally, Black people experience anti-Black racism, a system of marginalization that benefits those racialized as White and harms those racialized as Black (Bonilla-Silva, 1997). Thus, Black individuals experience health inequities, such as higher disease (e.g., cancer and diabetes) mortality rates (Chu et al., 2007; Kulshreshtha et al., 2014; Rosenstock et al., 2014; Singh et al., 2011) and worse cardiovascular health when compared to White individuals (Lukachko et al., 2014). Although the primary focus of research into Black TGNC health inequities has been sexual and mental health (Blondeel et al., 2016; Cahill & Makadon, 2014; Institute of Medicine, 2011) there is some initial evidence that Black TGNC individuals are particularly vulnerable to negative outcomes across other dimensions of health (Brown & Jones, 2014; Hughes et al., 2022; Lett et al., 2020).

Previous literature suggests that health inequities for Black TGNC individuals are linked to marginalization at the intersections of racism and cissexism (e.g., lack of culturally-specific TGNC knowledge included in medical education; negative stereotypes about Black TGNC individuals' sexual behavior; Poteat et al., 2013). Visual conformity, the degree to which a TGNC individual is perceived to be cisgender or not recognizable as TGNC, has been found to differ by gender identity and to be associated with health care access and utilization (Kcomt et al., 2020; Lerner et al., 2020), which are necessary for the management of one's health (Almazan et al., 2022). These associations may be explained by experiences of trans-specific health care discrimination (Kattari & Hasche, 2016; Rodriguez et al., 2018), in that those who are perceived to be TGNC are more likely to experience discrimination and, subsequently, less likely to access and utilize health care. In this sense, high visual conformity (i.e., not recognizable as TGNC) being associated with a lower likelihood of discriminatory experiences and better health care outcomes can be thought of as a manifestation of cissexism (Begun & Kattari, 2016; Hughes et al., 2022; King et al., 2020). Given that racism negatively impacts perceptions of Black individuals (e.g., Black men perceived as aggressive; Ford, 2008; Wong et al., 2013) and that marginalization often manifests in negative health care experiences (e.g., discriminatory treatment; Poteat et al., 2013) that reduce access to and utilization of health care (Gonzales & Henning-Smith, 2017; James et al., 2017b; White Hughto et al., 2016), it may be the case that the associations between visual conformity and health care outcomes differ at the intersections of race and gender identity among Black and White TGNC individuals.

In order to alleviate health inequities for Black TGNC individuals, we need more knowledge about intervenable determinants of health outcomes, such as health care access and utilization (Arthur et al., 2021; Bauer, 2014; Kattari et al., 2020; Perez-Brumer et al., 2018).

Guided by the theoretical frameworks of the Health Equity Promotion Model (Fredriksen-Goldsen et al., 2014) and quantitative analytic intersectionality (Bauer & Scheim, 2019; Evans, 2019; McCall, 2005), the current study utilizes data from Black and White TGNC participants of the largest national survey of TGNC individuals (i.e., United States Transgender Survey; USTS; James et al., 2019) to assess if the associations between the degree to which a TGNC individual is perceived as TGNC and health care access and utilization is explained by whether or not they experience health care discrimination, and if those processes differ by the intersections of race and gender identity.

Terminology

It is important to ground my work in established definitions of race and gender identity. Race is a sociopolitical system of classifying individuals into categories based on various characteristics (e.g., skin color, eye color, eye shape) that are incorrectly thought to be biologically distinct between racial groups (Krieger, 2020; Lett et al., 2022; Roberts, 2012). The boundaries of racial categories are contextually informed in that they can change over time, space, and sociopolitical contexts. For instance, individuals who are racialized as Black within the United States may not be considered Black in different parts of Latin America dependent upon whether, and the degree to which, they have features that are typically associated with Blackness (e.g., darker skin, curlier hair; Cleland, 2022).

In the current study, I refer to people as Black or White based on self-report and the understanding of these constructs within the United States. Blackness generally refers to individuals of African descent (Volpe et al., 2019) and Whiteness typically refers to individuals of European descent, and may include those who are from the Middle East or North Africa (Awad et al., 2021). Although there are several other marginalized racial categories, I am

specifically interested in differences among Black and White TGNC individuals as the lives of Black TGNC individuals are shaped, and constrained, by the ubiquitous and systemic nature of anti-Black racism (Bonilla-Silva, 1997; Krieger, 2020; Lett et al., 2022), and its intersections with cissexism (Crenshaw, 1989; Poteat et al., 2013). As such, the current study focuses on Black and White TGNC individuals and uses racial group identification as a proxy for whether one is harmed (i.e., Black) or not harmed (i.e., White) by anti-Black racism (Lett et al., 2022).

Gender identity is the internal sense of being a gender (e.g., man, woman; APA, 2015). There are several gender identities that fall within the TGNC population. In research, they are typically grouped into three categories: transfeminine, transmasculine, and gender nonconforming (Lett et al., 2020; Reisner & Murchinson, 2016). Transfeminine individuals include those who are assigned male at birth and identify as a woman or are otherwise not cisgender and identify as feminine. Transmasculine individuals include those who are assigned female at birth and identify as a man or are otherwise not cisgender and identify as masculine. Gender nonconforming individuals includes those who are not cisgender and do not exclusively identify as a man/masculine or a woman/feminine. Gender nonconforming individuals may not always identify their selves as transgender, but they have a gender identity that differs from their sex assigned at birth (e.g., nonbinary, agender, genderqueer).

These gender identity categories are often treated as distinct in research, but a person can have multiple gender identities (Kuper et al., 2011), such as being nonbinary and a trans woman. Being TGNC is usually associated with medically transitioning, or undergoing gender affirmation treatments (e.g., hormone replacement; facial feminization surgery), but an individual can be TGNC without medically transitioning (Roe et al., 2022). In recognition of the diversity of this population and the shared experience of cissexism, I use the umbrella term

“transgender and gender nonconforming” to refer to those with a gender identity that is not cisgender. In using gender identity as a social position of interest within the current study, I recognize that while TGNC individuals have a shared experience of cissexism, there are differences in this experience by gender identity among TGNC individuals (e.g., differing HIV prevalence rates; Cicero et al., 2020; Grant et al., 2011; Hughes et al., 2022).

Theoretical Frameworks

The theoretical frameworks of the Health Equity Promotion model (Fredriksen-Goldsen et al., 2014) and quantitative analytic intersectionality (Bauer & Scheim, 2019; Evans, 2019) guide the current study’s examination of health care access and utilization among Black and White TGNC individuals. The Health Equity Promotion model (Fredriksen-Goldsen et al., 2014), which focuses on lesbian, gay, bisexual, and transgender (LGBT) health across the course of one’s life, suggests that marginalized social identity positions (e.g., racial identity that is not White) intersect with gender identity, and their related forms of marginalization. These intersectional forms of marginalization then create unique experiences that disproportionately affect the health of LGBT individuals who experience multiple forms of marginalization, such as Black TGNC individuals (who are harmed by racism, cissexism, and their intersections). Additionally, this model suggests that factors on multiple levels (e.g., perceptions of one’s own visual conformity on the individual level and health care discrimination on the interpersonal level) can create health promoting or health adverse pathways that impact LGBT individuals regarding their health outcomes and behaviors (e.g., increasing or reducing health care utilization). In the current study, I use this theoretical framework to examine visual conformity and trans-specific health care discrimination as contributors to health care access and utilization,

and if the examined associations differ by intersectional position (e.g., e.g., Black transfeminine individual vs. White transfeminine individual).

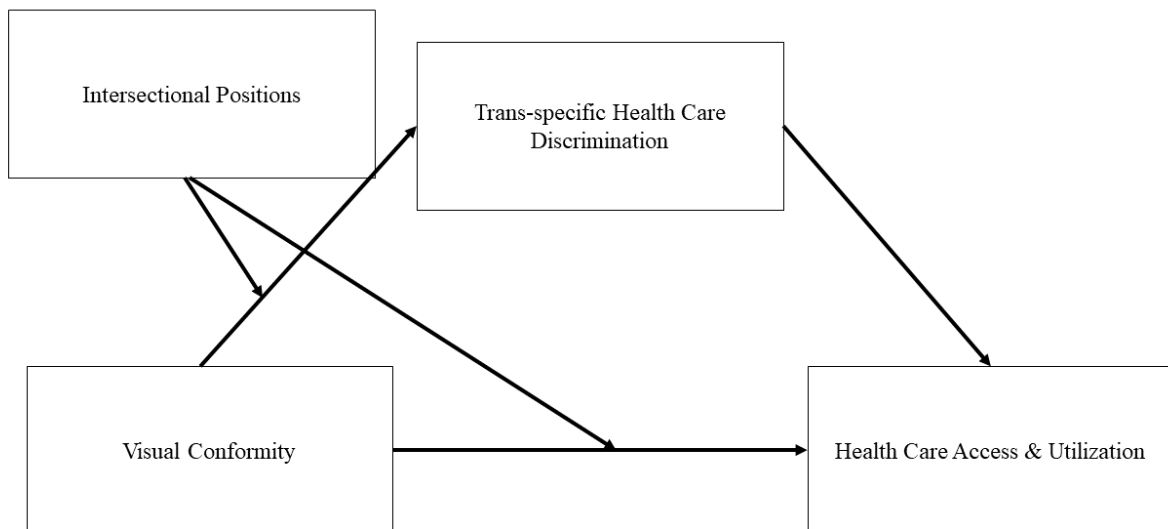
Quantitative analytic intersectionality is the application of intersectionality theory to quantitative analytic methods (Bauer & Scheim, 2019; Evans, 2019). Born of Black feminist thought (Crenshaw, 1989), intersectionality theory tells us that our experiences are uniquely informed by the intersections of social positions and the power or lack of power associated with these intersections. As such, focusing on just one form of marginalization (e.g., racism) when examining the experiences of those who are marginalized in multiple social positions (e.g., Black TGNC individuals) is insufficient. There are two different types of studies that can be used within this quantitative approach to intersectionality: intercategory, which examines experiences within a general population with considerations for multiple intersections of social positions and intracategory, which examines experiences at the intersections of social positions within a social group (McCall, 2005). Studies that are focused on differences within TGNC individuals, such as the current one, are intracategory. Studies that utilize this analytic approach are guided to incorporate some or all of the following four characteristics: structure intersections in a way that reflects differences in power, describe inequities at the intersections of interest, incorporate theory that explains how inequities occur, and examine drivers of inequities. Specifically, this framework suggests the examination of discrimination as a factor that may be able to explain why there are differences by intersectional positions in processes that result in health inequities (e.g., diminished odds of health care utilization).

This theoretical framework guides me to present the current study as an intracategory intersectional study that uses the Health Equity Promotion model (Fredriksen-Goldsen et al., 2014) to examine whether the associations between visual conformity and health care access and

utilization differ by intersectional positions (i.e., race and gender identity combination), and if those associations are explained by trans-specific health care discrimination (see Figure 1). In line with the theoretical framework of quantitative analytic intersectionality (Bauer & Scheim, 2019; Evans, 2019), the current study: structures intersections in a way that reflects differences in power, incorporates theory that explains how inequities may occur, examines drivers of inequities, and examines discrimination as a mediator. The use of these theoretical frameworks to guide the current study will allow for the identification of potential differences, at the intersections of race and gender identity, in processes that influence health care inequities among Black and White TGNC individuals. Present differences may indicate the need to incorporate intersectional considerations into interventions that reduce health care discrimination as an intervenable factor that impacts health care outcomes.

Figure 1

Conceptual Moderated Mediation Model of Health Care Outcomes



Black TGNC Health Inequities

Health inequities are particularly pronounced for Black TGNC individuals (Lett et al., 2020). Black TGNC individuals are more likely to report having cardiovascular disease and worse general health when compared to both White TGNC and Black cisgender individuals. Compared to only White TGNC individuals, Black TGNC individuals are more likely to have diabetes, and compared to only Black cisgender individuals, they report more activity-limited and mentally unwell days. Additionally, similar inequities have been found among Black and White TGNC veterans (Brown & Jones, 2014). There is a greater prevalence of severe mental illness and medical conditions (e.g., congestive heart failure, kidney disease) in Black TGNC veterans when compared to their White counterparts. These are notable findings given that the veteran population is one that should have shared access to health care resources. The uniqueness of these inequities for Black TGNC individuals supports the need for intersectional health research, as opposed to only studying inequities for TGNC and Black populations alone.

Research also supports disaggregation by TGNC gender identity. Gender identity differences in mortality risk have been found amongst Black and White cisgender and TGNC individuals (Hughes et al., 2022). Black transfeminine and gender nonconforming individuals assigned male at birth have the greatest mortality risk when compared to Black individuals with other gender identities and White TGNC and cisgender individuals. Among White TGNC and cisgender individuals, White transfeminine and gender nonconforming individuals assigned male at birth have a greater mortality risk. It has been posited that these differences in mortality risk are a function of transmisogyny (i.e., systemic marginalization that harms transfeminine individuals) and transmisogynoir (i.e., marginalization that harms Black transfeminine individuals; Krell, 2017), in that the experiences of frequent and chronic stressors (e.g., violence,

discrimination) associated with being transfeminine or transfeminine and Black are likely responsible for their increased mortality risk. However, it should be noted that this study grouped TGNC individuals by sex. While this may be practically useful when examining sex-related phenomena (e.g., ovarian cancer; Miyagi et al., 2022), this type of grouping can make it difficult to tease apart and understand shared gender identity experiences and may reinforce biological essentialist notions of sex and gender.

More broadly, differences in health outcomes by TGNC gender identity have been found. Findings from one study suggest that transmasculine and gender nonconforming individuals separately report higher odds of poor/fair health when compared to transfeminine individuals and that transmasculine individuals report more mentally unhealthy days when compared to transfeminine and gender nonconforming individuals separately (Cicero et al., 2020). However, another study did not find any significant differences in general, mental, and physical health outcomes by gender identity among TGNC individuals (Fredriksen-Goldsen et al., 2022). These findings suggest that there may be important differences in the experiences of TGNC individuals which influence their health outcomes and require disaggregation at the gender identity level in TGNC health research to better inform tailored public health strategies (Cicero et al., 2020; DuBois & Juster, 2022; Kinney & Cosgrove et al., 2022).

Black TGNC Health Care Inequities

For individuals who have a higher likelihood of poor health due to marginalization, health care access (e.g., having a primary care provider) and utilization (e.g., routine health care visits) are important leverage points for intervention efforts as they are vehicles through which individuals can properly manage their health (Almazan et al., 2022; Downing & Przedworksi, 2018; Gonzales & Henning-Smith, 2017). Indeed, diminished access to and utilization of health

care is associated with worsening health conditions, worse general health, and the overutilization of emergency services in both TGNC and Black individuals (Chen et al., 2016; Progovac et al., 2018; Seelman et al., 2017; Teti et al., 2021; Whitehead et al., 2016; Willging et al., 2019).

While there is minimal research on how health care access and utilization impact the health of Black TGNC individuals, we do know that they experience diminished access to and utilization of health care. Compared to both White TGNC and Black cisgender individuals, Black TGNC individuals are more likely to be uninsured and are less likely to have a primary care provider (James et al., 2017b; Lett et al., 2020). Additionally, Black TGNC individuals who participated in the USTS reported higher rates (40%) of delaying care due to costs compared to all TGNC individuals (33%; James et al., 2017b). These findings indicate the need for research further examining health care access and utilization for Black TGNC individuals.

Beyond evidence suggesting TGNC gender identity differences in health outcomes, there is further evidence supporting the examination health care outcomes, and their drivers, by gender identity. Overall, we know that transmasculine, transfeminine, and gender nonconforming individuals all have higher odds of delaying care due to cost when compared to cisgender men (Downing & Przedworski, 2018). However, transfeminine individuals are more likely to have had a primary care visit and a primary care provider, when compared to cisgender men (Fredriksen-Goldsen et al., 2022), but they are less likely to have a primary care provider when compared to cisgender women (Downing & Przedworski, 2018). Additionally, compared to transmasculine and transfeminine individuals, gender nonconforming individuals report lower rates of health care utilization (Almazan et al., 2022; Reisner & White Hughto, 2019).

Research conducted with the USTS and the NTDS suggests that transmasculine individuals have greater odds of avoiding and delaying care than transfeminine individuals, but

gender nonconforming individuals are less likely than transfeminine individuals to do so (Cruz et al., 2014; Kcomt et al., 2020). Another study conducted with USTS data suggests that gender nonconforming individuals are the most likely to avoid care due to costs, followed by transmasculine individuals, when compared to transfeminine individuals (Kcomt et al., 2021). There is also research that has found no significant differences in access and utilization of health care amongst TGNC individuals of different gender identities (Fredriksen-Goldsen et al., 2022). Given that there are demonstrated differences, by race and gender identity, in health and health care outcomes among TGNC individuals, examination of potential drivers (e.g., visual conformity, trans-specific health care discrimination) of health care outcomes at these intersections is warranted.

Visual Conformity and Health Care Outcomes

Visual conformity is the degree to which a person is perceived or not perceived as being TGNC (Begun & Kattari, 2016). In the context of the current study, to visually conform is to not be perceived as a TGNC individual (i.e., being perceived to be a cisgender individual). Being visually conforming is not entirely in the control of an individual being perceived. While gender affirmation practices (e.g., wearing clothing associated with one's gender identity, taking gender affirming hormone treatments) may be engaged in as a means for achieving visual conformity, it is not necessarily a goal for all TGNC individuals (Begun & Kattari, 2016). Regardless of whether visual conformity is the goal of an individual, visual conformity is associated with how TGNC individuals navigate their lives, such as low visual conformity being associated with avoiding public bathrooms (Lerner, 2021). Additionally, past research has shown that it is an important predictor of health care outcomes.

Research utilizing data from the USTS has found that visual conformity is associated with care avoidance, such that those who are less visually conforming, or more recognizable as TGNC, are more likely to avoid care due to fear of discrimination (Kcomt et al., 2020; Lerner et al., 2020) and due to cost concerns (Kcomt et al., 2021). However, other research utilizing USTS data has found that the degree to which one visually conforms is not associated with the likelihood of having a doctor's visit in the past year (Lerner et al., 2022). Although being more visually conforming may inhibit access to trans-specific care (White Hughto et al., 2015), visual conformity is generally beneficial for health care outcomes. Given that perceptions of one's appearance influences interpersonal interactions (Roth et al., 2019) and that being TGNC is an identity position marginalized by cissexism (Hughes et al., 2022; King et al., 2020), it has been posited that TGNC individuals who are less visually conforming may experience, or anticipate experiencing, discrimination which lessens their willingness or ability to engage in health care.

Trans-specific Health Care Discrimination as a Mediator

Cissexism in Western society relies on the assumption that one's gender identity is biologically determined by the sex one is assigned at birth (Hughes et al., 2022; King et al., 2020). As such, having a gender identity that differs from one's natally-assigned sex, or being recognizable as such (i.e., not being visually conforming), is seen as deviant or a violation of cissexist notions of gender which are prevalent in our Western society (Conrad, 2007). As perceptions of others influence interactions (Roth et al., 2019), being perceived as TGNC is associated with experiences of trans-specific discrimination (e.g., Miller & Grollman, 2015), defined as unequal treatment related to one's TGNC gender identity (King et al., 2020). Although trans-specific discrimination has been defined multiple ways (King et al., 2020), the current study primarily focuses on more common (Grant et al., 2011; Kattari & Hasche, 2016),

but arguably less severe, experiences of discrimination that do not include physical and sexual harm. Research supports the association between the degree to which one is perceived as TGNC and experiences with discrimination as studies conducted with the National Transgender Discrimination Survey (NTDS), a precursor to the USTS, found that low visual conformity was associated with experiencing more types of discrimination (e.g., intentional incorrect pronoun use, denial of health care, harassment from police; Miller & Grollman, 2015), and a higher frequency of discrimination (Reisner et al., 2016).

Within health care settings, experiences with trans-specific discrimination are commonplace for TGNC individuals (Gonzales & Henning-Smith, 2017; James et al., 2017b; Poteat et al., 2013; White Hughto et al., 2016). These experiences of trans-specific health care discrimination can include health care professionals using the wrong pronouns or name for a patient, showing their discomfort treating a patient because of their gender identity, lacking the knowledge necessary to provide appropriate care, providing inadequate care, and refusing to provide care (Calleros et al., 2022; Kattari et al., 2015; Kosenko et al., 2013; Seelman et al., 2021). In addition to visual conformity being associated with trans-specific discrimination generally, it is also associated to discriminatory experiences within health care settings. Prior research conducted with the NTDS, has found that lower levels of visual conformity were associated with greater odds of having experienced health care discrimination (Kattari & Hasche, 2016; Rodriguez et al., 2018). In a more recent study that utilized USTS data to examine patterns in health care discrimination, researchers found that those who had higher levels of visual conformity were less likely to be in the subgroups of participants who reported experiencing any health care discrimination versus the subgroup of participants who did not (Romanelli & Lindsey, 2019). From this body of research, there is a pattern wherein TGNC individuals, who

are recognizable as such, experience discriminatory treatment when accessing and utilizing care. As visual conformity is also associated with health care outcomes, it may be possible that the seemingly resultant experiences with trans-specific health care discrimination are an intermediary factor in these associations.

The potential for trans-specific health care discrimination to explain the association between visual conformity and health care outcomes is supported by past research that shows that these experiences are associated with reduced access to and utilization of health care. As evidenced by quantitative and qualitative research, it is not uncommon for TGNC individuals to avoid and delay health care when needed because of prior and anticipated health care discrimination (Grant et al., 2011; James et al., 2017b; Poteat et al., 2013; Shipherd et al., 2010; White Hughto et al., 2016). Prior research conducted with the NTDS has found that care avoidance is associated with treatment refusal because of one's TGNC status (White Hughto et al., 2016) and having to teach one's provider about TGNC individuals (Jaffee et al., 2016). Furthermore, providers lacking knowledge about caring for TGNC patients is associated with diminished odds of having a doctor's visit in the past year (Lerner et al., 2022). Additional research conducted with the USTS has found that discriminatory experiences within health care settings (e.g., verbal harassment, needing to educate one's provider, invasive questioning, treatment refusal) were all uniquely associated with a greater likelihood of care avoidance due to anticipated discrimination (Lerner et al., 2020). These experiences make TGNC individuals who are seeking care feel as though many health care settings are not prepared or willing to care for them as TGNC individuals (Poteat et al., 2013), thus making it less desirable and less feasible to access and utilize care even when needed.

Visual conformity is associated with both discriminatory experiences within health care settings and with health care outcomes. Thus, this research demonstrating that these experiences also negatively impact health care outcomes further supports examining trans-specific health care discrimination as an intervening factor in the association between visual conformity and health care outcomes. As access to and utilization of care is necessary for management of one's health (Almazan et al., 2022; Downing & Przedworksi, 2018; Gonzales & Henning-Smith, 2017), examining these processes will provide information that could be used to promote health equity for TGNC individuals.

Intersectional Positions as a Moderator

In addition to the aforementioned evidence of intersectional differences in health care outcomes, there is evidence that suggests that the associations among visual conformity, health care discrimination, and health care outcomes may differ at the intersections of race and gender identity. As sexism writ large posits masculinity as superior to femininity (Serano, 2007), and cisgender women as a vulnerable group that needs protection (Westbrook & Schilt, 2014), previous literature suggests that visual conformity may be less attainable for transfeminine individuals compared to transmasculine individuals. Meaning that transfeminine individuals may experience more difficulty being seen as women, and subsequently, may be perceived as TGNC more often than TGNC individuals of other gender identities (Devor, 2004; Schilt & Connell, 2010). Indeed, a study that utilized USTS data revealed that a larger proportion of transmasculine individuals reported high visual conformity compared to transfeminine and gender nonconforming individuals, with transfeminine individuals reporting the least visual conformity (Kcomt et al., 2020).

Previous literature about perceptions of gender among Black and White men and women suggests that there may also be racial differences in visual conformity, as notions of gender within Western society are racialized (Ford, 2008). Past research has shown that Black individuals overall are seen as more masculine than White individuals (Benson & Volpe, 2022; Johnson & Ghavami, 2011), Black men are perceived as more masculine than White men (Wong et al., 2013), and that people have more difficulty perceiving Black women as women compared to perceptions of White women (Goff et al., 2008; Thomas et al., 2014). Although this research was not explicitly inclusive of TGNC individuals, it may be the case that there are higher standards for Black transfeminine individuals to be perceived as visual conforming, and not recognizable as TGNC. It may also be the case that visual conformity is more attainable for Black transmasculine individuals, compared to Black transfeminine and gender nonconforming individuals, given the perceptual associations between Blackness and masculinity. Taken together, this literature suggests that how visual conformity functions may differ at the intersections of race and gender identity among Black and White TGNC individuals. For example, compared to White transmasculine individuals, the associations between visual conformity and health care utilization may be weaker for White transfeminine individuals.

When considering associations between trans-specific health care discrimination and health care outcomes, there is evidence that these associations also differ at the intersections of race and gender identity. Prior research has shown that White individuals report better quality of care than Black individuals, and that health care discrimination is not uncommon for Black individuals (Gonzalez et al., 2021, Volpe et al., 2021). Among Black, White, and Hispanic/Latinx men and women, a higher proportion of Black women report prior experience with health care discrimination, defined here as unequal treatment for any reason (Gonzalez et

al., 2021). Additionally, experiences with racial health care discrimination are associated with diminished health care outcomes for Black individuals (Gonzalez et al., 2021; Stepanikova & Oates, 2017).

Research conducted with the NTDS has demonstrated that for TGNC people of color, experiences with trans-specific health care discrimination is significantly more commonplace when compared to reports from White TGNC individuals (Kattari et al., 2015; Kattari et al., 2017; Kattari & Hasche, 2016). Specific to Black TGNC individuals, NTDS data suggests that a greater proportion are denied care compared to their White counterparts (Grant et al., 2011), and USTS data suggests that they report experiences with trans-specific health care discrimination more often than all TGNC individuals (James et al., 2017b). However, one study with NTDS data suggests that there are no differences in experiences of trans-specific health care discrimination between Black and White TGNC individuals (Shires & Jaffee, 2015). In qualitative research that has examined health care experiences, Black TGNC individuals have noted that their experiences of discrimination within health care are unique to their position as both Black and TGNC (Jefferson et al., 2013; Perez-Brumer et al., 2018; Sherman et al., 2022). This prior research suggests that overall patterns between health care discrimination and health care outcomes are likely similar among Black and White TGNC individuals (i.e., experiencing health care discrimination diminishes health care outcomes).

When looking at trans-specific health care discrimination among TGNC individuals overall, research conducted with USTS data suggests that transmasculine individuals are more likely to report experiences than both transfeminine and gender nonconforming individuals (James et al., 2016; Romanelli & Lindsey, 2020; Seelman et al., 2021). However, other research conducted with USTS data has shown that gender nonconforming individuals, compared to other

TGNC individuals, were the least likely to feel respected by providers who knew of their gender identity (Kattari et al., 2020). Additionally, prior research with NTDS data has found that a greater proportion of transfeminine individuals report being denied care, compared to other TGNC individuals, with this experience being the least common among gender nonconforming individuals (Grant et al., 2011; Harrison et al., 2012). Yet, gender nonconforming individuals report care avoidance due to fear of discrimination more often (Harrison et al., 2012). Qualitative research suggests that experiences of trans-specific health care discrimination are unique, and potentially more harmful, for gender nonconforming individuals because of gender binarism (i.e., the prioritization of those with binary gender identities, or men and women; Frohard-Dourlent et al., 2017). This is shown in the experiences of gender nonconforming individuals who note that they encounter providers who lack an understanding of their gender identity as TGNC or with clinic policies that do not account for those who are neither men nor women (Kinney & Cosgrove, 2022).

Taken together these findings suggest that both race and gender identity are important to consider when examining health care outcomes and their drivers, as they are likely influenced by the unique experiences of systemic marginalization at the intersections of racism and cissexism (e.g., transmisogynoir, gender binarism; Frohard-Dourlent et al., 2017; Krell, 2017). Although, prior evidence suggests that transmasculine individuals are at a higher risk for experiencing trans-specific health care discrimination compared to transfeminine and gender nonconforming individuals, past literature and research about visual conformity and health care discrimination concerning other groups (i.e., transfeminine individuals, gender nonconforming individuals, Black women) highlight potentially unique risks for health adverse pathways related to transmisogyny, gender binarism, and transmisogynoir.

Current Study

In order to create targeted efforts that reduce health inequities for Black TGNC individuals, we need a deeper understanding of Black TGNC health care inequities and related processes. Examination of these associations at the intersections of race and gender identity aligns with an intersectional praxis in research (Bauer, 2014; Bauer & Scheim, 2019; McCall, 2005; Wesp et al., 2019). This praxis calls us to acknowledge that systems of marginalization (e.g., racism, cissexism) intersect to create unique experiences for multiply marginalized individuals that cannot be examined or addressed through efforts that focus on differences within only one social category. At this time, there is paucity of research examining drivers of health care access and utilization among Black and White TGNC individuals at the intersections of both race and gender identity. Examining these differences may indicate intersectional positions that are in need of tailored attention and different considerations in research and health promotion efforts, such as further investigation into the nature of visual conformity and health care experiences and how they may be differentially informed by intersectional forms of marginalization. In line with the Health Equity Promotion model (Fredriksen-Goldsen et al., 2014) and quantitative analytic intersectionality (McCall, 2005; Bauer & Scheim, 2019; Evans, 2019), I propose an intracategorical intersectional study examining the following research questions:

RQ 1) Do the associations between visual conformity and health care access and utilization differ by intersectional position (e.g., Black transfeminine vs White transmasculine individuals; Black transfeminine vs Black gender nonconforming individuals)?

RQ 2) Are the associations between the interactions of intersectional positions and visual conformity and health care access and utilization explained by trans-specific health care discrimination?

Adequate health care access and regular health care utilization are crucial for the management of one's health (Gonzales & Henning-Smith, 2017; Kachen & Pharr, 2020; Resiner & White Hughto, 2019), especially when considering present inequities in health outcomes for Black TGNC individuals. Previous literature has found inequitable differences in health (Brown & Jones, 2014; Hughes et al., 2022) and health care outcomes for Black TGNC individuals when compared to White TGNC individuals (James et al., 2017b; Lett et al., 2020). Additionally, the varied findings by gender identity in health and health care outcomes (e.g., Cicero et al., 2020; Downing & Przedworski, 2018; Fredriksen-Goldsen et al., 2022; Kinney & Cosgrove, 2022) among all TGNC individuals and the unique forms of identity specific anti-TGNC marginalization (i.e., transmisogyny, transmisogynoir, gender binarism; Frohard-Dourlent et al., 2017; Krell, 2017) lead me to propose a series of competing hypotheses.

Overall, I hypothesize that there will be differences in the associations between visual conformity and health care outcomes by intersectional position (RQ1), and that experience with trans-specific health care discrimination will mediate the associations between the interactions of intersectional position and visual conformity and health care outcomes (RQ2). In line with an understanding of transmisogyny and transmisogynoir as drivers of inequities for transfeminine and Black transfeminine individuals (Hughes et al., 2022; Krell, 2017), it may be the case that the associations between visual conformity and health care outcomes are weaker for White transfeminine and Black transfeminine individuals when compared to their same race counterpart, and weakest for Black transfeminine individuals overall. However, in line with an

understanding that gender binarism shapes experiences of trans-specific health care discrimination (Frohard-Dourlent et al., 2017; Kinney & Cosgrove, 2022), it may instead be the case that gender nonconforming individuals, of either race, have comparatively weaker associations between visual conformity and health care outcomes. By examining these hypotheses, the current study intends to provide knowledge to researchers, health care providers, and policymakers that can be used to promote health equity for Black TGNC individuals.

Method

Overview of the United States Transgender Survey

The current study is a secondary data analysis of the United States Transgender Survey (USTS; James et al., 2019). The USTS was administered in 2015 by the National Center for Transgender Equality (NCTE) and it is the largest national survey of transgender and gender-nonconforming individuals ($N = 27,715$) making it an ideal dataset for examining health care experiences and outcomes among TGNC individuals. The USTS collected self-reported data regarding various dimensions of TGNC life (e.g., education, employment, and health). The survey was created by the National Center for Transgender Equality in collaboration with individuals who have related research, advocacy, and/or lived expertise. To ease comparability of USTS responses with national data, some survey questions were adapted from national surveys (e.g., American Community Survey, Current Population Survey; James et al., 2017a; United States Census Bureau, 2022a; United States Census Bureau, 2022b). The current study is interested in differences among Black and White TGNC adults. As such, it only used USTS data from Black and White TGNC adults as differences are likely shaped by systemic anti-Black racism (Bonilla-Silva, 1997; Krieger, 2020; Lett et al., 2022), and its intersections with cissexism (Crenshaw, 1989; Poteat et al., 2013). Thus, the current study utilizes racial group identification

as a proxy for exposure to racism (Lett et al., 2022). Institutional review board (IRB) approval has been obtained for the current study (eIRB# 25025). A data use agreement with the Inter-university Consortium for Political and Social Research, the manager of the USTS data, was obtained.

Participants

Participants were recruited using a variety of targeted convenience sampling methods (see description of sampling weights and representativeness in the Analytic Approach section below; James et al., 2017a), such as the NCTE asking U.S. TGNC-specific or –inclusive organizations to share recruitment materials for the survey with their members, having organizations agree to host survey-taking stations at their events and facilities, and sharing recruitment materials via their own communication channels (e.g., social media, email listservs) and at in-person events (e.g., conferences, speaking engagements).

Inclusion criteria included identifying as transgender and/or gender nonconforming, being 18 years or older, and residing in the United States (i.e., all 50 states, Washington D. C., Puerto Rico, Guam, and the U.S. Virgin Islands). Of the 22,975 Black and White TGNC participants in the USTS dataset, 90 were removed because they provided contradictory responses related to a variable of interest, whether or not they had a primary care physician (i.e., response to one question indicating they had a primary care physician and response to another indicating that they did not). Another 166 participants were removed from the analytic sample because of missing data on variables of interest (e.g., having a doctor’s visit in the past year, insurance status, visual conformity; see Analytic Approach for more information about missing data). The final analytic sample included 771 Black (transfeminine $n = 240$; transmasculine $n = 274$; gender nonconforming individuals $n = 257$) and 21,948 White (transfeminine $n = 7812$;

transmasculine $n = 6320$; gender nonconforming individuals $n = 7816$) TGNC adults ($M_{\text{age}} = 31.2$, $SD_{\text{age}} = 13.4$, range = 18 – 100+). The majority of participants were well educated, with over a third of participants (38%) having completed some college and just over a quarter (26%) completed their Bachelor's degree. Participants were approximately evenly distributed across the United States (West: 29%; South: 28%; Midwest: 22%, Northeast: 21%). Over half of participants (66%) were employed, 22% were out of the workforce, and 13% were unemployed. Of note, to abide by the data use agreement, the "Out of the workforce" and "Missing" categories were collapsed to reduce identifiability by small cell size. Missing employment status responses made up less than 1% of the overall sample. Over half (54%) of participants reported a household income less than \$50,000 and nearly a quarter (23%) reported a household income of \$50,000 to \$99,999. The majority (88%) of participants had health insurance coverage (see Tables 1 and 2 for complete sample characteristics). Intersectional position groups are abbreviated as follows, for related tables: BTF = Black transfeminine individuals, BTM = Black transmasculine individuals, BGNC = Black gender nonconforming individuals, WTF = White transfeminine individuals, WTM = White transmasculine individuals, WGNC = White gender nonconforming individuals.

Procedure

The National Center for Transgender Equality collected data for the USTS from January to December 2015 via an online format (James et al., 2017a) After consenting, participants answered questions about their health and quality of life. Upon completion, participants could choose to enter a drawing for three cash prizes (one \$500, two \$250). The survey was available in both English and Spanish.

Table 1*Unweighted Sample Demographics*

Demographic	BTF (<i>n</i> = 240)	BTM (<i>n</i> = 274)	BGNC (<i>n</i> = 257)	WTF (<i>n</i> = 7812)	WTM (<i>n</i> = 6320)	WGNC (<i>n</i> = 7816)	Total (<i>n</i> = 22,719)
	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)
Age, Mean (SD)	36.0 (13.0)	30.2 (9.5)	25.6 (9.2)	38.9 (15.5)	28.3 (10.3)	25.9 (9.2)	31.2 (13.4)
Age							
18-24	53 (22)	81 (30)	152 (59)	1697 (22)	2972 (47)	4674 (60)	9629 (42)
25-44	130 (54)	166 (61)	99 (39)	3313 (42)	2733 (43)	2694 (34)	9135 (40)
45+	57 (24)	27 (10)	6 (2)	2802 (36)	615 (10)	448 (6)	3955 (17)
Census Region							
Northeast	42 (18)	58 (21)	56 (22)	1452 (19)	1440 (23)	1763 (23)	4811 (21)
Midwest	41 (17)	42 (15)	47 (18)	1749 (22)	1401 (22)	1685 (22)	4965 (22)
South	114 (48)	123 (45)	112 (44)	2173 (28)	1679 (27)	2060 (26)	6261 (28)
West	43 (18)	51 (19)	42 (16)	2438 (31)	1800 (28)	2308 (30)	6682 (29)
Educational Attainment							
Less than high school; High school grad (incl. GED)	54 (23)	35 (13)	31 (12)	1075 (14)	1055 (17)	1225 (16)	3475 (15)
Some college (no degree)	92 (38)	104 (38)	114 (44)	2683 (34)	2346 (37)	3212 (41)	8551 (38)
Associate's Degree	30 (13)	31 (11)	20 (8)	824 (11)	492 (8)	475 (6)	1872 (8)
Bachelor's Degree	44 (18)	59 (22)	62 (24)	2075 (27)	1512 (24)	2057 (26)	5809 (26)

Table 1 (continued).

Demographic	BTF (<i>n</i> = 240)	BTM (<i>n</i> = 274)	BGNC (<i>n</i> = 257)	WTF (<i>n</i> = 7812)	WTM (<i>n</i> = 6320)	WGNC (<i>n</i> = 7816)	Total (<i>n</i> = 22,719)
	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)
Graduate or professional degree	20 (8)	45 (16)	30 (12)	1155 (15)	915 (14)	847 (11)	3012 (13)
Employment Status							
Employed	141 (59)	192 (70)	154 (60)	5168 (66)	4357 (70)	4904 (63)	14916 (66)
Unemployed	37 (15)	40 (15)	42 (16)	879 (11)	761 (12)	1115 (14)	2874 (13)
Out of the labor force;	62 (26)	42 (15)	61 (24)	1765 (23)	1202 (19)	1797 (23)	4929 (22)
Missing							
Insurance Status							
No	51 (21)	50 (18)	55 (21)	1023 (13)	707 (11)	843 (11)	2729 (12)
Yes	189 (79)	224 (82)	202 (79)	6789 (87)	5613 (89)	6973 (89)	19990 (88)
Household income							
No income	18 (8)	12 (4)	17 (7)	224 (3)	204 (3)	290 (4)	754 (3)
\$1 to \$9,999	45 (19)	31 (11)	44 (17)	677 (9)	726 (11)	1029 (13)	2552 (10)
\$10,000 to \$24,999	55 (23)	48 (18)	46 (18)	1358 (17)	1249 (20)	1393 (18)	4149 (18)
\$25,000 to \$49,999	50 (21)	69 (25)	59 (23)	1594 (20)	1330 (21)	1594 (20)	4696 (21)
\$50,000 to \$99,000	36 (15)	64 (23)	45 (18)	1938 (25)	1452 (23)	1666 (21)	5201 (23)
\$100,000 or more	18 (8)	29 (11)	23 (9)	1491 (19)	806 (13)	1055 (13)	3422 (15)
Missing	18 (8)	21 (8)	23 (9)	530 (7)	553 (9)	789 (10)	1934 (9)

Note. To abide by the data use agreement, categories have been collapsed to reduce identifiability by small cell sizes. For age, “45-64” and “65+.” For educational attainment, “Less than high school” and “High school grad (incl. GED);” for employment status, “Out of Labor Force” and “Missing” Missing responses made up less than 1% of the overall sample for each variable with collapsed categories. Percentages may not add up to 100 due to rounding. See Appendix A for select unweighted bivariate associations.

Table 2*Weighted Sample Demographics*

Demographic	BTF (9%)	BTM (5%)	BGNC (3%)	WTF (49%)	WTM (17%)	WGNC (17%)	Total (<i>n</i> = 22,719)
Age, Mean (SE)	42.4 (0.36)	36.9 (0.45)	39.5 (0.49)	50 (0.14)	35.9 (0.28)	34.3 (0.28)	43.5 (0.37)
	%	%	%	%	%	%	%
Age							
18-24	4	9	26	4	18	28	11
25-44	49	61	50	27	51	47	39
45+	47	30	23	70	31	25	50
Census Region							
Northeast	17	23	16	20	20	22	20
Midwest	19	13	14	23	21	20	21
South	43	43	56	27	28	26	30
West	21	21	14	30	31	32	29

Table 2 (continued).

Demographic	BTF (9%)	BTM (5%)	BGNC (3%)	WTF (49%)	WTM (17%)	WGNC (17%)	Total (<i>n</i> = 22,719)
	%	%	%	%	%	%	%
Educational Attainment							
Less than high school; High school grad (incl. GED)	56	42	38	42	33	30	40
Some college (no degree)	22	24	26	21	25	28	23
Associate's Degree	7	9	7	9	8	7	8
Bachelor's Degree	10	15	15	17	19	22	17
Graduate or professional degree	4	11	14	12	14	13	12
Employment Status							
Employed	47	68	50	58	68	65	60
Unemployed	14	12	18	8	9	10	9
Out of the labor force	39	20	32	34	24	25	30
Health Insurance Status							
No	19	19	26	13	13	15	15
Yes	81	81	74	87	87	85	85

Table 2 (continued).

Demographic	BTF (9%)	BTM (5%)	BGNC (3%)	WTF (49%)	WTM (17%)	WGNC (17%)	Total (<i>n</i> = 22,719)
	%	%	%	%	%	%	%
Household income							
No income	5	3	18	2	2	3	3
\$1 to \$9,999	25	12	14	9	11	12	12
\$10,000 to \$24,999	24	30	14	23	23	21	23
\$25,000 to \$49,999	22	30	17	24	25	23	24
\$50,000 to \$99,000	20	19	14	25	25	25	24
\$100,000 or more	5	7	25	17	12	15	14

Note. To align with the Table 1 which abides by the data use agreement, categories have been collapsed. For age, “45-64” and “65+.”

For educational attainment, “Less than high school” and “High school grad (incl. GED).” Percentages may not add up to 100 due to rounding. Due to the procedure used to estimate weighted descriptives, missing responses are not included.

Measures

See Appendix B for included USTS survey questions (James et al., 2016; James et al., 2017a).

Visual Conformity

To assess visual conformity, participants were prompted with the statement “People can tell I am trans even if I don’t tell them.” Responses were made on a 5-point scale (*Always, Most of the time, Sometimes, Rarely, Never*) with higher scores meaning higher visual conformity.

Intersectional Positions

Responses from questions that assessed participants’ race, sex, and gender identity were combined into a cross-stratified intersectional positions variable for the current study. To assess race/ethnicity, participants were prompted with, “Although the choices listed below may not represent your full identity or use the language you prefer, for this survey please select the choice that most accurately describes your racial/ethnic identity” and several response options. The National Center for Transgender Equality provided a recoded variable that used American Community Survey categories for racial/ethnic identities: “Alaska Native/American Indian alone,” “Asian/Native Hawaiian/Pacific Islander,” “Biracial/Multiracial/Not listed,” “Black/African American alone,” “Latino/a/Hispanic alone,” “White/Middle Eastern/North African alone.” Only participants in the, “Black/African American alone” or “White/Middle Eastern/North African alone” categories were included in the current study’s analyses. Participants in the “Biracial/Multiracial/Not listed” category who selected “Black/African American” as one of their constituent racial/ethnic identities were not included in the current study as the sample was relatively small ($N = 76$), precluding comparisons at that level, and those who have more than one marginalized racial/ethnic identity would incorporate exposure to

types of racism other than anti-Black racism into the study (e.g., exposure to anti-Asian racism among Black-Asian biracial individuals; Gay et al., 2022).

To assess sex, participants were asked, “What sex were you assigned at birth, on your original birth certificate?” and could select, “Male” or “Female.” To assess gender identity, participants were asked, “If you had to choose only one of the following terms, which best describes your current gender identity?” and were provided with the following responses: “Cross-dresser,” “Woman,” “Man,” “Trans woman (MTF),” “Trans man (FTM),” “NB/Genderqueer.” Using participants’ responses, the National Center for Transgender Equality created a new gender variable with the following categories: “Cross-Dresser,” “Trans Women,” “Trans Men,” “Assigned Female at Birth (AFAB) NB,” and “Assigned Male at Birth (AMAB) NB.” For the current study, I collapsed participants in the AFAB and AMAB NB categories into one gender nonconforming category and did not include those who identified as cross-dressers as the USTS defined this response option as a gender nonconforming behavior rather than a gender identity. My decisions were made because of the current study’s focus on those who are transfeminine, transmasculine, and gender non-conforming (Kachen & Pharr, 2020) and their experiences of cissexism within health care writ large, which does not explicitly include or disaggregate by sex-specific health care (e.g., gynecology, hormone therapy; Miyagi et al., 2022). The composite intersectional positions variable does not contain a reference category in order to not suggest that there is a “normal” or “ideal” intersectional position (Cicero et al., 2020). Participants were categorized as “Black transfeminine,” “Black transmasculine,” “Black gender non-conforming,” “White transfeminine,” “White transmasculine,” or “White gender non-conforming.”

Trans-specific Health Care Discrimination

Participants who had indicated that they had had a doctor's visit in the past year were presented with a list of 10 different experiences (e.g., being respected by their provider, verbal harassment, physical abuse from a provider) that can occur within a health care setting. They were asked, "In the past year, did you have any of these happen to you, as a trans person, when you went to see a doctor or health care provider?" Participants could select either "Yes" or "No" in response to each experience. To focus on experiences of trans-specific health care discrimination, defined for the current study as unequal treatment related to one's TGNC gender identity (King et al., 2020), exploratory and confirmatory factor analyses were conducted to create a composite measure (see Appendix C). This measure uses five of the original 10 experiences (i.e., needing to teach a provider about trans health, trans-specific treatment refusal, invasive questioning, harsh/abusive language usage from one's provider, verbal harassment in the health care setting) and indicates whether or not a participant experienced any trans-specific health care discrimination. Cronbach α reliabilities were sufficient for the overall sample (.88), and for each intersectional position (Black transfeminine = .91; Black transmasculine = .85; Black gender nonconforming = .79; White transfeminine = .88; White transmasculine = .87; White gender nonconforming = .89).

Health Care Access

In line with prior research that has shown the importance of access to routine care for health maintenance (Gonzales & Henning-Smith, 2017; Kachen & Pharr, 2020; Resiner & White Hughto, 2019), health care access was measured with one variable, having a primary care provider. Participants were asked a series of questions about their experiences with health care providers. They were first asked, "Thinking about the doctor or provider you go to for your trans-related health care (such as hormone treatment), how much do they know about providing

health care for trans people?” Those who selected a response indicating that they do have a trans-related provider were then asked, “Do you also go to your trans-related health care provider for your routine health care, like physicals, flu, diabetes, etc.?” Those who indicated that they did not have a trans-specific provider in response to the first question or that they see another provider for their routine care in response to the second question were then asked, “How much does your routine health care provider (who you see for physical, flu, diabetes, etc.) know about health care for trans people?” The health care access outcome variable was created using the responses from second and third question in this series. Participants who selected “No, I do not get any routine health care,” in response to the second question, or “I don’t have a routine health care provider,” in response to the third question, were categorized as not having a primary care provider. Participants who selected, “Yes, I see my trans health care provider for my routine health care” or “No, I see a different doctor or health care provider for my routine health care,” in response to the second question, or a response indicating that they have a primary care provider (e.g., “They know most things”) in response to the third question were categorized as having a primary care provider.

Health Care Utilization

In line with prior research which has shown the importance of regular health care visits and not avoiding care for health maintenance (Gonzales & Henning-Smith, 2017; Kachen & Pharr, 2020; Resiner & White Hughto, 2019), health care utilization was measured with two variables, having a visit and care avoidance due to fear of trans-specific health care discrimination in the past year. Having a visit in the past year was captured via the following question, “In the past year, have you seen a doctor or health care provider?” Participants could select “Yes” or “No.” Care avoidance due to fear of trans-specific health care discrimination was

captured via the following question, “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 person?” In response to both questions, participants could select “Yes” or “No.”

Demographic Variables

The current study will include age, census region, educational attainment, employment status, health insurance status, and household income as demographic variables. The educational attainment, employment status, and household income variables were used to demonstrate the impact of known racism- and cissexism-related structural inequities (e.g., poverty, employment discrimination; King et al., 2022; Zarwell et al., 2022). As such, these variables were not included in the central analyses as covariates as they are on the path from systemic marginalization to health inequities for both Black and TGNC individuals, and may introduce overadjustment bias (Lett et al., 2020; Schisterman et al., 2009). The covariates for the current study will include age, census region, and health insurance status (Lett et al., 2020; Lett et al., 2021). Due to the largest proportion of participants indicating that they live in the “West” and that they have health insurance, these categories were selected as the referents. There are regional differences in the frequency of trans-specific health care discrimination experiences (Cicero et al., 2019; Kattari et al., 2015; Truszczynski et al., 2022). There are also differences in health care outcomes by age (Tran et al., 2022). Although, health insurance is a measure of health care access it precedes the health care access and utilization outcomes in the current study (Gonzales & Henning-Smith, 2017; Kachen & Pharr, 2020).

Analytic Approach

Using averaged estimates from prior research with similar study variables (Kcomt, 2019; Kcomt et al., 2020; Lerner et al., 2020), a power analysis (Faul et al., 2019; Faul et al., 2007)

revealed that a sample of 1,447 was required to obtain 80% power to detect a significant effect (OR = 1.34) at a .017 α error probability ($\alpha = .05/3$, adjusting for three health care outcome models health) with an outcome probability of 22% and shared variance of .50 amongst other predictors. Sample characteristics and regression diagnostics were examined to describe the sample and assess statistical model assumptions (e.g., multicollinearity, influential observations, normality of the residuals; Agresti, 2019; Field, 2013; Menard, 2013; Zhang, 2016). Unweighted and weighted distributions of demographic and central study variables were reported to describe the overall sample and each intersectional position. Weighted and unweighted significant differences in predictors of interest (i.e., visual conformity, trans-specific health care discrimination) and outcomes by intersectional position were briefly reported. Participants identified as outliers (e.g., high absolute values for the change in the deviance residual; Agresti, 2019; Menard, 2013; Zhang, 2016) will be retained for sensitivity analyses to assess their influence. All potential covariates (i.e., age, insurance status, and census region) were included in the primary analyses because they were each significantly associated with the outcomes and at least one predictor variable (de Boer et al., 2015).

Those with no missing responses on central study variables (e.g., visual conformity, having a primary care provider) were more highly educated ($\phi_c = .04$, $p < .001$) and more likely to be employed ($\phi_c = .03$, $p < .001$) than the aforementioned 166 participants who were removed due to missing data on central study variables. Otherwise, these two groups were demographically similar and had no significant differences on central study variables. Due to the small amount of missing data (0.01%) and demographic similarity on central variables of interest, complete case analysis was utilized for study analyses. Maximum likelihood estimation

was utilized due to its iterative process of fitting parameter estimates within generalized linear models (Agresti, 2019). All analyses were conducted in R 4.2 (R Core Team, 2022).

Three multivariate hierarchical logistic regression models were used to examine whether the associations between visual conformity and health care outcomes (i.e., having a doctor's visit in the past year, having a primary care provider, care avoidance due to fear of trans-specific health care discrimination) differed by intersectional positions (RQ 1), and whether trans-specific health care discrimination explained the association between the intersection of visual conformity and intersectional positions and health care outcomes (i.e., having a primary care provider and care avoidance due to fear of trans-specific health care discrimination; RQ 2). Covariates (i.e., age, insurance status, and census region) were added in the first step, predictors (i.e., intersectional positions, visual conformity) were added in the second step, and the interaction of the predictor variables (i.e., product of intersectional positions and visual conformity) was added in the third step. Since the items assessing experiences with trans-specific health care discrimination were only presented to participants who had reported a doctor's visit in the past year, trans-specific health care discrimination was added in the fourth step for the other two outcomes.

Continuous variables were mean-centered before inclusion within the regression models. Artificially coded indicator variables were used to indicate membership in each non-reference level of the categorical predictors (e.g., an indicator representing participants who live in the Midwest compared to those who live in the West). A Bonferroni corrected significance level ($\alpha = .05/3 = .017$) was employed for the correction of multiple comparisons. As such, parameter estimates were considered significant if their 98.3% confidence intervals did not contain 1. Odds ratios, 98.3% confidence intervals, and model fit indices (e.g., pseudo R^2 , AIC) were reported for

all analyses (Agresti, 2019). For logistic regressions, pseudo R^2 values are an indicator of model fit as they are not an exact measure of explained variance or effect size (Hemmert et al., 2018). As such, the magnitude of odds ratios was an indicator of effect size for each parameter (Agresti, 2019).

In line with positing as an intracategorical intersectional study (Bauer & Scheim, 2019; Evans, 2019), the intersectional positions variable did not include a reference level and all of the logistic regression models were intercept-free (Cicero et al., 2020). These decisions were made so that there was not an intersectional position (e.g., White transfeminine individuals) as the basis of all comparisons that is subsequently assumed to have the most favorable or desirable odds of the health care outcomes examined. This approach is aligned with the understanding that intersectionality means being exposed to multiple forms of marginalization (e.g., cissexism, racism) creates unique experiences and intersectional forms of marginalization (e.g., transmisogynoir; Krell, 2017) that should be examined from multiple perspectives. Applying this approach means that the parameter estimate for each intersectional position indicator (e.g., Black transfeminine individuals) variable is a comparison of that intersectional position to the overall sample. In any model wherein the interaction variable, or the intersectional positions variable, significantly contributed to the outcome (via a significant likelihood ratio test), post-hoc pairwise comparisons were used to estimate odds ratios and 95% confidence intervals that compare the odds of health care outcomes between intersectional positions (e.g., comparing the odds of having a doctor's visit between Black transfeminine and transmasculine individuals, comparing the change in odds of care avoidance associated with visual conformity between White transfeminine and gender nonconforming individuals). Using this approach allows for the potential exploration of all comparative combinations of the intersectional positions variable, and

their interactions with visual conformity. This will lead to a fuller understanding of how the exposure to cissexism, racism, and its intersections potentially impact health care outcomes among Black and White TGNC individuals.

Removing the intercept from logistic regression models allows for the estimation of parameters reflecting all levels of a categorical variable. As such, in the first step of each central study model, there were parameter estimates for both having insurance and not having insurance. For the second through fourth steps of the model, there were parameter estimates for each level of the intersectional positions variable. However, due to multicollinearity associated with interactions including a categorical variable with more than three levels (Allison, 2012; Menard, 2013; Yavorsky et al., 2016), only five interaction indicators were included within the third step of each of the models, for which White transfeminine participants were treated as the referent.

If trans-specific health care discrimination was significantly associated with the health care outcome (i.e., care avoidance, having a primary care provider), bootstrapped mediation tests with 5,000 samples and 95% bias-corrected confidence intervals were conducted. As such, significant mediation was indicated by a significant total effect and a significant indirect effect. Mediation results were reported as the change in the probability of the outcome (Tingley et al., 2014).

Findings from health equity research are used to inform public health strategies, such as the creation of policies and interventions that are targeted to reduce inequities in marginalized groups. As such, representativeness of national samples is an important methodological consideration. The NCTE used convenience sampling methods for the USTS which resulted in a TGNC sample that is disproportionately White, younger, and more highly educated compared to the general US population at the time (Lett & Everhart, 2022). There are two methods that can

and have been used to address this issue: weighted and unweighted analyses (Lett & Everhart, 2022). For the first method, the NCTE provides survey sampling weights that utilize data from the 2014 American Community Survey (ACS). When applied, these weights adjust for race/ethnicity, age, and educational attainment to approximate a more nationally representative sample. However, there are critiques of the utilization of these survey weights. The unweighted USTS sample includes nearly 800 Black participants (nearly 3% of the overall sample), who are then upweighted to approximately 12% of overall sample when the weights are applied. As such, weighted findings about Black TGNC participants, that are presented as nationally representative, may incorporate unknown selection bias. The TGNC individuals who participated in the USTS may be meaningfully different from those who did not (Lett & Everhart, 2022). This is especially important when considering Black TGNC individuals who may encounter barriers (e.g., economic inequities; Lett et al., 2020) that may have prohibited their ability to participate in an online survey. Additionally, there is evidence that suggests that transgender individuals are more likely to be non-White when compared to cisgender individuals (Herman et al., 2017). Therefore, the use of the 2014 ACS data to create survey weights may not be appropriate given that the ACS did not collect inclusive gender identity data.

Unweighted analyses use the sample without applying the provided survey sampling weights (Turban et al., 2020; Turban et al., 2021). This alternative method results in arguably less nationally representative findings. However, it can be used to avoid overconfidence in the assumed representativeness and unaddressed selection bias in weighted analyses (Lett & Everhart, 2022). This method also allows for the identification of potential inequities that can be further examined in more intentionally representative research.

Following previous TGNC health inequities research, I conducted the central analyses using both weighted analyses and unweighted analyses. The analytic steps described previously were used for each method. By using both methods, I intend to present a fuller understanding of potential health care inequities among Black and White TGNC individuals and address the issues of representativeness when defaulting to only using weighted analyses. Findings from both methods are presented regardless of whether they differ in the amount or direction of significant findings.

Results

The average visual conformity indicated that participants believed that they were recognizable as TGNC “sometimes” to “rarely” ($M = 3.63$, $SD = 0.99$). A majority of the sample (88%) reported having a doctor’s visit in the past year. Of these participants, just over a third (34%) reported experiencing trans-specific health care discrimination, over three-quarters (83%) reported having a primary care provider, and nearly a quarter (22%) reported care avoidance due to fear of trans-specific health care discrimination. See Tables 3 and 4 for full unweighted and weighted descriptive statistics for the overall sample and by intersectional position. For all weighted and unweighted logistic regression models, no participants were flagged as data-based outliers.

Table 3

Unweighted Distributions of Visual Conformity, Health Care Discrimination, Doctor's Visit, Primary Care Provider, and Care Avoidance

Variable	BTF (<i>n</i> = 240)	BTM (<i>n</i> = 274)	BGNC (<i>n</i> = 257)	WTF (<i>n</i> = 7812)	WTM (<i>n</i> = 6320)	WGNC (<i>n</i> = 7816)	Total (<i>n</i> = 22,719)
	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)
Visual Conformity, M (SD)	3.48 (0.97)	4.05 (0.95)	3.96 (0.97)	3.37 (1.04)	3.71 (0.98)	3.80 (0.89)	3.63 (0.99)
Health Care Discrimination							
No	124 (63)	154 (63)	156 (77)	4444 (64)	3215 (57)	4886 (76)	12979 (66)
Yes	73 (37)	91 (37)	46 (23)	2448 (36)	1503 (43)	1503 (24)	6573 (34)
Doctor's Visit							
No	41 (17)	25 (9)	50 (19)	784 (10)	615 (10)	1224 (16)	2739 (12)
Yes	199 (83)	249 (91)	207 (81)	7028 (90)	5705 (90)	6592 (84)	19980 (88)
Primary Care Provider							
No	22 (11)	34 (14)	58 (29)	1012 (15)	904 (16)	1232 (19)	3262 (17)
Yes	175 (89)	211 (86)	144 (71)	5880 (85)	4723 (84)	5157 (81)	16290 (83)
Care avoidance							
No	146 (74)	173 (71)	155 (77)	5603 (81)	3921 (70)	5246 (82)	15244 (78)
Yes	51 (26)	72 (29)	47 (23)	1289 (19)	1706 (30)	1143 (18)	4308 (22)

Note. As complete case analysis was utilized for the moderated mediation models, sample size total for health care discrimination, primary care provider, and care avoidance are 19,552 since only those who went to the doctor in the past year were able to answer items related to health care discrimination. Percentages may not add up to 100 due to rounding.

Table 4

Weighted Distributions of Visual Conformity, Health Care Discrimination, Doctor's Visit, Primary Care Provider, and Care

Avoidance

Variable	BTF (9%)	BTM (5%)	BGNC (3%)	WTF (49%)	WTM (17%)	WGNC (17%)	Total (<i>n</i> = 22,719)
Visual Conformity, M (SE)	3.50 (0.02)	4.07 (0.03)	4.01 (0.04)	3.33 (0.01)	3.83 (0.02)	3.69 (0.02)	3.56 (0.02)
	%	%	%	%	%	%	%
Health Care Discrimination							
No	59	61	75	67	60	74	66
Yes	41	39	25	33	40	26	34
Doctor's Visit							
No	15	10	28	9	9	18	12
Yes	85	90	72	91	91	82	88
Primary Care Provider							
No	7	12	32	10	13	17	12
Yes	93	88	68	90	87	83	88
Care avoidance							
No	77	72	73	85	73	83	81
Yes	23	28	27	15	27	17	19

Note. As complete case analysis was utilized for the moderated mediation models, sample size total for health care discrimination, primary care provider, and care avoidance are 19,552 since only those who went to the doctor in the past year were able to answer items related to health care discrimination. Percentages may not add up to 100 due to rounding.

Weighted Analyses

Differences in Central Study Variables by Intersectional Positions

Weighted bivariate analyses revealed several significant ($p < .05$; 95% CI did not include 1) differences by intersectional position. White transfeminine individuals had the lowest average visual conformity score ($M = 3.33$, $SE = 0.01$), followed by Black transfeminine individuals ($M = 3.50$, $SE = 0.02$), White gender nonconforming individuals ($M = 3.69$, $SE = 0.02$), White transmasculine individuals ($M = 3.83$, $SE = 0.02$), and Black gender nonconforming individuals ($M = 4.01$, $SE = 0.04$). Lastly, Black transmasculine individuals reported the highest average visual conformity score ($M = 4.07$, $SE = 0.03$). Other than the non-significant difference between Black gender nonconforming and transmasculine individuals, post-hoc comparisons revealed that all group differences were significant.

Nearly three-quarters (72%) of Black gender nonconforming individuals reported having a doctor's visit in the past year, followed by 82% of White gender nonconforming individuals, 85.21% of Black transfeminine individuals, 90% of Black transmasculine individuals, 91% of White transfeminine individuals, and 91% of White transmasculine individuals. All group differences were significant, except for those amongst Black transmasculine, White transmasculine, and White transfeminine individuals.

Of those who reported having a doctor's visit in the past year, a higher proportion of Black transfeminine individuals reported any experience with trans-specific health care discrimination (41%), followed by White transmasculine individuals (40%), Black transmasculine individuals (39%), and White transfeminine individuals (33%). Lastly, about a quarter of Black (25%) and White (26%) gender nonconforming individuals reported any experience with trans-specific health care discrimination. All group differences were significant,

except for those between Black and White gender nonconforming individuals, Black and White transmasculine individuals, and between Black transfeminine and White transmasculine individuals.

Less than three-quarters (68%) of the Black gender nonconforming individuals who reported having a doctor's visit in the past year also had a primary care provider, followed by 83% of White gender nonconforming individuals, 87% of White transmasculine individuals, 88% of Black transmasculine individuals, 92% of White transfeminine individuals, and 93% of Black transfeminine individuals. There were no significant differences in having a primary care provider between Black and White transmasculine individuals, and between Black transmasculine and White transfeminine individuals. All other group differences were significant.

Of those who reported having a doctor's visit in the past year, over a quarter (28%) of Black transmasculine individuals reported care avoidance due to fear of trans-specific health care discrimination, followed by 27% of White transmasculine individuals, 27% of Black gender nonconforming individuals, 23% of Black transfeminine individuals, 17% of White gender nonconforming individuals, and 15% of White transfeminine individuals. There were no significant differences between Black gender nonconforming individuals and their same-race counterparts. Additionally, White transmasculine individuals were not significantly different from Black transmasculine and gender nonconforming individuals. All other group differences were significant.

Doctor's Visit

Full weighted model results can be found in Table 5. The first step revealed that age and insurance status were significantly associated with the odds of having a doctor's visit in the past

year (McFadden's adjusted $R^2 = .383$; AIC = 10,323). In the second step, visual conformity and indicators representing each of the intersectional position variables were added to the model which revealed a better fit (McFadden's adjusted $R^2 = .393$; AIC = 10,154) for the data compared to the covariates-only model ($\chi^2(6) = 181.51$, $p < .001$). After adjusting for the covariates, visual conformity (OR = 1.10, 98.3% CI [1.04,1.16]) and intersectional positions ($\chi^2(5) = 164.19$, $p < .001$) significantly contributed to the odds of having a doctor's visit.

In the third and final step, which addresses the first research question, adding indicators representing the interaction of visual conformity and intersectional positions revealed a better fit (McFadden's adjusted $R^2 = .394$; AIC = 10,136) for the data compared to the previous step ($\chi^2(5) = 27.44$, $p < .001$), indicating that the overall interaction of visual conformity and intersectional positions significantly contributed to the outcome. Post-hoc comparisons of the change in odds of having a doctor's visit associated with a one-unit increase in visual conformity were conducted for each intersectional position group, controlling for age, insurance status, and census region. A one-unit increase in visual conformity was significantly associated with increased odds of having a doctor's visit for White transmasculine (OR = 1.27, 95% CI [1.12, 1.43]), Black gender nonconforming (OR = 1.28, 95% CI [1.06, 1.54]), and Black transfeminine individuals (OR = 1.45, 95% CI [1.23, 1.71]). Visual conformity was nonsignificant for White transfeminine and gender nonconforming individuals and for Black transmasculine individuals.

Black transfeminine individuals had a significant increase in odds when compared to White gender nonconforming (OR = 1.50, 95% CI [1.24, 1.82]) and transfeminine (OR = 1.42, 95% CI [1.19, 1.70]). White transmasculine individuals also had a significant increase in odds when compared to White transfeminine (OR = 1.31, 95% CI [1.12, 1.54]) and White gender nonconforming individuals (OR = 1.24, 95% CI [1.08, 1.43]). All other pairwise comparisons

were nonsignificant. These findings mean that a one-unit increase in visual conformity results in higher odds of having a doctor's visit for both Black transfeminine and White transmasculine individuals when compared to White gender nonconforming and transfeminine individuals.

Primary Care Provider

Full weighted model results can be found in Table 6. The first step revealed that age, insurance status, and living in the Northeast were all significantly associated with the odds of having a primary care provider (McFadden's adjusted $R^2 = .544$; AIC = 8,056.7). In the second step, visual conformity and indicators representing each of the intersectional position variables were added to the model which revealed a better fit (McFadden's adjusted $R^2 = .550$; AIC = 7938.3) for the data compared to the covariates-only model ($\chi^2(6) = 130.48$, $p < .001$). After adjusting for the covariates, visual conformity was not significantly associated with the odds of having a primary care provider. However, intersectional positions significantly contributed to the outcome ($\chi^2(5) = 122.98$, $p < .001$).

In the third step, which address the first research question, adding indicators representing the interaction of visual conformity and intersectional positions revealed a better fit (McFadden's adjusted $R^2 = .556$; AIC = 7,823.5) for the data compared to the previous step ($\chi^2(5) = 124.76$, $p < .001$), indicating that the overall interaction of visual conformity and intersectional positions significantly contributed to the outcome. Post-hoc comparisons of the change in odds of having a primary care provider associated with a one-unit increase in visual conformity were conducted for each intersectional position group, controlling for age, insurance status, and census region. A one-unit increase in visual conformity was significantly associated with increased odds of having a primary care provider for White transfeminine (OR = 1.11, 95% CI [1.03, 1.20]), White transmasculine (OR = 1.20, 95% CI [1.07, 1.35]), and Black transmasculine individuals (OR =

1.43, 95% CI [1.16, 1.75]). However, for Black transfeminine individuals, an increase in visual conformity was associated with decreased odds of having a primary care provider (OR = 0.24, 95% CI [0.17, 0.33]). Visual conformity was nonsignificant for Black and White gender nonconforming individuals.

Black transfeminine individuals had a significant decrease in odds when compared to Black and White transmasculine (OR_{Black} = 0.17, 95% CI [0.11, 0.25]; OR_{White} = 0.20, 95% CI [0.14, 0.28]) and gender nonconforming individuals (OR_{Black} = 0.28, 95% CI [0.18, 0.42]; OR_{White} = 0.22, 95% CI [0.16, 0.32]), and to White transfeminine individuals (OR = 0.22, 95% CI [0.16, 0.30]). Additionally, Black transmasculine individuals had a significant increase in odds when compared to Black gender nonconforming individuals (OR = 1.66, 95% CI [1.19, 2.30]). All other pairwise comparisons were nonsignificant. Thus, a one-unit increase in visual conformity results in lower odds of having a primary care provider for Black transfeminine individuals when compared to all other intersectional position groups, and higher odds for Black transmasculine individuals when compared to their gender nonconforming counterparts.

In the fourth step, which addresses the second research question, trans-specific health care discrimination was added to the model as an initial test of mediation in the association between the interaction of visual conformity and intersectional positions and the odds of having a primary care provider. This addition evidenced a better fit (McFadden's adjusted $R^2 = .559$; AIC = 7,772) for the data compared to the previous step ($\chi^2(1) = 53.49$, $p < .001$). After adjusting for the covariates and all other predictors, experiencing health care discrimination was associated with a 52% increase in the odds of having a primary care provider, 98.3% CI [1.32, 1.75]. However, mediation tests revealed that experiencing health care discrimination did not

significantly mediate the association between visual conformity and having a primary care provider for any of the intersectional position groups.

Care Avoidance

Full weighted model results can be found in Table 7. The first step revealed that age, insurance status, living in the Northeast, and living in the Midwest were all significantly associated with the odds of care avoidance due to fear of trans-specific health care discrimination (McFadden's adjusted $R^2 = .399$; AIC = 12,401). In the second step, visual conformity and indicators representing each of the intersectional position variables were added to the model which revealed a better fit (McFadden's adjusted $R^2 = .402$; AIC = 12,333) for the data compared to the covariates-only model ($\chi^2(6) = 80.17, p < .001$). After adjusting for the covariates, visual conformity (OR = 0.86, 98.3% CI [0.82, 0.91] and intersectional positions ($\chi^2(5) = 61.11, p < .001$) significantly contributed to the outcome.

In the third step, which addresses the first research question, adding indicators representing the interaction of visual conformity and intersectional positions revealed a better fit (McFadden's adjusted $R^2 = .405$; AIC = 12,276) for the data compared to the previous step ($\chi^2(5) = 66.26, p < .001$), indicating that the overall interaction of visual conformity and intersectional positions significantly contributed to the outcome. Post-hoc comparisons of the change in odds of care avoidance associated with a one-unit increase in visual conformity were conducted for each intersectional position group, controlling for age, insurance status, and census region. A one-unit increase in visual conformity was associated with decreased odds of care avoidance for White transfeminine (OR = 0.89, 95% CI [0.84, 0.95]), transmasculine (OR = 0.81, 95% CI [0.75, 0.89]), and gender nonconforming individuals (OR = 0.59, 95% CI [0.53, 0.67]). However, for Black transmasculine individuals, an increase in visual conformity was

significantly associated with increased odds of care avoidance (OR = 1.30, 95% CI [1.11, 1.53]). Visual conformity was nonsignificant for Black transfeminine and gender nonconforming individuals.

Black transfeminine individuals had a significant increase in odds when compared to White transmasculine (OR = 1.38, 95% CI [1.16, 1.65]) and transfeminine (OR = 1.26, 95% CI [1.07, 1.49]) individuals, and when compared to Black and White gender nonconforming individuals (OR_{Black} = 1.38, 95% CI [1.04, 1.83]; OR_{White} = 1.90, 95% CI [1.57, 2.29]).

Additionally, Black transmasculine individuals had a significant increase in odds when compared to Black gender nonconforming individuals (OR = 1.59, 95% CI [1.19, 2.13]). However, White gender nonconforming individuals had a significant decrease in odds when compared to White transmasculine (OR = 0.73, 95% CI [0.63, 0.84]) and transfeminine individuals (OR = 0.67, 95% CI [0.59, 0.76]). All other comparisons were nonsignificant. Together, these findings mean that a one-unit increase in visual conformity was associated with greater odds of care avoidance for Black transfeminine individuals when compared to all White TGNC groups and both Black transfeminine and transmasculine individuals when separately compared to Black gender nonconforming individuals. However, this one-unit increase was associated with lower odds of care avoidance for White gender nonconforming individuals when compared to other White TGNC groups. No other comparisons were significant.

In the fourth step, which addresses the second research question, health care discrimination was added to the model as an initial test of mediation in the association between the interaction of visual conformity and intersectional positions and the odds of care avoidance. This addition evidenced a better fit (McFadden's adjusted $R^2 = .473$; AIC = 10,872) for the data compared to the previous step ($\chi^2(1) = 1406.2$, $p < .001$). After adjusting for the covariates and

all other predictors, the odds of care avoidance were 5.67 times greater for those who had experienced health care discrimination compared to those who had not, 98.3% CI [5.10, 6.32]. Mediation tests revealed that experiencing health care discrimination did significantly mediate the association between visual conformity and care avoidance for White gender nonconforming individuals. For this group, the total effect revealed that a one-unit increase in visual conformity was associated with a 5% reduction in the probability of care avoidance, 95% CI [-.07, -.04], and experiencing health care discrimination mediated 28% of this effect (95% CI [0.18, 0.46]). The direct effect was also significantly associated with the outcome for this group ($B = -0.03$, 95% CI [-.05, -.01]). Remaining mediation tests revealed that experiencing health care discrimination was not a significant mediator for any of other the intersectional position groups.

Unweighted Analyses

Differences in Central Study Variables by Intersectional Positions

Unweighted bivariate analyses revealed several significant differences ($p < .05$; 95% CI did not include 1) by intersectional position. White transfeminine individuals had the lowest average visual conformity score ($M = 3.37$, $SD = 1.04$), followed by Black transfeminine individuals ($M = 3.48$, $SD = 0.97$), White transmasculine ($M = 3.71$, $SD = 0.99$), White gender nonconforming individuals ($M = 3.80$, $SD = 0.89$), and Black gender nonconforming individuals ($M = 3.96$, $SD = 0.97$). Lastly, Black transmasculine individuals reported the highest average visual conformity score ($M = 4.05$, $SD = 0.0.96$). Other than the non-significant differences between Black gender nonconforming and transmasculine individuals, and between Black and White transfeminine individuals, post-hoc comparisons revealed that all group differences were significant.

Over three-quarters (81%) of Black gender nonconforming individuals reported having a doctor's visit in the past year, followed by 83% of Black transfeminine individuals, 84% of White gender nonconforming individuals, 90% of White transfeminine individuals, 90% of White transmasculine individuals, and 91% of Black transmasculine individuals. There were no significant differences between White transfeminine individuals and either group of transmasculine individuals, Black transfeminine individuals and either group of gender nonconforming individuals, Black and White transmasculine individuals, or between Black and White gender nonconforming individuals. All other group differences were significant.

Of those who reported having a doctor's visit in the past year, a higher proportion (43%) of White transmasculine individuals reported any experience with trans-specific health care discrimination, followed by Black transmasculine individuals (37%), Black transfeminine individuals (37%), and White transfeminine individuals (36%). Lastly, about a quarter of Black (23%) and White (24%) gender nonconforming individuals reported any experience with trans-specific health care discrimination. There were no significant differences between groups of the same gender identity (e.g., Black and White transfeminine individuals), nor were there significant differences between Black transfeminine individuals and either transmasculine group, or between Black transmasculine and White transfeminine individuals. All group differences were significant.

Less than three-quarters (71%) of the Black gender nonconforming individuals who reported having a doctor's visit in the past year also had a primary care provider, followed by 81% of White gender nonconforming individuals, 84% of White transmasculine individuals, 85% of White transfeminine individuals, 86% of Black transmasculine individuals, and 89% of Black transfeminine individuals. There were no significant differences in having a primary care

provider among transfeminine individuals, between Black transfeminine and White transmasculine individuals, or between Black transmasculine and White transfeminine individuals. All other group differences were significant.

Of those who reported having a doctor's visit in the past year, nearly a third (30%) of White transmasculine individuals reported care avoidance due to fear of trans-specific health care discrimination, followed by 29% of Black transmasculine individuals, 26% of Black transfeminine individuals, 23% of Black gender nonconforming individuals, 19% of White transfeminine individuals, and 18% of White gender nonconforming individuals. White gender nonconforming individuals were significantly different from both groups of transmasculine individuals, and Black transfeminine individuals. Additionally, White transfeminine individuals were significantly different from both groups of transmasculine individuals and Black transfeminine individuals. Lastly, there was a significant difference between Black gender nonconforming and White transmasculine individuals. All other group differences were non-significant.

Doctor's Visit

Full unweighted model results can be found in Table 8. Similar to weighted analyses, the first step revealed that age and insurance status were associated with the odds of having a doctor's visit in the past year (McFadden's adjusted $R^2 = .075$; AIC = 15,466). However, living in the Northeast was also a significant contributor to the outcome. In the second step, adding visual conformity and indicators representing each of the intersectional position variables revealed a better fit (McFadden's adjusted $R^2 = .082$; AIC = 15,359) for the data compared to the covariates-only model ($\chi^2(6) = 118.28$, $p < .001$). Similar to the weighted analyses, intersectional

positions significantly contributed to the outcome ($\chi^2(5) = 114.02, p < .001$). In contrast, visual conformity was not significantly associated with the odds of having a doctor's visit.

In the third and final step, which addresses the first research question, adding indicators representing the interaction of visual conformity and intersectional positions revealed a better fit (McFadden's adjusted $R^2 = .083$; AIC = 15,334) for the data compared to the previous step ($\chi^2(5) = 35.69, p < .001$), indicating that the overall interaction of visual conformity and intersectional positions significantly contributed to the outcome, akin to the weighted analyses. However, the pattern of associations between visual conformity and the odds of having a doctor's visit by intersectional positions, and between intersectional positions (i.e., pairwise comparisons), differed from weighted analyses. A one-unit increase in visual conformity was associated with decreased odds of having a doctor's visit for White transfeminine (OR = 0.91, 95% CI [0.84, 0.98]) and gender nonconforming individuals (OR = 0.90, 95% CI [0.83, 0.96]), and increased odds for Black (OR = 1.66, 95% CI [1.09, 2.53]) and White transmasculine individuals (OR = 1.19, 95% CI [1.09, 1.30]). Visual conformity was nonsignificant for Black transfeminine and gender nonconforming individuals. Black transmasculine individuals had a significant increase in odds when compared to Black transfeminine (OR = 1.82, 95% CI [1.04, 3.19]) and gender nonconforming individuals (OR = 1.85, 95% CI [1.08, 3.18]). Similarly, White transmasculine individuals had a significant increase in odds when compared to White transfeminine (OR = 1.31, 95% CI [1.17, 1.47]) and gender nonconforming individuals (OR = 1.33, 95% CI [1.19, 1.49]). All other comparisons were nonsignificant. Similar to the weighted analyses a one-unit increase in visual conformity resulted in increased odds of having a doctor's visit for White transmasculine individuals compared to their same-race counterparts. In contrast to the weighted analyses, increased visual conformity also resulted in increased odds of having a

doctor's visit for Black transmasculine individuals compared to their same-race counterparts. See Table 9 for comparison of post-hoc contrasts from weighted and unweighted doctor's visit models.

Primary Care Provider

See Table 10 for full unweighted model results. Similar to the weighted analyses, the first step revealed that age, insurance status, and living in the Northeast were all significantly associated with the odds of having a primary care provider (McFadden's adjusted $R^2 = .093$; AIC = 15,990). In contrast, living in the South was also significantly associated with the outcome. In the second step, visual conformity and indicators representing each of the intersectional position variables were added to the model which revealed a better fit (McFadden's adjusted $R^2 = .095$; AIC = 15,946) for the data compared to the covariates-only model ($\chi^2(6) = 55.86, p < .001$). Similar to the weighted analyses, intersectional positions significantly contributed to the outcome ($\chi^2(5) = 32.01, p < .001$). However, in contrast, visual conformity was also significantly associated with the outcome. A one-unit increase in visual conformity was associated with a 10% increase in the odds of having a primary care provider, 98.3% [1.05, 1.16].

In contrast to the weighted analyses, adding indicators representing the interaction of visual conformity and intersectional positions in the third step (RQ 1) did not improve the fit (McFadden's adjusted $R^2 = .095$; AIC = 15,950) for the data ($\chi^2(5) = 5.69, p = .34$). This indicated that the overall interaction was not significantly associated with the outcome. As such, pairwise comparisons of the odds of having a primary care provider by intersectional positions were conducted, controlling for visual conformity, age, insurance status, and census region. The odds of having a primary care provider were significantly higher for Black transfeminine individuals when compared to White gender nonconforming (OR = 1.81, 95% CI [1.12, 2.92],

White transfeminine (OR = 1.85, 95% CI [1.15, 2.97]), and Black gender nonconforming individuals (OR = 2.62, 95% CI [1.48, 4.65]). Furthermore, White transmasculine individuals had significantly higher odds of having a primary care provider when compared to White gender nonconforming (OR = 1.19, 95% CI [1.08, 1.31]) and White transfeminine individuals (OR 1.21, 95% CI [1.09, 1.35]). Lastly, Black transmasculine individuals had significantly higher odds of having a primary care provider when compared to Black gender nonconforming individuals (OR = 2.20, 95% CI [1.33, 3.63]). There were no other significant pairwise comparisons. See Tables 11 and 12 for post-hoc contrasts from weighted and unweighted primary care analyses.

Care Avoidance

See Table 13 for full unweighted model results. Similar to the weighted analyses, the first step revealed that age and insurance status were associated with the odds of care avoidance due to fear of health care discrimination (McFadden's adjusted $R^2 = .014$; AIC = 20,339). In contrast with the weighted analyses, no other indicators were significantly associated with the outcome. In the second step, visual conformity and indicators representing each of the intersectional position variables were added to the model which revealed a better fit (McFadden's adjusted $R^2 = .038$; AIC = 19,843) for the data compared to the covariates-only model ($\chi^2(6) = 507.98$, $p < .001$). Similar to the weighted analyses, visual conformity (OR = 0.78, 98.3% CI [0.75, 0.81]) and intersectional positions ($\chi^2(5) = 316.61$, $p < .001$) significantly contributed to the outcome.

Similar to the weighted analyses, adding indicators representing the interaction of visual conformity and intersectional positions in the third step revealed a better fit (RQ 1; McFadden's adjusted $R^2 = .041$; AIC = 19,770) for the data compared to the previous step ($\chi^2(5) = 83.10$, $p < .001$), indicating that the overall interaction of visual conformity and intersectional positions significantly contributed to the outcome. There were some similarities and dissimilarities in the

decomposition of the interaction of intersectional positions and visual conformity with the odds of care avoidance. Similar to the weighted analyses, a one-unit increase in visual conformity was significantly associated with decreased odds of care avoidance for White transfeminine (OR = 0.84, 95% CI [0.79, 0.89]), transmasculine individuals (OR = 0.87, 95% CI [0.82, 0.92]), and gender nonconforming individuals (OR = 0.58, 95% CI [0.54, 0.63]), and remained nonsignificant for Black transfeminine individuals. In contrast, an increase in visual conformity was also significantly associated with decreased odds of care avoidance for Black gender nonconforming individuals (OR = 0.64, 95% CI [0.46, 0.89]) and became nonsignificant for Black transmasculine individuals. White gender nonconforming individuals had a significant decrease in odds when compared to White transmasculine (OR = 0.67, 95% CI [0.61, 0.74]) and transfeminine (OR = 0.70, 95% CI [0.63, 0.76]) individuals, and when compared to Black transfeminine individuals (OR = 0.62, 95% CI [0.44, 0.86]). Similar to the weighted analyses, this means that a one-unit increase in visual conformity was associated with lower odds of care avoidance for White gender nonconforming individuals when compared to their same-race counterparts, and Black transfeminine individuals. However, there were no other significant comparisons, including those that were significant in the weighted analyses.

In the fourth step, which addresses the second research question, health care discrimination was added to the model as an initial test of mediation in the association between the interaction of visual conformity and intersectional positions and the odds of care avoidance. Similar to the weighted analyses, this addition evidenced a better fit (McFadden's adjusted $R^2 = .125$; AIC = 18,049) for the data compared to the previous step ($\chi^2(1) = 1723.10$, $p < .001$) and the odds of care avoidance were 4.66 times greater for those who had experienced any health care discrimination compared to those who had not, 98.3% CI [4.26, 5.11]. Mediation tests

revealed that experiencing health care discrimination did significantly mediate the association between visual conformity and having a primary care provider for White transfeminine, Black gender nonconforming, and White gender nonconforming individuals. For White transfeminine individuals, the total effect revealed that a one-unit increase in visual conformity was associated with a 3% reduction in the probability of care avoidance, 95% CI [-0.04, -0.02], and experiencing health care discrimination mediated 29% of this effect, 95% CI [0.19, 0.48]. For Black gender nonconforming individuals, the total effect revealed that a one-unit increase in visual conformity was associated with a 7% reduction in the probability of care avoidance, 95% CI [-0.12, -0.02], and experiencing health care discrimination mediated 29% of this effect, 95% CI [0.20, 1.96]. For White gender nonconforming individuals, the total effect revealed that a one-unit increase in visual conformity was associated with a 6% reduction in the probability of care avoidance, 95% CI [-0.07%, -0.05%], and experiencing health care discrimination mediated 34% of this effect, 95% CI [0.28, 0.39]. All direct effects were also significantly associated with the outcome for these groups (White transfeminine $B = -0.02$, 95% CI [-0.03, -0.01]; Black gender nonconforming $B = -0.05$, 95% CI [-0.09, 0.00]; White gender nonconforming $B = -0.04$, 95% CI [-0.95, -0.03]). Remaining mediation tests revealed that experiencing health care discrimination was not a significant mediator for any of other the intersectional position groups. These findings differed from the weighted analyses in that mediation was significant for White transfeminine and Black gender nonconforming individuals, as opposed to only being significant for White gender nonconforming individuals. See Table 14 for comparisons of post-hoc contrasts from weighted and unweighted care avoidance analyses.

Table 5*Odds Ratios, 98.3% Confidence Intervals for Weighted Doctor's Visit Model*

Predictor	Step 1 OR (98.3% CI)	Step 2 OR (98.3% CI)	Step 3 OR (98.3% CI)
Age	1.03 (1.03, 1.03)	1.03 (1.02, 1.03)	1.02 (1.02, 1.03)
Insurance Status			
No insurance	2.19 (1.90, 2.51)	0.19 (0.17, 0.22)	0.19 (0.17, 0.22)
Has insurance	11.33 (10.13, 12.69)		
Census Region			
Midwest	1.08 (0.92, 1.27)	1.08 (0.91, 1.27)	1.07 (0.91, 1.27)
Northeast	1.17 (0.98, 1.39)	1.19 (1.00, 1.42)	1.20 (1.01, 1.43)
South	1.07 (0.93, 1.24)	1.09 (0.94, 1.27)	1.12 (0.97, 1.30)
Visual Conformity		1.10 (1.04, 1.16)	1.01 (0.93, 1.11)
Intersectional Positions			
BTF		9.24 (7.52, 11.40)	9.52 (7.73, 11.81)
BTM		16.38 (12.39, 21.95)	15.79 (11.85, 21.37)
BGNC		4.81 (3.70, 6.26)	4.50 (3.44, 5.91)
WTF		12.35 (10.83, 14.12)	12.03 (10.54, 13.77)
WTM		16.66 (13.89, 20.09)	16.17 (13.47, 19.53)
WGNC		7.94 (6.82, 9.29)	7.99 (6.85, 9.36)
Interaction Indicators			
BTF x VC			1.42 (1.15, 1.77)
BTM x VC			1.15 (0.87, 1.51)
BGNC x VC			1.25 (0.98, 1.60)
WTM x VC			1.24 (1.04, 1.48)
WGNC x VC			0.94 (0.81, 1.48)

Table 5 (continued).

Model Fit	Step 1	Step 2	Step 3
Step LRT		$\chi^2(6) = 181.51, p < .001$	$\chi^2(5) = 27.44, p < .001$
Intersectional Positions LRT		$\chi^2(5) = 164.19, p < .001$	
AIC	10323	10154	10136
R ²	.383	.393	.394

Note. R² values are adjusted McFadden's R². LRT = Likelihood ratio test. VC = Visual Conformity.

Table 6*Odds Ratios, 98.3% Confidence Intervals for Weighted Primary Care Provider Model*

Predictor	Step 1 OR (98.3% CI)	Step 2 OR (98.3% CI)	Step 3 OR (98.3% CI)	Step 4 OR (98.3% CI)
Age	1.05 (1.05, 1.06)	1.05 (1.05, 1.06)	1.05 (1.05, 1.06)	1.05 (1.05, 1.06)
Insurance Status				
No insurance	2.24 (1.90, 2.64)	0.18 (0.15, 0.20)	0.18 (0.15, 0.21)	0.18 (0.15, 0.20)
Has insurance	12.38 (10.93, 14.07)			
Census Region				
Midwest	1.09 (0.92, 1.31)	1.05 (0.88, 1.26)	1.08 (0.90, 1.30)	1.09 (0.91, 1.31)
Northeast	1.34 (1.11, 1.63)	1.33 (1.09, 1.61)	1.28 (1.06, 1.56)	1.31 (1.08, 1.59)
South	0.88 (0.75, 1.03)	0.82 (0.70, 0.96)	0.78 (0.67, 0.92)	0.80 (0.68, 0.94)
Visual Conformity		1.06 (0.96, 1.13)	1.11 (1.01, 1.22)	1.12 (1.02, 1.23)
Healthcare Discrimination				
Any Experience				1.52 (1.32, 1.75)
Intersectional Positions				
BTF		28.43 (21.37, 38.36)	48.40 (33.07, 73.98)	42.86 (29.08, 65.93)
BTM		18.37 (13.77, 24.81)	16.88 (12.57, 22.94)	14.85 (11.03, 20.26)
BGNC		7.29 (5.29, 10.13)	7.96 (5.64, 11.40)	7.15 (5.05, 10.26)
WTF		11.10 (9.64, 12.82)	11.33 (9.82, 13.12)	9.80 (8.44, 11.41)
WTM		15.60 (12.97, 18.86)	15.37 (12.76, 18.61)	13.10 (10.81, 15.96)
WGNC		11.70 (9.77, 14.08)	11.72 (9.78, 14.10)	10.58 (8.80, 12.76)
Interaction Indicators				
BTF x VC			0.21 (0.14, 0.32)	0.20 (0.13, 0.29)
BTM x VC			1.29 (0.98, 1.68)	1.24 (0.94, 1.61)
BGNC x VC			0.96 (0.81, 1.14)	0.79 (0.57, 1.09)
WTM x VC			1.08 (0.91, 1.28)	1.08 (0.91, 1.28)
WGNC x VC			0.96 (0.81, 1.14)	1.00 (0.84, 1.18)

Table 6 (continued).

Model Fit	Step 1	Step 2	Step 3	Step 4
Step LRT		$\chi^2(6) = 130.48, p < .001$	$\chi^2(5) = 124.76, p < .001$	$\chi^2(1) = 53.49, p < .001$
Intersectional Positions LRT		$\chi^2(5) = 122.98, p < .001$		
AIC	8056.7	7938.3	7823.5	7772
R^2	.543	.550	.556	.560

Note. R^2 values are adjusted McFadden's R^2 . LRT = Likelihood ratio test. VC = Visual Conformity.

Table 7*Odds Ratios, 98.3% Confidence Intervals for Weighted Care Avoidance Model*

Predictor	Step 1 OR (98.3% CI)	Step 2 OR (98.3% CI)	Step 3 OR (98.3% CI)	Step 4 OR (98.3% CI)
Age	0.97 (0.97, 0.97)	0.97 (0.97, 0.97)	0.97 (0.97, 0.97)	0.97 (0.97, 0.97)
Insurance Status				
No insurance	0.27 (0.23, 0.31)	1.27 (1.10, 1.47)	1.28 (1.10, 1.48)	1.33 (1.14, 1.55)
Has insurance	0.21 (0.19, 0.23)			
Census Region				
Midwest	1.19 (1.04, 1.37)	1.20 (1.03, 1.37)	1.21 (1.05, 1.39)	1.30 (1.12, 1.51)
Northeast	0.86 (0.75, 1.00)	0.86 (0.74, 1.00)	0.86 (0.75, 1.00)	0.96 (0.82, 1.12)
South	1.03 (0.91, 1.17)	1.00 (0.88, 1.14)	1.02 (0.90, 1.17)	1.12 (0.98, 1.29)
Visual Conformity		0.86 (0.82, 0.91)	0.89 (0.83, 0.96)	0.90 (0.83, 0.96)
Healthcare Discrimination				
Any Experience				5.67 (5.10, 6.32)
Intersectional Positions				
BTF		0.25 (0.21, 0.30)	0.25 (0.21, 0.30)	0.09 (0.08, 0.11)
BTM		0.31 (0.25, 0.38)	0.24 (0.19, 0.31)	0.10 (0.08, 0.13)
BGNC		0.21 (0.16, 0.29)	0.21 (0.15, 0.29)	0.11 (0.08, 0.15)
WTF		0.19 (0.17, 0.21)	0.19 (0.17, 0.21)	0.08 (0.07, 0.09)
WTM		0.28 (0.24, 0.32)	0.27 (0.24, 0.31)	0.11 (0.09, 0.13)
WGNC		0.15 (0.12, 0.17)	0.14 (0.12, 0.17)	0.07 (0.06, 0.08)
Interaction Indicators				
BTF x VC			1.27 (1.04, 1.54)	1.29 (1.05, 1.59)
BTM x VC			1.46 (1.19, 1.81)	1.35 (1.08, 1.71)
BGNC x VC			0.92 (0.68, 1.24)	1.29 (1.05, 1.59)
WTM x VC			0.91 (0.80, 1.04)	0.90 (0.78, 1.03)
WGNC x VC			0.67 (0.57, 0.78)	0.76 (0.64, 0.89)

Table 7 (continued).

Model Fit	Step 1	Step 2	Step 3	Step 4
Step LRT		$\chi^2(6) = 80.17, p < .001$	$\chi^2(5) = 66.26, p < .001$	$\chi^2(1) = 1406.2, p < .001$
Intersectional Positions LRT		$\chi^2(5) = 61.11, p < .001$		
AIC	12401	12333	12276	10872
R^2	.399	.402	.405	.472

Note. R^2 values are adjusted McFadden's R^2 . LRT = Likelihood ratio test. VC = Visual Conformity.

Table 8*Odds Ratios, 98.3% Confidence Intervals for Unweighted Doctor's Visit Model*

Predictor	Step 1 OR (98.3% CI)	Step 2 OR (98.3% CI)	Step 3 OR (98.3% CI)
Age	1.03 (1.02, 1.03)	1.03 (1.02, 1.03)	1.03 (1.02, 1.03)
Insurance Status			
No insurance	2.04 (1.80, 2.33)	0.20 (0.18, 0.23)	0.20 (0.18, 0.23)
Has insurance	9.91 (8.99, 10.94)		
Census Region			
Midwest	1.01 (0.88, 1.17)	1.00 (0.87, 1.16)	1.01 (0.88, 1.17)
Northeast	1.23 (1.06, 1.44)	1.23 (1.06, 1.43)	1.24 (1.06, 1.44)
South	1.02 (0.89, 1.16)	1.01 (0.89, 1.16)	1.02 (0.89, 1.17)
Visual Conformity		0.97 (0.92, 1.03)	0.91 (0.83, 0.99)
Intersectional Positions			
BTF		7.08 (4.59, 11.28)	7.02 (4.54, 11.20)
BTM		16.27 (9.87, 28.57)	14.47 (8.70, 25.59)
BGNC		7.43 (4.99, 11.34)	7.57 (4.94, 12.04)
WTF		10.66 (9.39, 12.13)	10.51 (9.26, 11.97)
WTM		13.35 (11.66, 15.32)	13.24 (11.56, 15.21)
WGNC		7.81 (6.97, 8.79)	7.87 (7.00, 8.85)
Interaction Indicators			
BTF x VC			1.00 (0.63, 1.57)
BTM x VC			1.83 (1.09, 3.11)
BGNC x VC			0.99 (0.64, 1.50)
WTM x VC			1.31 (1.14, 1.50)
WGNC x VC			0.99 (0.87, 1.12)

Table 8 (continued).

Model Fit	Step 1	Step 2	Step 3
Step LRT		$\chi^2(6) = 118.28, p < .001$	$\chi^2(5) = 35.69, p < .001$
Intersectional Positions		$\chi^2(5) = 114.02, p < .001$	
LRT			
AIC	15466	15359	15334
R ²	.075	.082	.083

Note. R² values are adjusted McFadden's R². LRT = Likelihood ratio test. VC = Visual Conformity.

Table 9

Comparison of Visual Conformity Slopes, by Intersectional Position, from Weighted and Unweighted Doctor's Visit Models

Visual Conformity Slope	Weighted OR (95% CI)	Unweighted OR (95% CI)
BTF	1.45 (1.23, 1.71)	0.91 (0.63, 1.31)
BTM	1.17 (0.95, 1.45)	1.66 (1.09, 2.53)
BGNC	1.28 (1.06, 1.54)	0.90 (0.64, 1.26)
WTF	1.02 (0.95, 1.10)	0.91 (0.84, 0.98)
WTM	1.27 (1.12, 1.43)	1.19 (1.09, 1.30)
WGNC	0.97 (0.87, 1.07)	0.90 (0.83, 0.96)
Contrasts		
BTF vs BTM	1.23 (0.95, 1.61)	0.55 (0.31, 0.96)
BTF vs BGNC	1.14 (0.89, 1.45)	1.02 (0.62, 1.68)
BTF vs WTF	1.42 (1.19, 1.70)	1.00 (0.69, 1.46)
BTF vs WTM	1.14 (0.93, 1.40)	0.77 (0.53, 1.12)
BTF vs WGNC	1.50 (1.24, 1.82)	1.02 (0.70, 1.48)
WTF vs WTM	0.80 (0.70, 0.93)	0.76 (0.68, 0.85)
WTF vs WGNC	1.05 (0.93, 1.19)	1.01 (0.91, 1.12)
WGNC vs WTM	0.76 (0.65, 0.90)	0.75 (0.67, 0.84)
BGNC vs BTM	1.09 (0.82, 1.44)	0.54 (0.31, 0.93)

Note. Structure of contrasts may differ from written results section.

Table 10*Odds Ratios, 98.3% Confidence Intervals for Unweighted Primary Care Provider Model*

Predictor	Step 1 OR (98.3% CI)	Step 2 OR (98.3% CI)	Step 3 OR (98.3% CI)
Age	1.05 (1.04, 1.05)	1.05 (1.04, 1.05)	1.05 (1.04, 1.05)
Insurance Status			
No insurance	1.28 (1.11, 1.48)	0.19 (0.17, 0.22)	0.19 (0.17, 0.22)
Has insurance	6.71 (6.12, 7.37)		
Census Region			
Midwest	0.95 (0.83, 1.09)	0.95 (0.83, 1.09)	0.95 (0.83, 1.09)
Northeast	1.65 (1.42, 1.92)	1.64 (1.41, 1.91)	1.64 (1.41, 1.91)
South	0.86 (0.76, 0.97)	0.84 (0.74, 0.95)	0.84 (0.74, 0.95)
Visual Conformity		1.10 (1.05, 1.16)	1.08 (0.99, 1.17)
Intersectional Positions			
BTF		11.73 (6.76, 21.81)	11.76 (6.67, 22.39)
BTM		9.82 (6.21, 16.21)	9.15 (5.67, 15.49)
BGNC		4.47 (3.00, 6.78)	4.42 (2.92, 6.86)
WTF		6.35 (5.65, 7.16)	6.31 (5.61, 7.12)
WTM		7.70 (6.81, 8.72)	7.70 (6.81, 8.72)
WGNC		6.47 (5.77, 7.28)	6.46 (5.75, 7.26)
Interaction Indicators			
BTF x VC			0.63 (0.32, 1.15)
BTM x VC			1.26 (0.75, 2.09)
BGNC x VC			1.06 (0.69, 1.60)
WTM x VC			1.04 (0.92, 1.18)
WGNC x VC			1.04 (0.93, 1.18)

Table 10 (continued).

Model Fit	Step 1	Step 2	Step 3
Step LRT		$\chi^2(6) = 55.86, p < .001$	$\chi^2(5) = 5.69, p = .34$
Intersectional Positions		$\chi^2(5) = 32.01, p < .001$	
LRT			
AIC	15990	15946	15950
R ²	.093	.095	.095

Note. R² values are adjusted McFadden's R². LRT = Likelihood ratio test. VC = Visual Conformity.

Table 11

Visual Conformity Slopes, by Intersectional Position, from Weighted Primary Care Model

Visual Conformity Slope	OR (95% CI)
BTF	0.24 (0.17, 0.33)
BTM	1.43 (1.16, 1.75)
BGNC	0.86 (0.67, 1.12)
WTF	1.11 (1.03, 1.20)
WTM	1.20 (1.07, 1.35)
WGNC	1.07 (0.95, 1.21)
Contrasts	
BTF vs BTM	0.17 (0.11, 0.25)
BTF vs BGNC	0.28 (0.18, 0.42)
BTF vs WTF	0.22 (0.16, 0.30)
BTF vs WTM	1.19 (0.94, 1.50)
BTF vs WGNC	0.22 (0.16, 0.32)
WTF vs WTM	0.92 (0.80, 1.06)
WTF vs WGNC	1.04 (0.90, 1.19)
WGNC vs WTM	0.89 (0.75, 1.05)
BGNC vs BTM	0.60 (0.43, 0.84)

Note. Structure of contrasts may differ from written results section.

Table 12*Unweighted Odds of Having a Primary Care Provider by Intersectional Position*

	OR (95% CI)
BTF	5.49 (3.42, 8.80)
BTM	4.60 (3.12, 6.76)
BGNC	2.09 (1.51, 2.90)
WTF	2.97 (2.75, 3.22)
WTM	3.60 (3.30, 3.93)
WGNC	3.03 (2.79, 3.29)
Contrasts	
BTF vs BTM	1.19 (0.65, 2.19)
BTF vs BGNC	2.62 (1.48, 4.65)
BTF vs WTF	1.85 (1.15, 2.97)
BTF vs WTM	1.52 (0.95, 2.46)
BTF vs WGNC	1.81 (1.12, 2.92)
WTF vs WTM	0.83 (0.74, 0.92)
WTF vs WGNC	0.98 (0.88, 1.09)
WGNC vs WTM	0.84 (0.76, 0.93)
BGNC vs BTM	0.46 (0.28, 0.75)

Note. Structure of contrasts may differ from written results section.

Table 13*Odds Ratios, 98.3% Confidence Intervals for Unweighted Care Avoidance Model*

Predictor	Step 1 OR (98.3% CI)	Step 2 OR (98.3% CI)	Step 3 OR (98.3% CI)	Step 4 OR (98.3% CI)
Age	0.98 (0.98, 0.98)	0.98 (0.97, 0.98)	0.98 (0.98, 1.21)	0.97 (0.97, 0.98)
Insurance Status				
No insurance	0.37 (0.32, 0.43)	1.40 (1.22, 1.60)	1.40 (1.22, 1.60)	1.46 (1.26, 1.69)
Has insurance	0.26 (0.24, 0.28)			
Census Region				
Midwest	1.06 (0.94, 1.19)	1.06 (0.94, 1.20)	1.07 (0.95, 1.21)	1.15 (1.01, 1.30)
Northeast	0.92 (0.82, 1.04)	0.92 (0.81, 1.03)	0.92 (0.81, 1.03)	0.97 (0.85, 1.10)
South	1.09 (0.98, 1.22)	1.11 (1.00, 1.25)	1.12 (1.00, 1.26)	1.22 (1.08, 1.37)
Visual Conformity		0.78 (0.74, 0.81)	0.84 (0.78, 0.90)	0.87 (0.81, 0.94)
Healthcare Discrimination				
Any Experience				4.66 (4.26, 5.11)
Intersectional Positions				
BTF		0.33 (0.22, 0.48)	0.34 (0.22, 0.51)	0.16 (0.10, 0.25)
BTM		0.41 (0.29, 0.57)	0.37 (0.25, 0.53)	0.17 (0.11, 0.26)
BGNC		0.25 (0.17, 0.38)	0.26 (0.17, 0.39)	0.15 (0.09, 0.23)
WTF		0.23 (0.20, 0.25)	0.23 (0.21, 0.26)	0.11 (0.10, 0.13)
WTM		0.39 (0.35, 0.43)	0.38 (0.35, 0.42)	0.17 (0.15, 0.19)
WGNC		0.18 (0.17, 0.21)	0.18 (0.16, 0.20)	0.10 (0.09, 0.11)
Interaction Indicators				
BTF x VC			1.13 (0.75, 1.70)	1.18 (0.77, 1.74)
BTM x VC			1.18 (0.81, 1.73)	1.15 (0.77, 1.74)
BGNC x VC			0.77 (0.50, 1.15)	0.81 (0.52, 1.25)
WTM x VC			1.04 (0.93, 1.15)	0.99 (0.89, 1.10)
WGNC x VC			0.70 (0.62, 0.78)	0.78 (0.69, 0.88)

Table 13 (continued).

Model Fit	Step 1	Step 2	Step 3	Step 4
Step LRT		$\chi^2(6) = 507.98, p < .001$	$\chi^2(5) = 83.10, p < .001$	$\chi^2(1) = 1723.10, p < .001$
Intersectional Positions LRT		$\chi^2(5) = 316.61, p < .001$		
AIC	20339	19843	19770	18049
R ²	.014	.038	.041	.125

Note. R² values are adjusted McFadden's R². LRT = Likelihood ratio test. VC = Visual Conformity.

Table 14

Comparison of Visual Conformity Slopes, by Intersectional Position, from Weighted and Unweighted Doctor's Visit Models

Visual Conformity Slope	Weighted OR (95% CI)	Unweighted OR (95% CI)
BTF	1.13 (0.97, 1.31)	0.94 (0.68, 1.31)
BTM	1.30 (1.11, 1.53)	0.99 (0.73, 1.34)
BGNC	0.82 (0.64, 1.04)	0.64 (0.46, 0.89)
WTF	0.89 (0.84, 0.95)	0.84 (0.79, 0.89)
WTM	0.81 (0.75, 0.89)	0.87 (0.82, 0.92)
WGNC	0.59 (0.53, 0.67)	0.58 (0.54, 0.63)
Contrasts		
BTF vs BTM	0.86 (0.69, 1.08)	0.96 (0.61, 1.49)
BTF vs BGNC	1.38 (1.04, 1.83)	1.47 (0.92, 2.35)
BTF vs WTF	1.26 (1.07, 1.49)	1.12 (0.81, 1.57)
BTF vs WTM	1.38 (1.16, 1.65)	1.09 (0.78, 1.52)
BTF vs WGNC	1.90 (1.57, 2.29)	1.62 (1.16, 2.27)
WTF vs WTM	1.09 (0.98, 1.22)	0.97 (0.89, 1.05)
WTF vs WGNC	1.50 (1.32, 1.70)	1.44 (1.31, 1.58)
WGNC vs WTM	0.59 (0.53, 0.67)	0.67 (0.61, 0.74)
BGNC vs BTM	0.82 (0.64, 1.04)	0.65 (0.41, 1.02)

Note. Structure of contrasts may differ from written results section.

Discussion

In the current study, I examined the health care outcomes of Black and White TGNC individuals via moderated mediation models (see Figure 1) in both weighted and unweighted analyses. In partial support of the hypotheses, results indicated that there were differences in the associations between visual conformity and health care outcomes by intersectional positions. Thus, visual conformity, as a construct that may impact health care decisions and interactions with others in health care settings, functions differently when considering the intersections of race and gender identity among Black and White TGNC individuals. As opposed to finding that presumed exposure to intersectional forms of marginalization (e.g., gender binarism; Frohard-Dourlent et al., 2017) weakened associations between visual conformity and health care outcomes, the current study revealed that there are contexts in which visual conformity diminishes outcomes, particularly for Black transfeminine and transmasculine individuals.

As expected (Kattari & Hasche, 2016; Rodriguez et al., 2018), experiencing trans-specific health care discrimination was significantly associated with increased odds of care avoidance due to fear of trans-specific health care discrimination. Unexpectedly, experiencing discrimination was also associated with increased odds of having a primary care provider. In minimal support of the mediation analyses, these experiences of discrimination only mediated the association between visual conformity and care avoidance for White gender nonconforming individuals, indicating that these experiences are related to their visual conformity which suggests that they have a unique impact on this group. Overall, the findings from the current study highlight the need for research to more closely examine health and health care at the intersections of multiple forms of systemic marginalization and the need for health equity efforts

(e.g., interventions, medical education) that are tailored and considerate of the heterogeneous experiences of TGNC individuals.

There were many differences between the results of the weighted analyses and those of the unweighted analyses. According to the power analysis' suggested sample size ($N = 1,447$), the overall sample sizes for the larger moderated model of having a doctor's visit ($N = 22,719$) and the slightly smaller moderated mediation models of care avoidance and having a primary care provider ($N = 19,552$) were sufficient. However, the unweighted models had a much poorer fit for the data compared to the weighted models, as evidenced by the low adjusted McFadden's R^2 values. Only the final unweighted care avoidance model had a somewhat adequate fit (Care Avoidance $R^2 = .125$; Adequate $R^2 = .11 - .20$; Hemmert et al., 2018). When weights were applied, Black TGNC individuals were approximately 18% of the overall sample. However, in the unweighted sample, Black TGNC individuals were about 3% of the overall sample. As such, the increase in inequality of subsample sizes may have contributed to the reduction in model fit for the unweighted analyses (Cramer, 1999). Although the results of the unweighted models are reported, compared to the weighted results, they are less reliable. Therefore, the discussion focuses on interpretation of the weighted analyses.

Black transfeminine individuals were the focal point of significant interactions in each health care outcome model, which suggests that their experiences are uniquely different from other White and Black TGNC individuals. Compared to White gender nonconforming and transfeminine individuals, visual conformity was more positively associated with the odds of having a doctor's visit in the past year for Black transfeminine individuals. This differs from the hypothesized association for Black transfeminine individuals, in that the association between visual conformity and having a doctor's visit is comparatively stronger for them compared to

than these associations for other groups. This suggests that the degree to which Black transfeminine individuals believe they are perceived as visual conforming, or not recognizable as being TGNC, is more important for their choice or ability to utilize health care compared to these White TGNC groups, for whom visual conformity was not associated with having a doctor's visit in the past year. This association for Black transfeminine individuals aligns with past research which has demonstrated that more visual conformity is generally associated with better health care outcomes (Kcomt et al., 2020; Kcomt et al., 2021; Lerner et al., 2020).

Given that Black transfeminine individuals in the current study had relatively low average visual conformity ($M = 3.50$, $SE = 0.02$) and a comparatively high rate (41%) of experiencing any trans-specific health care discrimination, it may be the case that being more visually conforming facilitates their willingness to engage in health care visits because it could be related to a lower likelihood of experiencing trans-specific health care discrimination. The design of the USTS (i.e., only those who reported a doctor's visit in the past year were asked questions related to trans-specific health care discrimination) precludes the ability to examine associations among visual conformity, trans-specific health care discrimination, and having a doctor's visit. However, via follow-up analyses, I did find that a one-unit increase in visual conformity was associated with 9% decrease in odds of experiencing any trans-specific health care discrimination, 98.3% CI [0.87, 0.95], after controlling for the effects of intersectional positions, age, census region, and insurance status. This follow-up finding, within the context of these other findings (i.e., significant interaction, low average visual conformity, high rate of experiencing any health care discrimination), warrants future research that examines how Black transfeminine individuals may navigate health care visits, as it seems that their visual conformity is a part of this process for them above and beyond other TGNC groups.

In contrast with this doctor's visit model's finding for Black transfeminine individuals suggesting that visual conformity facilitates health care utilization, other significant interaction findings suggests that more visual conformity may also hinder health care access for Black transfeminine individuals. Indeed, I found that more visual conformity was associated with lower odds of having a primary care provider, compared to all other intersectional position groups. Although the previously discussed findings suggest that visual conformity may be beneficial for health care visits, this finding suggests that there may be negative consequences, or anticipated negative consequences, associated with being more visually conforming and other aspects of health care. These findings go beyond what was hypothesized for Black transfeminine individuals as it relates to their exposure to transmisogynoir and transmisogyny (Krell, 2017).

It is important to situate this set of interaction findings within the context of other findings regarding the prevalence of having a primary care provider and care avoidance for Black transfeminine individuals. This group had the highest prevalence (93%) of having a primary care provider compared to all other intersectional position groups. It may be the case that this intersectional position group has a comparatively higher need for primary care providers, and due to high rates of insurance coverage in the overall sample (85%), are able to obtain them. This increased need could be related to health inequities that disproportionately impact Black TGNC individuals overall (e.g., high prevalence of cardiovascular disease; Lett et al., 2020), and Black transfeminine individuals specifically (e.g., high mortality risk; Hughes et al., 2022), and likely requires routine management through primary care (Almazan et al., 2022).

Although experiences with trans-specific discrimination did not mediate these associations for Black transfeminine individuals, there may be other negative experiences within health care that are uniquely associated with more visual conformity in Black transfeminine

individuals that were not captured and explain why visual conformity is associated with diminished likelihood of having a primary care provider. More visual conformity may mean that Black transfeminine individuals have their TGNC identity questioned or invalidated when getting care, which may be upsetting or even a hindrance to certain types of trans-specific care (Hughto et al., 2015). It may also be the case that not being recognizable as TGNC puts Black transfeminine individuals at an increased risk for violent harm when their TGNC identity is revealed, either intentionally or unintentionally. This follows past research which has found that Black transfeminine individuals are disproportionately victimized, compared to other TGNC individuals (Human Rights Campaign, 2019), and that TGNC individuals consider how to manage threats of violence associated with their TGNC status being revealed (Brambaugh-Johnson & Hull, 2018). It is important that the fields of TGNC health research and health care find ways to maintain this high prevalence of having a primary care provider as it is likely necessary in the face of health inequities specific to Black transfeminine individuals.

The current study also revealed that more visual conformity was associated with greater odds of care avoidance for Black transfeminine individuals, compared to White TGNC groups and Black gender nonconforming individuals. This finding was driven by a nonsignificant association between visual conformity and care avoidance for Black transfeminine individuals. This suggests that the anticipated discrimination that leads them to avoid care is not dependent on the degree to which they are perceived as TGNC, which is an interesting finding given that a considerable amount (23%) of Black transfeminine individuals reported engaging in care avoidance due to fear of trans-specific health care discrimination. This group may anticipate discrimination regardless of how recognizably TGNC they are because health care discrimination is commonplace for TGNC individuals (Gonzales & Henning-Smith, 2017; James

et al., 2017b; Poteat et al., 2013; White Hughto et al., 2016), disproportionately impacts Black women (Gonzalez et al., 2021), and was disproportionately commonplace for Black transfeminine individuals in the current study. This aligns with the finding of the fourth step of the care avoidance model, which demonstrated that experiencing any trans-specific health care discrimination (OR = 5.67, 98.3% CI [5.10, 6.32]) had a larger effect on care avoidance than did visual conformity (OR = 0.90, 98.3% CI [0.83, 0.98]). Given that these findings suggest risks associated with both less and more visual conformity for Black transfeminine individuals, future research that further examines their experiences within health care settings and expectations of these experiences as it relates to other factors (e.g., visual conformity) is needed as it may inform strategies to maintain and improve health care engagement for this intersectional position group.

Black gender nonconforming and transmasculine individuals were the focal points of significant interactions in the primary care provider and care avoidance models. Compared to Black gender nonconforming individuals, more visual conformity was associated with increased odds of having a primary care provider and care avoidance for Black transmasculine individuals. These significant interaction findings were driven by the fact that visual conformity was not significantly associated with having a primary care provider or care avoidance for Black gender nonconforming individuals. The current study highlights important health care inequities for Black gender nonconforming individuals, in that they had the lowest prevalence of having a primary care provider (68%) and having a doctor's visit in the past year (72%) compared to other TGNC groups. As such, it may be the case that there are other factors that impede their ability and willingness to engage in health care (Levesque et al., 2013). For example, Black gender nonconforming individuals may be more likely to find that, even when health care is available, it is not approachable or appropriate because it is uniquely exclusive of gender nonconforming

individuals (e.g., clinics with intake forms that allow for identification as transfeminine or transmasculine but not gender nonconforming individuals; Kinney & Cosgrove, 2022).

Additionally, manifestations of gender binarism and/or cissexism in other domains of Black gender nonconforming individuals' lives may also impede their ability to access and utilize care (e.g., unemployment, income disparities, lack of insurance coverage; King et al., 2022; Institute of Medicine, 2011; Zarwell et al., 2022). In the current sample, preliminary weighted bivariate associations revealed that Black gender nonconforming individuals had the lowest odds of reporting insurance coverage (e.g., compared to Black transfeminine individuals, OR = 0.64, 95% CI [0.52, 0.80]; compared to White transmasculine individuals, OR = 0.40, 95% CI [0.32, 0.49]). Additionally, in the unweighted sample, 7% of Black gender nonconforming individuals reported no income compared to 3% of the overall sample. Future research should examine these other potential factors as drivers of health care inequities for Black gender nonconforming individuals.

Interestingly, more visual conformity was significantly associated with increased odds of care avoidance for Black transmasculine individuals. This suggests that, similarly to Black transfeminine individuals, there may be unique risks associated with more visual conformity for both Black transmasculine and transfeminine individuals that diminish their health care utilization. Given previously discussed related research, past NTDS research that has found that Black TGNC individuals are more likely to report being physically attacked within health care settings (Grant et al., 2011), and our finding that, on average, Black transmasculine individuals report comparatively high visual conformity ($M = 4.07$, $SE = 0.03$), it may indeed be the case that being more visually conforming is associated with Black transmasculine individuals' care avoidance because they are considering risks of other negative health care experiences that were

not captured by the current study's measure of trans-specific health care discrimination. As the current study also found that experiencing any trans-specific health care discrimination (39% reported any experience) and care avoidance (28% avoided care) are both relatively more commonplace for Black transmasculine individuals, future research into the unique experiences of Black transmasculine individuals and their engagement in health care is warranted.

Regarding average visual conformity scores by intersectional position, I found that the most visually conforming groups were Black transmasculine ($M = 4.07$, $SE = 0.03$) and gender nonconforming individuals ($M = 4.01$, $SE = 0.04$) and the least visually conforming group was White transfeminine individuals ($M = 3.33$, $SE = 0.01$). Although not a primary focus of the current study, the literature review suggested that the degree to which transfeminine individuals believed they were visually conforming would be shaped, and negatively impacted, by sexism writ large, which privileges men and masculinity (Serano, 2007) and considers cisgender women as vulnerable (Westbrook & Schilt, 2014). These findings of lower average visual conformity for both White and Black transfeminine individuals align with this literature and prior research that has found that transmasculine individuals report comparatively high visual conformity (Kcomt et al., 2020), and suggests that lower visual conformity for transfeminine individuals may be related to transmisogyny (Krell, 2017).

Regarding Black transmasculine and gender nonconforming individuals' average visual conformity scores, past literature and research suggests that these findings may be a result of racialized Western notions of gender that conflates Blackness with masculinity (Benson & Volpe, 2022; Ford, 2008; Johnson & Ghavami, 2011). It may be the case that these racialized notions make it easier for Black transmasculine individuals to be seen as masculine or less recognizable as TGNC individuals. The degree that this may also be the case for Black gender

nonconforming individuals is unclear. This group's high visual conformity could also be a result of gender binarism rendering nonconforming individuals as an anomaly even within trans-inclusive contexts (Frohard-Dourlent et al., 2017; Kinney & Cosgrove, 2022) and or the general lack of representation for Black TGNC individuals within TGNC contexts (Bassichis & Spade, 2014; Parmenter et al., 2020). Past research has also found that more visually conformity is associated with distress in gender nonconforming individuals because it means that their TGNC identity is invalidated or not recognized (Flynn & Smith, 2021; Osborn, 2022). In addition to previous suggestions, future research should consider examining how different types of marginalization associated with race (i.e., anti-Black racism) and gender identity (e.g., gender binarism, transmisogyny) differentially shape perceptions of visual conformity and the potential consequences of visual conformity.

Similarly to one of the significant interaction findings for Black transfeminine individuals, the current study revealed that more visual conformity was associated with greater odds of having a doctor's visit for White transmasculine individuals, when compared to White transfeminine and gender nonconforming individuals. Additionally, a comparatively high proportion of White transmasculine individuals reported any experience with trans-specific health care discrimination (40%), which is in line with previous research that has shown that transmasculine individuals are more likely to report these experiences (James et al., 2016; Romanelli & Lindsey, 2020; Seelman et al., 2021). Although unexamined in the current study due to its design, it could be the case White transmasculine individuals also feel more comfortable engaging in health care visits the less likely they are to be recognizable as a TGNC individual because it could mean a lower likelihood of experiencing trans-specific health care discrimination.

Alternatively, it may be the case that White transmasculine individuals anticipate positive health care experiences when they are more visually conforming. Past research suggests that transmasculine individuals frequently report being respected by providers who know that they are TGNC individuals (Kattari et al., 2020). This finding in concert with the relatively high average visual conformity score for this group ($M = 3.83$, $SE = 0.02$) in the current study may mean that White transmasculine individuals are treated better within health care when they are perceived as adhering to rigid medical expectations for TGNC individuals (i.e., expecting assigned female at birth TGNC individuals to transition to masculine men and vice versa; Davidson, 2007). Given the current study's findings for both Black transfeminine and White transmasculine individuals, future research should further examine both the potential negative and positive consequences of various degrees visual conformity as it relates to engagement in health care.

Results from the current study indicated that experiencing trans-specific health care discrimination significantly mediated the effect of visual conformity on care avoidance for White gender nonconforming individuals. This partially supports the mediation hypothesis and aligns with past literature that suggests that more visual conformity is associated with a reduced likelihood of experiencing trans-specific health care discrimination (e.g., Kattari & Hasche, 2016) and that experiencing trans-specific health care discrimination is associated with an increased likelihood of care avoidance (Lerner et al., 2020). This finding suggests that a part of the reason that visual conformity is associated with care avoidance for White gender nonconforming individuals is because how they are perceived influences their experiences within health care and makes them more or less willing to utilize care.

In contrast to the potential explanations of findings for Black transfeminine and transmasculine individuals (e.g., risks associated with high visual conformity), these findings suggest that there is a unique impact of trans-specific health care discrimination, as it relates to recognizability as TGNC, for White gender nonconforming individuals. Given that a comparatively smaller proportion (26%) of White gender nonconforming individuals reported experiencing any trans-specific health care discrimination, it may be the case that this group primarily experiences this type of discrimination when they are less visually conforming. In that sense, when it does happen to White gender nonconforming individuals it may be particularly harmful, especially if it includes aspects of gender binarism (e.g., TGNC health care providers knowing less about gender nonconforming health care needs and experiences; Kinney & Cosgrove, 2022).

Alternatively, it could be the case that the measure of trans-specific health care discrimination created for the current study more accurately captures negative health care experiences related to White gender nonconforming individuals' visual conformity and engagement in health care. Future research should consider including measures of trans-specific health care discrimination that assess appraisal and frequency of events so that there is a better understanding of how these experiences may differentially impact TGNC individuals of different gender identities. Although intentionally removed from the current study in order to focus analyses on more common negative health care experiences (Grant et al., 2011; Kattari & Hasche, 2016), findings from the current study suggest that future research may benefit from including assessment of violent health care experiences as the likelihood of these experiences may differ at the intersections of race and gender identity. Given past research that suggests that these experiences are fairly uncommon (Grant et al., 2011; Kattari & Hasche, 2016), it may be

beneficial to use longitudinal and/or qualitative methods, or larger more diverse samples of TGNC individuals.

Outside of the significant mediation finding for White gender nonconforming individuals, the results from the current study did not support the hypothesis that experiencing trans-specific health care discrimination explains the associations between visual conformity and health care outcomes. There was support found for the association between visual conformity and trans-specific health care discrimination, in that a one-unit increase in visual conformity was associated with a 9% decrease in the odds of experiencing any trans-specific health care discrimination, 98.3% CI [0.87, 0.95]. However, the effect sizes of trans-specific discrimination on having a primary care provider and care avoidance were much larger. Indeed, experiencing trans-specific discrimination was associated with a 52% increase in the odds of having a primary care provider, 98.3% CI [1.32, 1.75], and a 467% increase in care avoidance, 98.3% CI [5.10, 6.32]. This suggests that whether or not someone experiences trans-specific discrimination is more important for navigating health care than the degree to which they are recognizable as TGNC. This is further supported by the fact that visual conformity was not significantly associated with all health care outcomes for each intersectional position group (e.g., the non-significant association between visual conformity and having a primary care provider for Black gender nonconforming individuals). As previously discussed, there may also be other factors (e.g., likelihood of positive health care experiences; Ross et al., 2016) that mediate the associations between visual conformity and health care outcomes among Black and White TGNC individuals, which should be further examined in future research.

Of note, the current study unexpectedly found that experiencing any trans-specific discrimination was associated with increased odds of having a primary care provider. This

deviates from prior research that shows that these experiences diminish health care outcomes (e.g., Jaffee et al., 2016) because they make health care settings unwelcoming and unsafe for TGNC individuals (Poteat et al., 2013). It may be the case that experiences with trans-specific health care discrimination lead TGNC individuals to obtain a primary care provider that they can trust and reasonably expect to not be discriminatory. Within the context of health inequities that TGNC individuals encounter (e.g., King et al., 2022), there is an increased need for management of one's health through routine care for this population (Almazan et al., 2022). As such, having a primary care provider may be an adaptive response to experiencing trans-specific health care discrimination. This is in line with research that has found associations between experiencing discrimination and adaptive responses (e.g., civic engagement, Hope & Spencer., 2017; mental health care utilization, Richman et al., 2007).

It is important to note that the majority (85%) of the sample for the current study was insured, so it may be the case that the association between trans-specific health care discrimination and having a primary care provider does not hold in samples with more uninsured individuals, for whom primary care is less accessible (Gonzales & Henning-Smith, 2017; Kachen & Pharr, 2020). Alternatively, as USTS data is cross-sectional, this association could mean that having a primary care provider is associated with a greater likelihood of experiencing trans-specific health care discrimination because increased engagement in health care may mean more opportunities for experiencing trans-specific health care discrimination. Longitudinal research that examines these associations, includes greater diversity in insurance status, and includes additional factors associated with access to health care is needed to further understand how these experiences influence, or may be influenced, by engagement in health care.

It is important to note that in discussing visual conformity as a predictor of outcomes, with the understanding that prior research suggests that more visual conformity generally leads to beneficial outcomes, I am not endorsing being visually conforming as a suggested goal for all TGNC individuals. I used visual conformity with the understanding that we live within a cissexist society that expects everyone to be cisgender and perceives being TGNC as an abnormality (Conrad, 2007; Hughes et al., 2022; King et al., 2020), and that the systemic nature of cissexism affects how TGNC people are treated by others and likely impacts how TGNC individuals choose to navigate public and shared spaces (Lerner, 2021). This is especially important to note given findings from the current study that suggests that, in certain contexts, more visual conformity is associated with diminished health care outcomes for both Black transfeminine and transmasculine individuals. These findings, although unexpected, should be taken as evidence that cissexism affects TGNC individuals differently at the intersections of racism and cissexism and that the potential benefits of adhering to cissexist notions is not worth its negative consequences. There is nothing wrong or abnormal about being transgender or gender nonconforming. It is a beautiful experience and should not be negatively impacted by systemic marginalization.

Limitations

There are limitations to the current study. Although cross-sectional data does not allow us to infer causality and the direction of associations, examining mediation effects with this data was justified. The conceptual model (see Figure 1) for the current study relied heavily on complementary theoretical frameworks (Bauer & Scheim, 2019; Evans, 2019; Fredriksen-Goldsen et al., 2014) which informed the position of the variables within the model and the expected direction of effects. Additionally, the current study's examined associations are novel

and their results may inform future longitudinal research about TGNC health care experiences and health care outcomes. Longitudinal research could allow for the examination of potential cyclical or counter-directional associations, such as whether prior experiences of health care discrimination impact perceptions of one's visual conformity. Longitudinal research could also allow for a deeper examination of health care discrimination experiences, its frequency over time, and how these phenomena may impact health care outcomes. Given that gender identity, how one chooses to express or present their gender, engagement in gender affirmation practices (e.g., gender affirming hormone therapy, gender affirming surgeries, use of gendered pronouns), and cultural expectations of gender may change over time, the degree to which one is perceived as being TGNC and how it may impact one's experiences may also change over time. Taken together, longitudinal research about these phenomena may further bolster and expand upon the findings from the current study.

There are constraints on the generality of the findings (Simons et al., 2017). The USTS was conducted online, with targeted convenience sampling methods, which likely contributed to the sample being disproportionately White, younger, and more highly educated compared to the general US population at the time (Lett & Everhart, 2022). Although the NCTE provided survey sampling weights to approximate a more nationally representative sample when these weights are applied, it is still important to recognize that the sampling methods used, and the subsequent USTS sample, constrain the generalizability of the results. Of note, 4% of the overall unweighted sample were identified as outliers (Age > 61) via a boxplot of participants' ages and Black TGNC individuals comprised 2% of these outliers. However, regression diagnostics determined that there were no outliers in the full logistic regression models and this issue was addressed via the application of survey sampling weights in the weighted analyses. The findings presented here

are only generalizable to, or representative of, Black and White TGNC individuals who are demographically similar to the current study's sample. There may be important differences between adult TGNC individuals who were able to access the USTS and chose to complete it and those for whom the survey was inaccessible or undesirable. For example, in the current unweighted sample, 63% of Black TGNC individuals were employed compared to 55% of the general Black U.S. population, as reported from the 2015 American Community Survey (United States Census Bureau, 2016). Thus, barriers to accessing and utilizing care may not be fully represented by the current study's findings. As such, these findings may be a conservative estimate of the differences in the associations and outcomes examined. Future research should examine additional methods in survey design, recruitment, and implementation to increase the national representativeness of future samples (e.g., having paper versions of the survey available at various community centers).

The measures utilized for the current study were another source of constraints on the generality of the findings. Only those who had a doctor's visit in the last year were able to indicate whether or not they had experienced any of the list of negative health care experiences provided within a later portion of the survey. This meant that I was only able to examine the association between health care discrimination and health care utilization as it relates to care avoidance. Although unmeasurable with the current data, it could be the case that experiences of health care discrimination prior to the past year, or over one's lifetime, are associated with not having a doctor's visit in the past year. Future research into these associations should consider adding, or amending, measures of health care discrimination so that participants can indicate when experiences occurred, if experiences have ever occurred over the course of their lifetimes, and/or whether any experiences occur repeatedly.

Additionally, the measure of visual conformity did not account for the construct's potential situational nature. It may be the case that one's recognizability as a TGNC individual is different in health care settings that are specific to trans-related care (e.g., clinics that provide gender affirming hormone treatment) compared to other health care settings or settings outside of health care. Indeed, prior research shows that perceptions of others differ dependent upon situational factors (e.g., differences in perception of sexual orientation by exposure to sexual minorities; Alaei & Rule, 2016). Future research should include setting-specific measures of visual conformity to better assess how it is associated with related outcomes.

By examining data from only White and Black TGNC individuals I hoped to understand how experiences with cissexism differed by gender identity and race, with the understanding that the experiences and outcomes of Black TGNC individuals are shaped by experiences with racism and the intersections of racism and cissexism (Crenshaw, 1989; Krieger, 2020; Lett et al., 2022; Poteat et al., 2013). The trans-specific health care discrimination variable utilized responses from items specifically designed to assess TGNC experiences and may not appropriately account for or capture experiences associated with being Black or being Black and TGNC. Although the factor analyses conducted implied that the measure was suitable for each intersectional position group, it could be the case that Black TGNC participants had experiences similar to those listed that they did not attribute solely to their gender identity (e.g., having a provider use harsh or abusive language, being verbally harassed in a health care setting). Although the degree to which this may be the case is not measurable with this data, future research with TGNC participants should consider utilizing either additional measures to capture non-cissexism-related experiences or measures that can capture experiences at the intersections of multiple forms of marginalization.

The current study utilized racial group identification as a proxy for whether or not TGNC participants are exposed to anti-Black racism. However, as previously implied, there were no direct measures of racism within the current study. Among Black individuals there have been varying levels of reports of racism, including those who report no experiences (Volpe et al., 2021). Even so, this conceptualization was justified because we know that anti-Black racism is ubiquitous and systemic within the U.S. It negatively impacts the opportunities, experiences, and outcomes of Black people writ large (Krieger, 2020; Lett et al., 2022); and it intersects with other forms of marginalization that affect Black lives (Crenshaw, 1989; Poteat et al., 2013). To address this limitation, future research should incorporate direct measures of racism.

Participants' gender identity for the current study (i.e., transmasculine, transfeminine, gender nonconforming) was indicated by their responses to two questions about their sex assigned at birth and the current gender identity. The current gender identity question had a list of responses (i.e., Cross-Dresser, Woman, Man, Trans woman (MTF), Trans man (FTM), Non-binary/Genderqueer) from which they could only select one identity. Although the USTS also had a select-all identity question that asked participants about the terms with which they most identify (e.g., Androgynous, Third gender, Stud, Two-spirit), it would be difficult to ascertain whether or not participants have more than one gender identity with the USTS as designed. For example, there may have been participants who are both trans women and non-binary who selected "Trans woman (MTF)" because it seemed like the most appropriate selection at the time of the survey. This lack of flexibility in gender identity responses is concerning given that past research has split TGNC participants into binary (i.e., transmasculine and transfeminine) and nonbinary (e.g., Resiner & White Hughto, 2019), implying that being transfeminine or transmasculine is always a binary gender identity when that may not be the case for all

transfeminine and transmasculine individuals. The current study attempts to address this with the use of “transmasculine” and “transfeminine” identity terms to imply that there is a spectrum or myriad of identities included within each major identity group (Kuper et al., 2011).

It is also important to note that another assumption of the current study’s categorization of gender identity is that this identity is stable over time (e.g., all gender nonconforming individuals continue to identify as gender nonconforming rather than later, or previously, identifying as transmasculine or transfeminine). To address these limitations, future research should consider allowing participants to select more than one gender identity term, asking those who select responses such as “trans woman” or “trans man” if they believe their gender is binary, or providing an “other” response that allows participants to specify their gender identity. Future research should also utilize longitudinal methods or include items that allow participants to indicate the temporal fluidity or lack thereof in their TGNC identity.

The data from the USTS was collected in 2015, before the COVID-19 pandemic, which disproportionately impacted TGNC individuals (Herman & O’Neill, 2020), and the recent increase in anti-trans legislature and sentiment in the U.S. (Human Rights Campaign, 2023). Although health inequities, legal discrimination, and anti-trans cultural sentiment were a part of living in the U.S. as a TGNC individual at the time of the survey, the context in which TGNC people live today is substantially different from 2015 and liable to continue changing. For example, it could be the case that TGNC individuals within the current context (i.e., 2023) are less willing or able to utilize care because they are anticipating more experiences with discrimination than they would have in previous years. This may be especially true in states that have criminalized gender affirming medical care and legalized trans-specific health care discrimination (Human Rights Campaign, 2023). The findings from the current study are still

important for a better understanding of TGNC experiences, especially those of Black TGNC individuals who have been underrepresented in health equity research. However, contemporaneous data that is contextually situated (e.g., including measures of enacted anti-trans legislation by state) should be collected and examined to support future efforts to better understand and address health inequities.

Conclusions

Results of the current study have implications for how Black and White TGNC individuals navigate health care, ongoing TGNC health research, and health equity efforts. In part, these findings demonstrate that the potential influence of one's visual conformity on health care outcomes is heterogenous when considering the intersections of race and gender identity. Indeed, these findings suggest that the influence of visual conformity on health care outcomes is likely shaped by exposure to the intersections of racism and cissexism. This follows past literature that highlights the importance of intersectional considerations in research (Bauer, 2014; Bauer & Scheim, 2019; McCall, 2005; Wesp et al., 2019).

For Black transfeminine and transmasculine individuals, I unexpectedly found that in certain contexts visual conformity was associated with diminished health care outcomes, and in others, improved health care outcomes. This suggests that there are both risks and benefits associated with how Black transfeminine and transmasculine are perceived, with regards to their TGNC status/ which impact how they decide or able to navigate care. Black transfeminine and transmasculine may have unique experiences within health care settings that make accessing and utilizing health care an arduous process. While the differences found may be due to how racism and cissexism differently shapes experiences (e.g., negative consequences regardless of Black TGNC individuals' visual conformity), the current study did not measure racism and can only

infer as to the causes of present differences. With present knowledge of health inequities for this population (King et al., 2022; Institute of Medicine, 2011; Zarwell et al., 2022), both qualitative and longitudinal research is needed to determine if there are any race-specific factors (e.g., anticipation of racist trans-specific discrimination) between visual conformity and health care outcomes that could be addressed to improve health care outcomes, and ultimately move us closer to health equity for this population.

Findings from the current study also highlight important health care inequities for Black gender nonconforming individuals (i.e., comparatively low odds of having a doctor's visit and having a primary care provider). This suggests that Black gender nonconforming individuals may experience inequities unique to their exposure to gender binarism and racism within and outside of health care settings (e.g., employment discrimination; King et al., 2022; Zarwell et al., 2022). As visual conformity did not always appear to be a strong predictor of these outcomes for Black gender nonconforming individuals, it would be beneficial for future research to examine intragroup differences in these potential explanatory factors to determine the breadth of their impact for this population and to develop strategies to improve their engagement in health care.

The current study only found significant mediation for White gender nonconforming individuals. This finding means that a part of the reason that visual conformity reduces care avoidance is because it reduces the likelihood of experiencing trans-specific health care discrimination for White gender nonconforming individuals. Given that the prevalence of experiencing any trans-specific health care discrimination was lower for White gender nonconforming individuals (26%) compared to other intersectional position groups (e.g., 41% of Black transfeminine individuals reporting any experience), this finding suggests that their experiences with trans-specific discrimination are uniquely impactful as it relates to how they

navigate health care. This finding aligns with past research that suggests that health care experiences for gender nonconforming individuals include aspects of gender binarism (e.g., clinic policies that only consider transfeminine and transmasculine individuals; Kinney & Cosgrove, 2022). Other findings from the current study suggest that visual conformity is important for health care outcomes in different ways by intersectional position. Thus, future research should consider including other intervening factors (e.g., positive health care experiences) and measures of discrimination that assess appraisal, attribution (e.g., race, gender identity, combination of both), and frequency of these events to better understand these processes among Black and White TGNC individuals.

The current study revealed important differences in health care outcomes (e.g., a smaller proportion of Black gender nonconforming individuals reporting that they have a primary care provider) and related processes (e.g., more visual conformity being associated with diminished health care outcomes for Black transfeminine and transmasculine individuals) among Black and White TGNC individuals. Given the limitations of the current study, particularly as it relates to constraints on generality, the findings provided from the current study's analyses may be a conservative estimate of these differences. This highlights the need for research methods that increase the representativeness of marginalized populations so that we can better estimate inequities and understand differences in other factors that are related to these inequities.

Although the weights supplied by the NCTE allowed me to fit models that examined potential explanations of different health care outcomes, the differences between the weighted and the unweighted model suggests that the weights are necessary for examining processes at the intersections of race and gender identity for Black and White TGNC individuals. However, as discussed previously, the application of weights also introduces unknown amounts of selection

bias. To include multiple related and potentially explanatory factors within analytic models, it then appears that a researcher has to decide between collapsing potentially important categories of interest (e.g., multiple racial categories to White and People of Color; Lerner et al., 2020) or applying weights whose application may still preclude fitting of models with multiple explanatory factors and intersectional position variables. Going forward, researchers should consider additional recruitment and design methods to increase the representation of demographic groups that are typically underrepresented in research (e.g., regional community advisory councils that include overrepresentation of marginalized groups; longer data collection periods; multimodal data collection, such as online surveys, paper surveys, and telephone surveys).

It is important to note that between group differences in average visual conformity were relatively small, given that weighted average values ranged from 3.33 to 4.07. This is likely due to the fact that over half (51%) of the weighted sample reported high visual conformity, while only 13% reported low visual conformity (see Appendix D). Even so, significant group differences were found in visual conformity and health care outcome associations by intersectional position, indicating that differences in these associations may be even more pronounced when solely considering those with low and/or high visual conformity. Increased representation of multiply marginalized groups in future research will allow for the close examination of visual conformity and related associations. Conducting such research could further illuminate potential impacts of varying degrees of visual conformity and highlight specific needs in ongoing efforts to increase health care engagement.

The current study's finding that experiencing trans-specific health care discrimination was positively associated with having a primary care provider should not be interpreted as

encouragement for discrimination. Rather this finding should be used to encourage addressing trans-specific health care discrimination in all health care settings, especially those that are utilized when individuals lack stable access to care (e.g., emergency rooms and urgent care facilities; Chen et al., 2016; Progovac et al., 2018; Seelman et al., 2017; Teti et al., 2021; Whitehead et al., 2016; Willging et al., 2019). Whether or not someone has a primary care provider should not be dependent upon their prior negative health care experiences, especially considering the large effect size of discrimination on care avoidance from the current study.

Lastly, as previously mentioned, the use of visual conformity as a predictor is not meant to encourage visual conformity as an assumed goal for TGNC individuals. The different ways in which it functions at the intersections of race and gender identity does have implications for health care practice. It suggests that health care professionals may treat TGNC patients differently dependent upon how they look. This aligns with past literature that suggests that TGNC health care primarily abides by the notion that TGNC individuals transition to the ideal of the “opposite” gender (e.g., assigned male at birth TGNC individuals transitioning to feminine women; Davidson, 2007).

Given that health care professionals are the gatekeepers of care, especially when it comes to gender affirming medical care (Poteat et al., 2013; Lerner et al., 2020), it is important that health care professionals use the current study and related research to investigate and deconstruct how cissexism and other forms of marginalization may inform their practice and interactions with TGNC patients. This body of research can then be used to develop policies and health care interventions that guide and educate health care professionals to provide equitable treatment that is not marred by systems of marginalization (e.g., interventions that teach providers to recognize and reduce trans-specific health care discrimination). Ultimately, researchers, health care

professionals, and policy makers need to work together to find ways to facilitate care navigation for TGNC individuals so that they do not have to consider how they are perceived when attempting to manage their own health. Given the inequities that this population experiences, we should work on ways to reduce discrimination and learn more about how and why TGNC individuals navigate care and the decisions and considerations that go into this process

The current study is among the first, to my knowledge, to examine trans-specific health care discrimination as a mediator of the association between visual conformity and health care outcomes and to demonstrate that there may be negative consequences of visual conformity on health care outcomes for Black TGNC individuals. This work highlights the necessity of intersectional research. The findings of the current study and future research could inform future policies and interventions that seek to reduce negative health care experiences, promote positive health care experiences, and promote health care engagement. This knowledge will allow researchers and health care professionals to better address and understand the diversity of experiences within TGNC health care and ultimately, promote health equity for this population.

REFERENCES

- Agresti, A. (2019). Building and applying logistic regression models. In Balding, D. J., Cressie, N. A. C., Fitzmaurice, G. M., Givens, G. H., Goldstein, H., Molenberghs, G., Scott, D. W., Smith, A. F. M., & Tsay, R. S. (Eds.), *An introduction to categorical analysis* (3rd, pp. 123-157). Wiley.
- Alaei, R., & Rule, N. O. (2016). Accuracy of perceiving social attributes. In J. Hall, M. Schmid Mast, & T. West (Eds.), *The social psychology of perceiving others accurately* (pp. 125-142). Cambridge University Press. <https://doi.org/10.1017/CBO9781316181959.006>
- Allison, P. (2012, September 10). When can you safely ignore multicollinearity? *Statistical Horizons*. <https://statisticalhorizons.com/multicollinearity/>
- Almazan, A. N., Benyishay, M., Stott, B., Vedilago, W., Reisner, S. L., & Keuroghlian, A. S. (2022). Gender-affirming primary care access among rural transgender and gender diverse adults in five Northeastern U.S. states. *LGBT Health*. Advance online publication. <https://doi.org/10.1089/lgbt.2021.0391>
- American Psychological Association. (2015). Guidelines for psychological practice with transgender and gender nonconforming people. *American Psychologist*, 70(9), 832–864. <https://doi.org/10.1037/a0039906>
- Arthur, S., Jamieson, A., Cross, H., Nambiar, K., & Llewellyn, C. D. (2021). Medical students' awareness of health issues, attitudes, and confidence about caring for lesbian, gay, bisexual and transgender patients: A cross-sectional survey. *BMC Medical Education*, 21(1), 56. <https://doi.org/10.1186/s12909-020-02409-6>
- Awad, G. H., Hashem, H., & Nguyen, H. (2021). Identity and ethnic/racial self-labeling among Americans of Arab or Middle Eastern and North African Descent. *An International*

- Journal of Theory and Research, 21(2), 115-130.
<https://doi.org/10.1080/15283488.2021.1883277>
- Baker, K. E. (2019). Findings From the Behavioral Risk Factor Surveillance System on Health-Related Quality of Life Among US Transgender Adults, 2014-2017. *JAMA Internal Medicine*, 179(8), 1141-1144. <https://doi.org/10.1001/jamainternmed.2018.7931>
- Bassichis, M., & Spade, D. (2014). Queer politics and anti-blackness. In J. Haritaworn, A. Kuntsman, & S. Posocco (Eds.), *Queer necropolitics* (pp. 191–210). Routledge.
- Bauer, G. R. (2014). Incorporating intersectionality theory into population health research methodology: Challenges and the potential to advance health equity. *Social Science & Medicine*, 110, 10-17. <https://doi.org/10.1016/j.socscimed.2014.03.022>
- Bauer, G. R., & Scheim, A. I. (2019). Methods for analytic intercategory intersectionality in quantitative research: Discrimination as a mediator of health inequalities. *Social Science & Medicine*, 226, 236-245. <https://doi.org/10.1016/j.socscimed.2018.12.015>
- Begun, S. & Kattari, S. K. (2016). Conforming for survival: Associations between transgender visual conformity/passing and homelessness experiences. *Journal of Gay & Lesbian Social Services*, 28(1), 54-66. <https://doi.org/10.1080/10538720.2016.1125821>
- Benson, G. P. & Volpe, V. V. (2022). Too manly and too straight? Perceived sexual orientation of Black and White men and women. *Journal of Homosexuality*. Advance online publication. <https://doi.org/10.1080/00918369.2022.2070445>
- Blondeel, K., Say, L., Chou, D., Toskin, I., Khosla, R., Scolaro, E., & Temmerman, M. (2016). Evidence and knowledge gaps on the disease burden in sexual and gender minorities: A review of systematic reviews. *International Journal for Equity in Health*, 15,16.
<https://doi.org/10.1186/s12939-016-0304-1>

- Bonilla-Silva, E. (1997). Rethinking racism: Toward a structural interpretation. *American Sociological Review*, 62(3), 465–480. <https://doi.org/10.2307/2657316>.
- Brambaugh-Johnson, S. M., & Hull, K. E. (2018). Coming out as transgender: Navigating the social implications of a transgender identity. *Journal of Homosexuality*, 66(8), 1148-1177. <https://doi.org/10.1080/00918369.2018.1493253>
- Braveman, P. A. (2019). Swimming against the tide: Challenges in pursuing health equity today. *Academic Medicine*, 94(2), 170-171. <https://doi.org/10.1097/ACM.0000000000002529>
- Brown, G. R., & Jones, K. T. (2014). Racial health disparities in a cohort of 5,135 transgender veterans. *Journal of Racial and Ethnic Health Disparities*, 1, 257-266. <https://doi.org/10.1007/s40615-014-0032-4>
- Cahill, S., & Makadon, H. (2014). Sexual orientation and gender identity data collection in clinical settings and in electronic health records: A key to ending LGBT health disparities. *LGBT Health*, 1(1), 34-41. <https://doi.org/10.1089/lgbt.2013.0001>
- Calleros, L., Emetu, R. E., & Missari, S. (2022). Interpersonal and structural healthcare barriers among transgender women: Healthcare curriculum needs. *Health Education Journal*, 1-13. <https://doi.org/10.1177/00178969221128639>
- Centers for Disease Control and Prevention. (2022). BRFSS Questionnaires. Center for Disease Control and Prevention. <https://www.cdc.gov/brfss/questionnaires/index.htm>
- Chatterjee, S. & Hadi, A. S. (1988). Impact of simultaneous omission of a variable and an observation on a linear regression equation. *Computational Statistics & Data Analysis*, 6(2),129-144. [https://doi.org/10.1016/0167-9473\(88\)90044](https://doi.org/10.1016/0167-9473(88)90044)

- Chen, J., Vargas-Bustamante, A., Mortensen, K., & Ortega, A. N. (2016). Racial and ethnic disparities in health care access and utilization under the Affordable Care Act. *Medical Care*, 54(2), 140-146. <https://doi.org/10.1097/mlr.0000000000000467>
- Chu, K. C., Miller, B. A., & Springfield, S. A. (2007). Measures of racial/ethnic health disparities in cancer mortality rates and the influence of socioeconomic status. *Journal of the National Medical Association*, 99(10), 1092-1104. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2574395/>
- Cicero, E. C., & Black, B. P. (2016). "I Was a Spectacle... A Freak Show at the Circus": A transgender person's ED experience and implications for nursing practice. *Journal of Emergency Nursing*, 42(1), 25-30. <https://doi.org/10.1016/j.jen.2015.08.012>
- Cicero, E. C., Reisner, S. L., Merwin, E. I., Humphreys, J. C., & Silva, S. G. (2020). The health status of transgender and gender nonbinary adults in the United States. *PLoS ONE*, 15(2), e0228765. <https://doi.org/10.1371/journal.pone.0228765>
- Cicero, E. C., Reisner, S. L., Silva, S. G., Merwin, E. I., & Humphreys, J. C. (2019). Health care experiences of transgender adults: An integrated mixed research literature review. *Advances in Nursing Science*, 42(2), 123-138. <https://doi.org/10.1097/ans.0000000000000256>
- Cleland, D. P. (2022) *Las Vidas Negras Importan: Centering Blackness and racial politics in Latin American research*. *Annual Review of Political Science*, 25, 341-356. <https://doi.org/10.1146/annurev-polisci-102119-100255>
- Conrad, P. (2007). *The medicalization of society: On the transformation of human conditions into treatable disorders*. Johns Hopkins University Press.

- Cramer, J. S. (1999). Predictive performance of the binary logit model in unbalanced samples. *Journal of the Royal Statistical Society: Series D (The Statistician)*, 48(1), 85–94.
<https://www.jstor.org/stable/2680898>
- Crenshaw, K. (1989). Demarginalizing the intersection of race and sex: A Black feminist critique of antidiscrimination doctrine, feminist theory and antiracist politics. In Maschke, K. (Ed.), *Feminist Legal Theories* (pp. 23-52). Routledge.
- Cruz, T. M. (2014). Assessing access to care for transgender and gender nonconforming people: A consideration of diversity in combating discrimination. *Social Science & Medicine*, 110, 65-73. <https://doi.org/10.1016/j.socscimed.2014.03.032>
- Davidson, M. (2007). Seeking refuge under the umbrella: Inclusion, exclusion, and organizing with the category Transgender. *Sexuality Research & Social Policy*, 4, 60.
<https://doi.org/10.1525/srsp.2007.4.4.60>
- de Boer, M. R., Waterlander, W. E., Kuijper, L. D. J., Steenhuis, I. H. M., & Twisk, J. W. R. (2015). Testing for baseline differences in randomized controlled trials: An unhealthy research behavior that is hard to eradicate. *International Journal of Behavioral Nutrition and Physical Activity*, 12, 4. <https://doi.org/10.1186/s12966-015-0162-z>
- Devor, A. (2004). Witnessing and mirroring: A fourteen stage model of transsexual identity formation. *Journal of Gay & Lesbian Psychotherapy*, 8(1-2), 41–67.
https://www.tandfonline.com/doi/abs/10.1300/J236v08n01_05
- Downing, J. M., & Przedworski, J. M. (2018). Health of transgender adults in the U.S., 2014-2016. *American Journal of Preventative Medicine*, 55(3),336-344.
<https://doi.org/10.1016/j.amepre.2018.04.045>

- DuBois, L. Z. & Juster, R. (2022). Lived experience and allostatic load among transmasculine people living in the United States. *Psychoneuroendocrinology*, 143, 105849.
<https://doi.org/10.1016/j.psyneuen.2022.105849>
- Evans, C. R. (2019). Modeling the intersectionality of processes in the social production of health inequalities. *Social Science & Medicine*, 226, 249-253.
<https://doi.org/10.1016/j.socscimed.2019.01.017>
- Fabrigar, L. R., Wegener, D. T., MacCallum, R. C., & Strahan, E. J. (1999). Evaluating the use of exploratory factor analysis in psychological research. *Psychological Methods*, 4(3), 272–299. <http://dx.doi.org/10.1037/1082-989X.4.3.272>
- Faul, F., Erdfelder, E., Buchner, A., & Lang, A. G. (2019). G*Power (version 3.1.9.4) [Computer software]. Universität Kiel.
- Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, 39(2), 175–191. <https://doi.org/10.3758/BF03193146>
- Field, A. (2013). Logistic regression. In: Carmichael, M., (Ed.) *Discovering Statistics Using IBM SPSS Statistics* (4th ed., pp. 884-944). SAGE Publications.
- Flores, A. R., Herman, J. L., Gates, G. J., & Brown, T. N. T. (2016). How Many Adults Identify as Transgender in the United States? The Williams Institute.
<https://williamsinstitute.law.ucla.edu/publications/trans-adults-united-states/>
- Flynn, S. & Smith, N. G. (2021). Interactions between blending and identity concealment: Effects on non-binary people's distress and experiences of victimization. *PLoS ONE*, 16(3), e0238970. <https://doi.org/10.1371/journal.pone.0248970>

- Ford, K. A. (2008). Gazing into a distorted looking glass: Masculinity, femininity, appearance ideals, and the Black body. *Sociology Compass*, 2(3), 1096–1114.
<https://doi.org/10.1111/j.1751-9020.2008.00116.x>
- Fredriksen-Goldsen, K. I., Romanelli, M., Hoy-Ellis, C. P., & Jung, H. (2022). Health, economic and social disparities among transgender women, transgender men and transgender nonbinary adults: Results from a population-based study. *Preventative Medicine*, 156, 106988. <https://doi.org/10.1016/j.ypmed.2022.106988>
- Fredriksen-Goldsen, K. I., Simoni, J. M., Kim, H. J., Lehavot, K., Walters, K. L., Yang, J., Hoy-Ellis, C. P., & Muraco, A. (2014). The health equity promotion model: Reconceptualization of lesbian, gay, bisexual, and transgender (LGBT) health disparities. *American Journal of Orthopsychiatry*, 84(6), 653-663. <https://doi.org/10.1037/ort000030>
- Frohard-Dourlent, H., Dobson, S., Clark, B. A., Douli, M., & Saewyc, E. M. (2017). “I would have preferred more options”: Accounting for non-binary youth in health research. *Nursing Inquiry*, 24, e12150. <https://doi.org/10.1111/nin.12150>
- Garcia, A. D., & Lopez, X. (2022). How cisgender clinicians can help prevent harm during encounters with transgender patients. *AMA Journal of Ethics*, 24, 8, E753-761.
<https://doi.org/10.1001/amajethics.2022.753>
- Gates, G. J. (2011). How Many People are Lesbian, Gay, Bisexual and Transgender? The Williams Institute. <https://escholarship.org/uc/item/09h684X2>
- Gay, T. M., Farinu, O. T. O., & Jackson, M. I. (2022). “From all sides”: Black-Asian Reddit communities identity and expand experiences of the multiracial microaggression taxonomy. *Social Sciences*, 11, 168. <https://doi.org/10.3390/socsci11040168>

- Goff, P. A., Thomas, M. A., & Jackson, M. C. (2008). "Ain't I a woman?" Towards an intersectional approach to person perception and group-based harms. *Sex Roles: A Journal of Research*, 59(5–6), 392–403. <https://doi.org/10.1007/s11199-008-9505-4>
- Gonzales, G., & Henning-Smith, C. (2017). Barriers to care among transgender and gender nonconforming adults. *Milbank Quarterly*, 95(4), 726-748. <https://doi.org/10.1111/1468-0009.12297>
- Gonzalez, D., Skopec, L., McDaniel, M., & Kenney, G. M. (2021). Perceptions of discrimination and unfair judgement while seeking health care: Findings from the September 11-28 Coronavirus Tracking Survey. The Urban Institute. <https://www.urban.org/research/publication/perceptions-discrimination-and-unfair-judgment-while-seeking-health-care>
- Grant, J. M., Mottet, L. A., Tanis, J., Harrison, J., Herman, J. L., & Keisling, M. (2011). Injustice at every turn: A report of the national transgender discrimination survey. District of Columbia: National Center for Transgender Equality and National Gay and Lesbian Task Force. https://transequality.org/sites/default/files/docs/resources/NTDS_Report.pdf
- Harrison, J., Grant, J., & Herman, J. L. (2012). A gender not listed here: Genderqueers, gender rebels, and otherwise in the national transgender discrimination survey. *LGBTQ Public Policy Journal at the Harvard Kennedy School*, 2(1), 13. <https://escholarship.org/uc/item/2zj46213>
- Hemmert, G. A. J., Schons, L. M., Wieseke, J., & Schimmelpfenning, H. (2018). Log-likelihood-based pseudo-R² in Logistic Regression: Deriving sample-sensitive benchmarks. *Sociological Methods & Research*, 47(3), 507-531. <https://doi.org/10.1177/0049124116638107>

Herman, J. L., & O'Neill, K. (2020). Vulnerabilities to COVID-19 among transgender adults in the US. The Williams Institute.

<https://williamsinstitute.law.ucla.edu/publications/transgender-covid-19-risk/>

Herman, J. L., Wilson, B. D. M., & Becker, T. (2017). Demographic and health characteristics of transgender adults in California: Findings from the 2015-2016 California Health Interview Survey. Policy brief (UCLA Center for Health Policy Research), (8), 1-10.

<https://pubmed.ncbi.nlm.nih.gov/29091375/>

Hirschfield, G. & von Brachel, R. (2014). Improving multiple-group confirmatory factor analysis in R – A tutorial in measurement invariance with continuous and ordinal indicators.

Practical Assessment, Research, and Evaluation, 19, 7. <https://doi.org/10.7275/qazy-2946>

Hope, E. C., & Spencer, M. B. (2017). Civic engagement as an adaptive coping response to conditions of inequality: An application of Phenomenological Variant of Ecological Systems Theory (PVEST). In: Cabrera, N., Leyendecker, B. (Eds.), Handbook on positive development of minority children and youth (pp. 421-435). Springer.

https://doi.org/10.1007/978-3-319-43645-6_25

Hughes, L. D., King, W. M., Gamarel, K. E., Geronimus, A. T., Panagiotou, O. A., & Hughto, J.

M. W. (2022). US Black–White differences in mortality risk among transgender and cisgender people in private insurance, 2011–2019. American Journal of Public Health, 112(10), 1507-1514. <https://doi.org/10.2105/AJPH.2022.306963>

Human Rights Campaign. (2019). A national epidemic: Fatal anti-transgender violence in the United States in 2019. Human Rights Campaign.

<https://assets2.hrc.org/files/assets/resources/Anti-TransViolenceReport2019.pdf>

- Human Rights Campaign. (2023, May 11). BREAKING: Gov. DeSantis signs extreme “License to Discriminate” healthcare bill [Press release]. <https://www.hrc.org/press-releases/breaking-gov-desantis-signs-extreme-license-to-discriminate-healthcare-bill>
- Institute of Medicine (IOM) Committee on Lesbian, Gay, Bisexual, and Transgender Health Issues and Research Gaps and Opportunities. (2011). *The Health of Lesbian, Gay, Bisexual, and Transgender People: Building a Foundation for Better Understanding*. National Academies Press. <https://doi.org/10.17226/13128>
- Jaffee, K. D., Shires, D. A., & Strousma, D. (2016). Discrimination and delayed health care among transgender women and men: Implications for improving medical education and health care delivery. *Medical Care*, 54(11), 1010-1016. <https://doi.org/10.1097/MLR.0000000000000583>
- James, S. E., Herman, J. L., Rankin, S., Keisling, M., Mottet, L., & Anafi, M. (2016). *The Report of the 2015 U.S. Transgender Survey*. National Center for Transgender Equity. <https://www.ustranssurvey.org/reports/#2015report>
- James, S. E., Herman, J., Keisling, M., Mottet L., & Anafi M. (2017a). *Methodology Report: Questionnaire Design, Data Collection Methods, Data Cleaning Procedures, Weights, and Other Technical Information*. Inter-university Consortium for Political and Social Research. <https://www.icpsr.umich.edu/web/RCMD/studies/37229/versions/V1/datadocumentation#>
- James, S. E., Herman, J., Keisling, M., Mottet L., & Anafi M. (2017b). *2015 U.S. Transgender Survey (USTS): Report on the Experiences of Black Respondents*. Inter-university Consortium for Political and Social Research. <https://doi.org/10.3886/ICPSR37229.v1>

- James, S. E., Herman, J., Keisling, M., Mottet, L., & Anafi, M. (2019). 2015 U.S. Transgender Survey (USTS) (ICPSR 37229; Version V1) [Data set]. ICPSR.
<https://doi.org/10.3886/ICPSR37229.v1>
- Jefferson, K., Neilands, T. B., & Sevelius. (2013). Transgender women of color: Discrimination and depression symptoms. *Ethnicity and inequalities in health and social care*, 6(4), 121-136. <https://doi.org/10.1108/EIHSC-08-2013-0013>
- Johnson, K. L., & Ghavami, N. (2011). At the crossroads of conspicuous and concealable: What race categories communicate about sexual orientation. *PLoS One*, 6(3), e18025.
<https://doi.org/10.1371/journal.pone.0018025>
- Kachen, A., & Pharr, J. R. (2020). Health care access and utilization by transgender populations: A United States Transgender Survey study. *Transgender Health*, 5(3), 141-148.
<https://doi.org/10.1089/trgh.2020.0017>
- Kattari, S. K., Bakko, M., Hecht, H. K., & Kinney M. K. (2020). Intersecting experiences of healthcare denials among transgender and nonbinary patients. *American Journal of Preventative Medicine*, 58(4), 506-513. <https://doi.org/10.1016/j.amepre.2019.11.014>
- Kattari, S. K., Walls, N. E., Whitfield, D. L., & Langenderfer-Magruder, L. (2015). Racial and ethnic differences in experiences of discrimination in accessing health services among transgender people in the United States. *International Journal of Transgenderism*, 16(2), 68-79. <https://doi.org/10.1080/15532739.2015.1064336>
- Kattari, S. K., Walls, N. E., Whitfield, D. L., & Langenderfer-Magruder, L. (2017). Racial and ethnic differences in experiences of discrimination in accessing social services among transgender/gender-nonconforming people. *Journal of Ethnic Cultural Diversity in Social Work*, 26(3), 217-235. <https://doi.org/10.1080/15313204.2016.1242102>

- Kattari, S. K. & Hasche, L. (2016). Differences across age groups in transgender and gender non-conforming people's experiences in health care discrimination, harassment, and victimization. *Journal of Aging and Health*, 28(2), 285-306.
<https://doi.org/10.1177/0898264315590228>
- Kcomt, L. (2019). Factors affecting Health Care Access among Transgender People in the United States (Publication No. 7785) [Doctoral dissertation, University of Windsor]. Electronic Theses and Dissertations. <https://scholar.uwindsor.ca/etd/7785>
- Kcomt, L., Gorey, K. M., Barrett, B. J., Levin, D. S., Grant, J., & McCabe, S. E. (2021). Unmet healthcare need due to cost concerns among U.S. transgender and gender-expansive adults: Results from a national survey. *Health & Social Work*, 46(4), 250-259.
<https://doi.org/10.1093/hsw/hlab029>
- Kcomt, L., Gorey, K. M., Barrett, B. J., McCabe, S. E. (2020). Healthcare avoidance due to anticipated discrimination among transgender people: A call to create trans-affirmative environments. *Social Science & Medicine*, 11, 100608
<https://doi.org/10.1016/j.ssmph.2020.100608>
- King, W. M., Hughto, J. M. W., & Operario, D. (2020). Transgender stigma: A critical scoping review of definitions, domains, and measures used in empirical research. *Social Science & Medicine*, 250, 112867. <https://doi.org/10.1016/j.socscimed.2020.112867>
- King, W. M., Jadwin-Cakmak, L., Trammell, R., & Gamarel, K. E. (2022). Structural vulnerability as a conceptual framework for transgender health research: findings from a community needs assessment of transgender women of colour in Detroit. *Culture, Health, & Sexuality*. Advance online publication.
<https://doi.org/10.1080/13691058.2022.2086709>

- Kinney, M. K., & Cosgrove, D. (2022). “Truly listen to us”: Recommendations for health professionals to bolster wellbeing of nonbinary individuals. *International Journal of Environmental Research and Public Health*, 19, 9032.
<https://doi.org/10.3390/ijerph19159032>
- Kosenko, K., Rintamaki, L., Raney, S., & Maness, K. (2013). Transgender patient perceptions of stigma in health care contexts. *Medical Care*, 51(9), 819-822.
<https://www.jstor.org/stable/42568763>
- Krell, E. C. (2017). Is transmisogyny killing trans women of color?: Black trans feminisms and the exigencies of White femininity. *Transgender Studies Quarterly*, 4(2), 226-242.
<https://doi.org/10.1215/23289252-3815033>
- Krieger, N. (2020). Measures of racism, sexism, heterosexism, and gender binarism for health equity research: From structural injustice to embodied harm-an ecosocial analysis. *Annual Review of Public Health*, 41, 37-62. <https://doi.org/10.1146/annurev-publhealth-040119-094017>
- Kulshreshtha, A., Goyal, A., Dabhadkar, K., Veledar, E., & Vaccarino, V. (2014). Urban-rural differences in coronary heart disease mortality in the United States: 1999–2009. *Public Health Reports*, 129(1), 19-29. <https://doi.org/10.1177/003335491412900105>
- Kuper, L., Nussbaum, R., Mustanski, B. (2012). Exploring the diversity of gender and sexual orientation identities in an online sample of transgender individuals. *The Journal of Sex Research*, 49(2), 244-254. <https://doi.org/10.1080/00224499.2011.596954>
- Lerner, J. E. (2021). Having to “Hold It”: Factors that influence the avoidance of using public bathrooms among transgender people. *Health & Social Work*, 46(4), 260-267.
<https://doi.org/10.1093/hsw/hlab027>

- Lerner, J. E., Martin, J. I., & Gorsky, G. S. (2022). To go or not to go: Factors that influence health care use among trans adults in a non-representative U.S. sample. *Archives of Sexual Behavior*, 51, 19-13-1925. <https://doi.org/10.1007/s10508-022-02302-x>
- Lerner, J. E., Martin, J. I., & Gorsky, G. S. More than an apple a day: Factors associated with avoidance of doctor visits among transgender, gender nonconforming, and nonbinary people in the USA. *Sexuality Research and Social Policy*, 18, 409-426. <https://doi.org/10.1007/s13178-020-00469-3>
- Lett, E., & Everhart, A. (2022). Considerations for transgender population health research based on US national surveys. *Annals of Epidemiology*, 65, 65-71. <https://doi.org/10.1016/j.annepidem.2021.10.009>
- Lett, E., Asabor, E. N., Beltrán, S., & Dowshen, N. (2021). Characterizing health inequities for the U.S. transgender Hispanic population using the Behavioral Risk Factor Surveillance System. *Transgender Health*, 6(5), 275-283. <https://doi.org/10.1089/trgh.2020.0095>
- Lett, E., Asabor, E., Beltrán, S., Michelle Cannon, A., & Arah, O. A. (2022). Conceptualizing, contextualizing, and operationalizing race in quantitative health sciences research. *Annals of Family Medicine*, 20(2), 157-163. <https://doi.org/10.1370/afm.2792>
- Lett, E., Dowshen, N. L., & Baker, K. E. (2020). Intersectionality and health inequities for gender minority Blacks in the U.S. *American Journal of Preventative Medicine*, 59(5), 639-647. <https://doi.org/10.1016/j.amepre.2020.04.013>
- Levesque, J., Harris, M. F., & Russell, G. (2013). Patient-centered access to health care: Conceptualizing access at the interface of health systems and populations. *International Journal for Equity in Health*, 12, 18. <https://doi.org/10.1186/1475-9276-12-18>

- Lukachko, A., Hatzenbuehler, M. L., & Keyes, K. M. (2014). Structural racism and myocardial infarction in the United States. *Social Science & Medicine*, 103:42-50.
<https://doi.org.10.1016/j.soscimed.2013.07.02>
- McCall, L. (2005). The complexity of intersectionality. *Signs*, 30 (3), 1771–1800.
<https://doi.org/10.1086/426800>
- Menard, S. (2013). Logistic regression diagnostics and problems of inference. In *Logistic regression: From introductory to advanced concepts and applications* (pp. 125-144). Sage Publications Inc. <https://doi.org/10.4135/9781483348964>
- Miller, L. R., & Grollman, E. A. (2015). The social costs of gender nonconformity for transgender adults: Implications for discrimination and health. *Sociological Forum*, 30, 809–831. <https://doi.org/10.1111/socf.12193>
- Miyagi, M., Guthman, E. M., & Sun, S. D. (2022). Transgender rights rely on inclusive language. *Science*, 374 (6575), 1568-1569. <https://doi.org/10.1126/science.abn3759>
- O'Connor, B.P. (2000). SPSS and SAS programs for determining the number of components using parallel analysis and Velicer's MAP test. *Behavior Research Methods, Instruments, & Computers*, 32, 396–402. <http://dx.doi.org/10.3758/BF03200807>
- Osborn, M. (2022). “Nobody ever correctly recognizes me”: Nonbinary presentation, visibility, and safety across contexts. *Advances in Gender Research*, 33, 51-69.
<https://doi.org/10.1108/S1529-212620220000033011>
- Osborne, J. W., & Costello, A. B. (2009). Best practices in exploratory factor analysis: Four recommendations forgetting the most from your analysis. *Practical Assessment, Research, and Evaluation*, 10, 7. <https://scholarworks.umass.edu/pare/vol10/iss1/7>

- Parmenter, J. G., Galliher, R. V., & Maughan, D. A. (2020). LGBTQ+ emerging adults perceptions of discrimination and exclusion within the LGBTQ+ community. *Psychology & Sexuality*, 12(4), 289-304. <https://doi.org/10.1080/19419899.2020.1716056>
- Perez-Brumer, A., Nunn, A., Hsian, E., Oldenburg, C., Melverta, B., Beauchamps, L., Mena, L., & MacCarthy, S. (2018). "We don't treat your kind": Assessing HIV health needs holistically among transgender people in Jackson, Mississippi. *PLoS ONE*, 13(11), e0202389. <https://doi.org/10.1371/journal.pone.0202389>
- Poteat, T., German, D., & Kerrigan, D. (2013). Managing uncertainty: A grounded theory of stigma in transgender health care encounters. *Social Science & Medicine*, 84, 22-29. <https://doi.org/10.1016/j.socscimed.2013.02.019>
- Progovac, A. M., Cook, B. L., Mullin, B. O., McDowell, A., Sanchez R., M. J., Wang, Y., Creedon, T. B., & Schuster (2018). Identifying gender minority patients' health and health care needs in administrative claims data. *Health Affairs*, 37(3), 413-420. <https://doi.org/10.1377/hlthaff.2017.1295>
- R Core Team (2022). R: A language and environment for statistical computing. (version 4.2) [Computer software]. R Foundation for Statistical Computing. <https://www.R-project.org/>
- Reisner, S. L., & White Hughto, J. M. (2019). Comparing the health of non-binary and binary transgender adults in a statewide non-probability sample. *PLoS One*, 14(8), e0221583. <https://doi.org/10.1371/journal.pone.0221583>
- Reisner, S. L., White Hughto, J. M., Gamarel, K. E., Keuroghlian, A. S., Mizock, L., & Pachankis, J. E. (2016). Discriminatory experiences associated with posttraumatic stress

- disorder symptoms among transgender adults. *Journal of Counseling Psychology*, 63(5), 509-519. <https://doi.org/10.1037/cou0000143>
- Resiner, S. L., & Murchinson, G. R. (2016). A global research synthesis of HIV and STI biobehavioural risks in female-to-male transgender adults. *Global Public Health*, 11(7-8), 866-887. <http://dx.doi.org/10.1080/17441692.2015.1134613>
- Richman, L. S., Kohn-Wood, L. P., & Williams, D. R. (2007). The role of discrimination and racial identity for mental health service utilization. *Journal of Social and Clinical Psychology*, 26(8), 960-981. <https://doi.org/10.1521/jscp.2007.26.8.960>
- Roberts, D. (2012). *The Invention of Race. Fatal Invention: How Science, politics, and big business re-create race in the twenty-first century* (pp. 3-25). Routledge.
- Rodriguez, A., Agardh, A., & Asamoah, B. O. (2018). Self-reported discrimination in health-care settings based on recognizability as transgender: A cross-sectional study among transgender U.S. citizens. *Archives of Sexual Behavior*, 47, 973-985. <https://doi.org/10.1007/s10508-017-1028-z>
- Roe, D. J., Schaub, J., Lynn, J., & Pentaris, P. (2022). Transgender, Genderqueer, and Non-Binary Identities. In Placa, V. L., & Morgan, J. (Eds.) *Social science perspectives on global public health* (pp. 179-188). Routledge. <https://doi.org/10.4324/9781003128373>
- Romanelli, M. & Lindsey, M. A. (2020). Patterns of healthcare discrimination among transgender help-seekers. *American Journal of Preventative Medicine*, 58(4), e123-e131. <https://doi.org/10.1016/j.amepre.2019.11.002>
- Rosenstock, S., Whitman, S., West, J. F., & Balkin, M. (2014). Racial disparities in diabetes mortality in the 50 most populous US cities. *Journal of Urban Health*, 91(5), 873-885. <https://doi.org/10.1007/s11524-013-9861-4>

- Ross, K. A. E., Law, M. P., & Bell, A. (2016). Exploring healthcare experiences of transgender individuals. *Transgender Health, 1*(1), 238-249. <https://doi.org/10.1089/trgh.2016.0021>
- Roth, J., Deutsch, R., & Sherman, J. W. (2019). Automatic antecedents of discrimination. *European Psychologist, 24*(3), 219–230. <https://doi.org/10.1027/1016-9040/a000321>
- Schilt, K. & Connell, C. (2007). Do workplace gender transitions make gender trouble? *Gender Work & Organization, 14*(6), 596–618. <https://doi.org/10.1111/j.1468-0432.2007.00373.x>
- Schisterman, E. F., Cole, S. R., & Platt, R. W. (2009). Overadjustment bias and unnecessary adjustment in epidemiologic studies. *Epidemiology, 20*(4), 488-495.
<https://doi.org/10.1097/EDE.0b013e3181a819a1>
- Schreiber, J. B. (2021). Issues and recommendations for exploratory factor analysis and principal component analysis. *Research in Social and Administrative Pharmacy, 17*, 1004-1011.
<https://doi.org/10.1016/j.sapharm.2020.07.027>
- Seelman, K. L., Colón-Díaz, M. J. P., Le Croix, R. H., Xavier-Brier, M., & Kattari, L. (2017). Transgender noninclusive healthcare and delaying care because of fear: Connections to general health and mental health among transgender adults. *Transgender Health, 2*(1), 17-28. <https://doi.org/10.1089/trgh.2016.0024>
- Seelman, K. L., Vasi, A., Kattari, S. K., & Alvarez-Hernandez, L. R. (2021). Predictors of healthcare mistreatment among transgender and gender diverse individuals: Are there different patterns by patient race and ethnicity? *Social Work in Health Care, 60*(5), 411-429. <https://doi.org/10.1080/00981389.2021.1909201>
- Serano, J. (2007). *Whipping girl: A transsexual woman on sexism and the scapegoating of femininity*. Seal Press.

- Sherman, A. D. F., Balthazar, M. S., Daniel, G., Bonds Johnson, K., Klepper, M., Clark, K. D., Baguso, G. N., Cicero, E., Allure, K., Wharton, W., & Poteat, T. (2022) Barriers to accessing and engaging in healthcare as potential modifiers in the association between polyvictimization and mental health among Black transgender women. *PLoS ONE*, 17(6), e0269776. <https://doi.org/10.1371/journal.pone.0269776>
- Shpherd, J. C., Green, K. E., & Abramovitz, S. (2010). Transgender clients: Identifying and minimizing barriers to mental health treatment. *Journal of Gay & Lesbian Mental Health*, 14(2), 94-108. <https://doi-org.prox.lib.ncsu.edu/10.1080/19359701003622875>
- Shires, D. A. & Jaffee, K. (2015). Factors associated with health care discrimination experiences among a national sample of female to male transgender individuals. *Health & Social Work*, 40(2),134-141. <https://doi.org/10.1093/hsw/hlv025>
- Simons, D. J., Shoda, Y., & Lindsay, D. S. (2017). Constraints on generality (COG): A proposed addition to all empirical papers. *Perspectives on Psychological Science*, 12(6), 1123–1128. <https://doi.org/10.1177/1745691617708630>
- Singh, G. K., Williams, S. D., Siahpush, M., & Mulhollen, A. (2011). Socioeconomic, rural-urban, and racial inequalities in US cancer mortality: Part I—all cancers and lung cancer and part II—colorectal, prostate, breast, and cervical cancers. *Journal of Cancer Epidemiology*, 2011, 107497. doi:10.1155/2011/107497
- Stepanikova, I., & Oates, G. R. (2017). Perceived discrimination and privilege in health care: The role of socioeconomic status and race. *American Journal of Preventative Medicine*, 52(1S1), S86-S94. <https://doi.org/10.1016/j.amepre.2016.09.024>
- Stuart, E. A., Lee, B. K., & Leacy, F. P. (2013). Prognostic score-based balance measures can be a useful diagnostic for propensity score methods in comparative effectiveness research.

Journal of Clinical Epidemiology, 66(8 Suppl), S84-S90.e1.

<https://doi.org/10.1016/j.jclinepi.2013.01.013>

Teti, M., Kerr, S., Bauerband, L. A., Koegler, E., & Graves, R. A. (2021). A qualitative scoping review of transgender and gender non-conforming people's physical healthcare experiences and needs. *Frontiers of Public Health*, 9,598455.

<https://doi.org/10.3389/fpubh.2021.598455>

Thomas, E. L., Dovidio, J. F., & West, T. V. (2014). Lost in the categorical shuffle: Evidence for the social non-prototypicality of Black women. *Cultural Diversity & Ethnic Minority Psychology*, 20(3), 370–376. <https://doi.org/10.1037/a0035096>

Tingley, D., Yamamoto, T., Hirose, K., Keele, L., & Imai, K. (2014) mediation: R package for causal mediation analysis. *Journal of Statistical Software*, 59(5), 1-38.

<https://doi.org/10.18637/jss.v059.i05>

Tran , N. K., Baker, K. E., Lett, E., & Scheim, A. I.(2022). State-level heterogeneity in associations between structural stigma and individual healthcare access: A multilevel analysis of transgender adults in the United States. *Journal of Health Services Research & Policy*, 1-10. <https://doi.org/10.1177/13558196221123413>

Truszczynski, M., Truszczynski, N., Estevez, R. I., & Elliot, A. E. (2022). Does policy matter? The impact of state and city anti-discrimination policy on the discrimination experiences of trans and nonbinary people. *Sexuality Research and Social Policy*. Advance online publication. <https://doi.org/10.1007/s13178-022-00762-3>

Turban, J. L., King, D., Carswell, J. M., & Keuroghlian, A. S. (2020). Pubertal suppression for transgender youth and risk of suicidal ideation. *Pediatrics*, 145(2), e20191725.

<https://doi.org/10.1542/peds.2019-1725>

- Turban, J. L., Loo, S. S., Almazan, A. N., & Keuroghlian, A. S. (2021). Factors leading to “detransition” among transgender and gender diverse people in the United States: A mixed-methods analysis. *LGBT Health*, 8(4), 273-280.
<https://doi.org/10.1089/lgbt.2020.0437>
- United States Census Bureau. (2016). *2015: ACS 1-Year estimates selected population profiles* [Data set]. United States Census Bureau. <https://data.census.gov/table?t=-00&d=ACS+1-Year+Estimates+Selected+Population+Profiles&tid=ACSSPP1Y2015.S0201>
- United States Census Bureau. (2022a). Questionnaires. United States Census Bureau. <https://www.census.gov/programs-surveys/cps/technical-documentation/questionnaires.html>
- United States Census Bureau. (2022b). Sample ACS & PRCS Forms and Instructions. United States Census Bureau. <https://www.census.gov/programs-surveys/acs/about/forms-and-instructions.2014.html#list-tab-LA3DJX665N7IWHQ6WE>
- Volpe, V. V., Dawson, D. N., Rahal, D., & Wiley, K. C. (2019). Bringing psychological science to bear on racial health disparities: The promise of centering Black health through a critical race framework. *Translational Issues in Psychological Science*, 5(4), 302-314.
<http://dx.doi.org/10.1037/tps0000205>
- Volpe, V. V., Schorpp, K. M., Cacace, S. C., & Benson, G. P. (2021). State- and provider-level racism and health care in the U.S. *American Journal of Preventative Medicine*, 61(3), 338-347. <https://doi.org/10.1016/j.amepre.2021.03.008>
- Wesp, L. M., Malcoe, L. H., Elliott, A., & Poteat, T. (2019). Intersectionality research for transgender health justice: A theory-driven conceptual framework for structural analysis

- of transgender health inequities. *Transgender Health*, 4(1), 287-296.
<https://doi.org/10.1089/trgh.2019.0039>
- Westbrook, L. & Schilt, K. (2014). Doing gender, determining Gender: Transgender people, gender panics, and the maintenance of the sex/gender/sexuality system. *Gender and Society*, 28(1), 32-57. <https://www.jstor.org/stable/43669855>
- White Hughto, J. M., Murchison, G. R., Clark, K., Pachankis, J. E., & Reisner, S. L. (2016). Geographic and individual differences in healthcare access for U.S. transgender adults: A multilevel analysis. *LGBT Health*, 3(6), 424-433. <https://doi.org/10.1089/lgbt.2016.0044>
- White Hughto, J. M., Reisner, S. L., & Pachankis, J. E. (2015). Transgender stigma and health: A critical review of stigma determinants, mechanisms, and interventions. *Social Science & Medicine*, 147, 222-231. <http://dx.doi.org/10.1016/j.socscimed.2015.11.010>
- Whitehead, J., Shaver, J., & Stephenson, R. (2016). Outness, stigma, and primary health care utilization among rural LGBT populations. *PLoS One*, 11(1), e0146139.
<https://doi.org/10.1371/journal.pone.0146139>
- Willging, C., Gunderson, L., Shattuck, D., Sturm, R., Lawyer, A., & Crandall, C. (2019). Structural competency in emergency medicine services for transgender and gender non-conforming patients. *Social Science & Medicine*, 222,67-75.
<https://doi.org/10.1016/j.socscimed.2018.12.031>
- Wong, Y. J., Horn, A. J., & Chen, S. (2013). Perceived masculinity: The potential influence of race, racial essentialist beliefs, and stereotypes. *Psychology of Men & Masculinity*, 14(4), 452-464. <https://doi.org/10.1037/a0030100>

- Yavorsky, J. E., Cohen, P. N., & Qian, Y. (2016). Man up, man down: Race-ethnicity and the hierarchy of men in female-dominated work. *The Sociological Quarterly*, 57(4), 733-758. <https://doi.org/10.1111/tsq.12152>
- Zarwell, M., Bowling, J., Gunn, L. H., Kissler, N., McComas, M., Patton, A., Ragnathan, R., & Brown, R. (2022). Collectives for care: Perspectives of providers and community members in transgender health care in a Southern U.S. city. *Journal of Homosexuality*. Advance online publication. <https://doi.org/10.1080/00918369.2022.2105674>
- Zhang, Z. (2016). Residuals and regression diagnostics: focusing on logistic regression. *Annals of Translational Medicine*, 4(10),195. <https://doi.org/10.21037/atm.2016.03.36>

APPENDICES

Appendix A

Select Unweighted Bivariate Associations

Table 15

Unweighted Bivariate Associations of Study Predictors, Covariates, and Outcomes with Intersectional Positions

Variable	Value
Age	.43*
Census Region	.05*
Insurance Status	.06*
Visual Conformity	.19*
Trans-specific Health Care Discrimination	.16*
Doctor's Visit	.09*
Primary Care Provider	.06*
Care Avoidance	.13*

Note. Bivariate association values for age and visual conformity are r values derived from adjusted R^2 values from linear regressions. For the remaining variables, these association values are Cramer's V . * $p < .001$. Significance indicated by chi-square tests or omnibus F tests from linear regressions.

Appendix B

USTS Survey Questions

Census Region

What U.S. state or territory do you currently live in?

- I do not live in a U.S. state or territory.

[Insert drop down of all U.S. states and territories for other response choices]

Sex Assigned at Birth

What sex were you assigned at birth, on your original birth certificate?

- Female
- Male

Gender Identity

If you had to choose only one of the following terms, which best describes your current gender identity? **(Please choose only one answer.)**

- Cross-dresser
- Woman
- Man
- Trans woman (MTF)
- Trans man (FTM)
- Non-binary/Genderqueer

Visual Conformity

People can tell I am trans even if I don't tell them.

- Always
- Most of the time
- Sometimes
- Rarely
- Never

Racial/Ethnic Identity

Although the choices listed below may not represent your full identity or use the language you prefer, for this survey please select the choice that most accurately describes your racial/ethnic identity. **(Please choose only one answer.)**

- Alaska Native
 - [Drop down if selected] Enter your enrolled or principal corporation: ____
- American Indian
 - [Drop down if selected] Enter your enrolled or principal tribe: _____

- Asian/Asian American
- Biracial/Multiracial
- Black/African American
- Latino/a/Hispanic
- Middle Eastern/North African
- Native Hawaiian/Pacific Islander
- White/European American
- A racial/ethnic identity not listed above (please specify) _____

Age

What is your current age?

[Drop down list of all ages: “18” through “99” and then “100 and above” as final response]

Educational Attainment

What is the highest level of school or degree you have completed?

- Less than 8th grade
- 8th grade
- Some high school, no diploma or GED
- GED
- High school graduate
- Some college, no degree (including currently in college)
- Associate degree in college – Occupational/vocational program
- Associate degree in college - Academic program
- Bachelor’s degree
- Some graduate work, no graduate degree
- Master’s degree (M.A, M.S., MBA)
- Doctoral degree (e.g., Ph.D., Ed.D.)
- Professional degree (e.g., MD, JD)

Employment Status

What is your current employment status? (**Mark all that apply**).

- Work for pay from sex work, selling drugs, or other work that is currently considered illegal
 - [Drop down if selected] Are you actively looking for legal work outside sexwork, selling drugs, or other work that is currently considered illegal
 - No
 - Yes
- Work full-time for an employer
 - [Drop down if selected] Do you have more than one full-time job?
 - No
 - Yes
- Work part-time for an employer

- **[Drop down if selected]** Do you have more than one part-time job?
 - No
 - Yes
- Self-employed in your own business, profession or trade, or operate a farm (not including sex work, selling drugs, or other work that is currently considered illegal)
- Unemployed but looking for work
- Unemployed and have stopped looking for work
- Not employed due to disability
- Student
- Retired
- Homemaker or full-time parent
- Not listed above (please specify) _____

Household Income

How many adults (age 18 or older) live in your **household***, including yourself? (Do not include neighbors or others who do not live with you in your house, apartment, or single housing unit.)

For more information, click on **household** above.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9 or more

****Hyperlinked text for “household”**: A household Includes all the adults who live with you in the same house, apartment, group of rooms, or room that is used as one home. If you live in group housing, such as a dormitory, only include yourself and your adult family members who live with you.*

How are the other adults (age 18 or older) who live in your household related to you? (**Mark all that apply**).

- Spouse (legally married)
- Partner (not legally married)
- Child or children
- Grandchild or grandchildren
- Parent(s) (Mother/Father/Step-Parent(s))
- Brother(s)/Sister(s)/Step-Brother(s)/Step-Sister(s)
- Other relative(s) (Aunt, Cousin, Nephew, Mother-in-law, etc.)
- Foster child or foster children
- Housemate(s)/Roommate(s)
- Roomer(s)/Boarder(s)

- Other non-relative(s)
- Not listed above (please specify) _____

How many adults in your household are **related to you*** by birth (blood relatives), adoption, or legal marriage? Don't include partners who aren't legally married to you or adults who aren't related to you. We will ask about them later.

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9 or more

**Hyperlinked text for “related to you”:* Include only adults you're related to by blood, legal adoption, or legal marriage that is recognized by the U.S. government. Do not include your unmarried partner or unrelated adults. Later we will ask about the people not included here.

What was your total combined **Individual Income*** (before taxes) **in 2014**? This includes all income sources **except** food stamps (SNAP) or WIC.

- No income
- \$1 to \$5,000
- 5,000 to 7,499
- 7,500 to 9,999
- 10,000 to 12,499
- 12,500 to 14,999
- 15,000 to 17,499
- 17,500 to 19,999
- 20,000 to 24,999
- 25,000 to 29,999
- 30,000 to 34,999
- 35,000 to 39,999
- 40,000 to 49,999
- 50,000 to 59,999
- 60,000 to 74,999
- 75,000 to 99,999
- 100,000 to 149,999
- 150,000 or more

**Hyperlinked text for “Individual Income”:* “Individual income” includes money from jobs, employment, net income from business, income from farms or rentals, income from self employment, pensions, dividends, interest, social security payments, and other money income

that you personally received in 2014. Do not include assistance from food stamps (SNAP) or WIC as income.

[This question is only for those who have related adults AND/OR have related children.]

What was your total combined **Family Income*** (before taxes) **in 2014**? This includes all income from all family members who are related to you by legal marriage, birth, or adoption and who have lived with you during the last 12 months. **Don't include** food stamps (SNAP) or WIC.

- No income
- \$1 to \$5,000
- 5,000 to 7,499
- 7,500 to 9,999
- 10,000 to 12,499
- 12,500 to 14,999
- 15,000 to 17,499
- 17,500 to 19,999
- 20,000 to 24,999
- 25,000 to 29,999
- 30,000 to 34,999
- 35,000 to 39,999
- 40,000 to 49,999
- 50,000 to 59,999
- 60,000 to 74,999
- 75,000 to 99,999
- 100,000 to 149,999
- 150,000 or more

** **Hyperlinked text for “Family Income”**: “Family income” includes you and members of your family related by legally-recognized marriage, by birth, or by adoption who have lived with you during the last 12 months and includes money from jobs, employment, net income from business, income from farms or rentals, income from self-employment, pensions, dividends, interest, social security payments, and any other money income received by you and family members in your household who are 15 years of age or older in 2014. Do not include assistance from food stamps (SNAP) or WIC as income.*

[This question is only for those with non-related adults and/or non-related children in the household (either alone or in combination with married/related adults or children) will get this question.]

How much was your total combined **HOUSEHOLD INCOME*** (before taxes) **in 2014**? This includes income from all members of your household from all sources **except** food stamps (SNAP) or WIC.

- No income
- \$1 to \$5,000

- 5,000 to 7,499
- 7,500 to 9,999
- 10,000 to 12,499
- 12,500 to 14,999
- 15,000 to 17,499
- 17,500 to 19,999
- 20,000 to 24,999
- 25,000 to 29,999
- 30,000 to 34,999
- 35,000 to 39,999
- 40,000 to 49,999
- 50,000 to 59,999
- 60,000 to 74,999
- 75,000 to 99,999
- 100,000 to 149,999
- 150,000 or more

**Hyperlinked text for “HOUSEHOLD INCOME”: “Household income” includes you and all members of your household who have lived with you during the past 12 months and includes money from jobs, employment, net income from business, income from farms or rentals, income from self-employment, pensions, dividends, interest, social security payments, and any other money income received by you and members of your household who are 15 years of age or older in 2014. Do not include assistance from food stamps (SNAP) or WIC as income.*

Health Insurance Status

Are you currently covered by any health insurance or health coverage plan?

- No
- Yes

Having a Primary Care Provider

Thinking about the doctor or provider you go to for your **trans-related** health care (such as hormone treatment), how much do they know about providing health care for trans people?

- I don’t have a trans-related doctor or health care provider right now
- They know almost everything about trans healthcare
- They know most things about trans healthcare
- They know some things about trans healthcare
- They know almost nothing about trans healthcare
- I am not sure

Do you also go to your **trans-related** health care provider for your routine health care, like physicals, flu, diabetes, etc.?

- Yes, I see my trans health care provider for my routine health care
- No, I see a different doctor or health care provider for my routine healthcare

- No, I do not get any routine health care

How much does your *routine health care* provider (who you see for physicals, flu, diabetes, etc.) know about health care for trans people?

- I don't have a routine health care provider
- They know almost everything about trans health care
- They know most things
- They know some things
- They know almost nothing
- I am not sure

Care Avoidance due to Fear of Trans-specific Health Care Discrimination

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 person?

- No
- Yes

Having a Visit in the Past Year

In the past year, have you seen a doctor or health care provider?

- No
- Yes

Trans-specific Health Care Discrimination

In the past year, did you have any of these things happen to you, as a trans person, when you went to see a doctor or health care provider? (**Please provide an answer in each row.**)

In the past year...	No	Yes
My doctor knew I was trans and treated me with respect.	<input type="radio"/>	<input type="radio"/>
I had to teach my doctor or other health care provider about trans people so that I could get appropriate care.	<input type="radio"/>	<input type="radio"/>
A doctor or other health care provider refused to give me trans-related care.	<input type="radio"/>	<input type="radio"/>
A doctor or other health care provider refused to give me other health care (such as for like physicals, flu, diabetes).	<input type="radio"/>	<input type="radio"/>
My doctor asked me unnecessary/invasive questions about my trans status that were not related to the reason for my visit.	<input type="radio"/>	<input type="radio"/>
A doctor or other health care provider used harsh or abusive language when treating me.	<input type="radio"/>	<input type="radio"/>
A doctor or other health care provider was physically rough or abusive when treating me.	<input type="radio"/>	<input type="radio"/>
I was verbally harassed in a health care setting (such as a hospital, office, clinic).	<input type="radio"/>	<input type="radio"/>
I was physically attacked by someone during my visit in a health care setting (such as a hospital, office, clinic).	<input type="radio"/>	<input type="radio"/>
I experienced unwanted sexual contact (such as fondling, sexual assault, or rape) in a health care setting (such as a hospital, office, clinic).	<input type="radio"/>	<input type="radio"/>

Appendix C

Factor Analysis of Trans-specific Health Care Discrimination

Before factor analyses were conducted for trans-specific health care discrimination five items, from the original list of ten experiences, (see Appendix A, Trans-specific Health Care Discrimination, Items 1, 4, 7, 9, 10) were removed from consideration. The first item (i.e., being respected by one's provider) was removed because although experiences of disrespect can be discriminatory, "No" responses to this item do not necessarily mean that a participant was disrespected by their provider. Another item (i.e., other treatment refusal) was removed because Black gender nonconforming participants' responses to this item were negatively correlated with all other items. Three more items (i.e., physical abuse from their provider, physically attacked in the health care setting, unwanted sexual contact in the health care setting) were removed because they described violent experiences within health care settings, rather than more common and less severe discriminatory experiences that are the focus of the current study (King et al., 2020). All analyses were conducted in R 4.2 (R Core Team, 2022).

A parallel analysis was first conducted to determine the number of factors to test in exploratory factor analyses (O'Connor, 2000). Exploratory factor analyses (EFA) were conducted using the weighted least squares method and tetrachoric correlations due to the binary response data (Schreiber, 2021). Oblimin rotation was utilized because I expected that discrimination experiences would be associated with each other based on past research (e.g., Romanelli & Lindsey, 2020). Competing factor structures were compared via factor loadings ($>.50$) and cross-loadings ($<.20$; Osborn & Costello, 2009). A confirmatory factor analysis (CFA) was conducted using the weighted least squares method with means and variance adjusted (Hirschfield & von Brachel, 2014). Fit indices included the comparative fit index (CFI; $>.90$),

standardized root-mean-square residual (SRMR; close to $< .08$), and the root mean square error of approximation (RMSEA; close to $< .08$; Fabrigar et al., 1999).

The scree plot from the parallel analysis displayed a cross-over of eigenvalues between observed and simulated data at two factors, although observed eigenvalues (3.06) were greater than simulated eigenvalues only for the first factor (0.41). Thus, EFAs with two-factor and one-factor solutions were conducted and compared. The two-factor structure evidenced a poor fit for the data because one item's primary loading was .44, with a cross loading of .34, and another item had a cross loading of .38. A one-factor solution evidenced adequate fit for the data as all items loaded onto the factor above .69 (see Table 15). This factor explained 61% of the variance in the discrimination responses. A CFA of the one-factor model demonstrated an adequate fit for the data due to all items significantly loading onto the single factor ($p < .001$) and fit indices' values (CFI = .95; RMSEA = .06; SRMR = .08). Cronbach α reliabilities were sufficient for the overall sample (.88), and for each intersectional position (Black transfeminine = .91; Black transmasculine = .85; Black gender nonconforming = .79; White transfeminine = .88; White transmasculine = .87; White gender nonconforming = .89).

Table 16*Final EFA Results of Trans-specific Health Care Discrimination*

Item	Factor Loadings	h^2
I had to teach my doctor or other health care provider about trans people so that I could get appropriate care.	.69	.48
A doctor or other health care provider refused to give me other health care (such as for like physicals, flu, diabetes).	.71	.50
My doctor asked me unnecessary/invasive questions about my trans status that were not related to the reason for my visit.	.82	.33
A doctor or other health care provider used harsh or abusive language when treating me.	.86	.026
I was verbally harassed in a health care setting (such as a hospital, office, clinic).	.81	.33

Appendix D

Weighted Distribution of Visual Conformity

Table 17

Weighted Distribution of Visual Conformity by Intersectional Position

Level	BTF (9%)	BTM (5%)	BGNC (3%)	WTF (49%)	WTM (17%)	WGNC (17%)	Total (<i>n</i> = 22,719)
Low <i>(Always, Most of the time)</i>	8	4	10	18	10	9	13
Medium <i>(Sometimes)</i>	44	24	20	39	27	35	35
High <i>(Rarely, Never)</i>	48	72	70	43	63	56	51

Note. To assess visual conformity, participants were prompted with the statement “People can tell I am trans even if I don’t tell them.”

Responses were made on a 5-point scale (*Always, Most of the time, Sometimes, Rarely, Never*). Percentages may not add up to 100 due to rounding.

Appendix E

Dissertation Proposal

CHAPTER 1) INTRODUCTION

Transgender and gender nonconforming (TGNC) individuals are those with gender identities that are incongruous with the sex they were assigned at birth (Flores et al., 2016). This population is harmed by cissexism, which is a system of marginalization that benefits those who are cisgender or those with gender identities that align with their sex assigned at birth (Hughes et al., 2022; King et al., 2020). This marginalization creates structural inequities for TGNC individuals, such as high rates of unemployment, housing instability, and poverty, that create unjust differences in health (i.e., health inequities; Braveman, 2019; King et al., 2022; Institute of Medicine, 2011; Zarwell et al., 2022). Indeed, TGNC individuals report more chronic conditions, more disabilities, and worse overall mental and physical health than cisgender individuals (Baker, 2018; Downing & Przedworksi, 2018; Fredriksen Goldsen et al., 2022). Additionally, people racialized as Black experience anti-Black racism, a system of marginalization that benefits those racialized as White and harms those racialized as Black (Bonilla-Silva, 1997). Thus, Black individuals experience health inequities, such as higher disease (e.g., cancer, coronary heart disease, diabetes; Chu et al., 2007; Kulshreshtha et al., 2014; Rosenstock et al., 2014; Singh et al., 2011) mortality rates and worse cardiovascular health when compared to White individuals (Lukachko et al., 2014). Although the primary focus of research into Black TGNC health inequities is sexual and mental health (Blondeel et al., 2016; Cahill & Makadon, 2014; Institute of Medicine, 2011) there is some initial evidence that Black TGNC individuals are particularly vulnerable to negative outcomes across other dimensions of health (Brown & Jones, 2014; Hughes et al., 2022; Lett et al., 2020). Previous literature suggests that these

inequities are linked to marginalization at the intersections of racism and cissexism (e.g., lack of culturally-specific TGNC knowledge included in medical education; negative stereotypes about Black TGNC individuals' sexual behavior; Poteat et al., 2013) that Black TGNC individuals uniquely face. This marginalization often manifests in negative healthcare experiences (e.g., discriminatory treatment; Poteat et al., 2013) that reduce access to and utilization of healthcare (Gonzales & Henning-Smith, 2017; James et al., 2017b; White Hughto et al., 2016). In order to alleviate health inequities for Black TGNC individuals, we need more knowledge about intervenable determinants of health outcomes, such as health care access and utilization (Arthur et al., 2021; Bauer, 2014; Kattari et al., 2020; Perez-Brumer et al., 2018). Guided by the theoretical frameworks of the Health Equity Promotion Model (Fredriksen Goldsen et al., 2014) and quantitative analytic intersectionality (Bauer & Scheim, 2019; Evans et al., 2019; McCall, 2005), the current dissertation seeks to examine inequities in health care access and utilization among Black and White TGNC individuals and to examine if the associations between health care discrimination and health care outcomes differ by the intersections of race and gender identity.

Terminology

It is important to ground my work in established definitions of the constructs of race and gender identity. Race is a sociopolitical system of classifying individuals into categories based on various characteristics (e.g., skin color, eye color, eye shape) that are incorrectly thought to be biologically distinct between racial groups (Krieger, 2020; Lett et al., 2022; Roberts, 2012). The boundaries of racial categories are contextually informed in that they can change over time, space, and sociopolitical contexts. For instance, individuals who are racialized as Black within the United States may not be considered Black in different parts of Latin America dependent

upon whether and how many features they have that are typically associated with Blackness (e.g., darker skin, curlier hair; Clealand, 2022). In this dissertation, I refer to people as Black or White based on self-report and the understanding of these constructs within the United States. Blackness generally refers to individuals of African descent (Volpe et al., 2019) and Whiteness typically refers to individuals of European descent, and may include those who are from the Middle East or North Africa (Awad et al., 2021). Although there are several other racial categories, I am specifically interested in how anti-Black racism, and its intersections with cissexism, affects Black TGNC individuals and thus, focus this dissertation on Black and White TGNC individuals. By using race as a proxy for exposure to racism and comparing outcomes in those who are Black and White, I am comparing outcomes based on whether one is exposed (i.e., Black) or not exposed (i.e., White) to racism (Lett et al., 2022).

Gender identity is the internal sense of being a gender (e.g., man, woman; APA, 2015). There are several gender identities that fall within the TGNC population. In research, they are typically grouped into three categories: transfeminine, transmasculine, and gender nonconforming (Lett et al., 2020; Reisner & Murchinson, 2016). Transfeminine individuals include those who are assigned male at birth and identify as a woman or are otherwise not cisgender and identify as feminine. Transmasculine individuals include those who are assigned female at birth and identify as a man or are otherwise not cisgender and identify as masculine. Gender nonconforming individuals includes those who are not cisgender and do not exclusively identify as a man/masculine or a woman/feminine. Gender nonconforming individuals may not always identify themselves as transgender, but they have a gender identity that differs from their sex assigned at birth (e.g., nonbinary, agender, genderqueer). These gender identity categories are often treated as distinct in research, but a person can have multiple gender identities (Kuper

et al., 2011), such as being nonbinary and a trans woman. Being TGNC is usually associated with medically transitioning, or undergoing gender affirmation treatments (e.g., hormone replacement; facial feminization surgery), but an individual can be TGNC without medically transitioning (Roe et al., 2022). In recognition of the diversity of this population and the shared experience of cissexism, I use the umbrella term transgender and gender nonconforming to refer to those with a gender identity that is not cisgender. In using gender identity as a social position of interest within this dissertation, I recognize that while TGNC individuals have a shared experience of cissexism, there are differences in this experience by gender identity (e.g., differing HIV prevalence rates; Cicero et al., 2020; Grant et al., 2011; Hughes et al., 2022).

Theoretical Frameworks

The theoretical frameworks of the Health Equity Promotion model (Fredriksen Goldsen et al., 2014) and quantitative analytic intersectionality (Bauer & Scheim, 2019; Evans, 2019) guide the current dissertation's examination of health care access and utilization among Black and White TGNC individuals. The Health Equity Promotion model (Fredriksen Goldsen et al., 2014), which focuses on lesbian, gay, bisexual, and transgender (LGBT) health across the course of one's life, suggests that marginalized social identity positions (e.g., race) intersect with gender identity, and their related forms of marginalization. These intersectional forms of marginalization then create unique experiences that disproportionately affect the health of LGBT individuals who experience multiple forms of marginalization, such as Black TGNC individuals (who are harmed by racism, cissexism, and their intersections). Additionally, this model suggests that factors on multiple levels (e.g., health care discrimination on the interpersonal level) can create health promoting or health adverse pathways that impact LGBT individuals regarding their health outcomes and behaviors (e.g., reducing health care utilization). In the current dissertation, I use

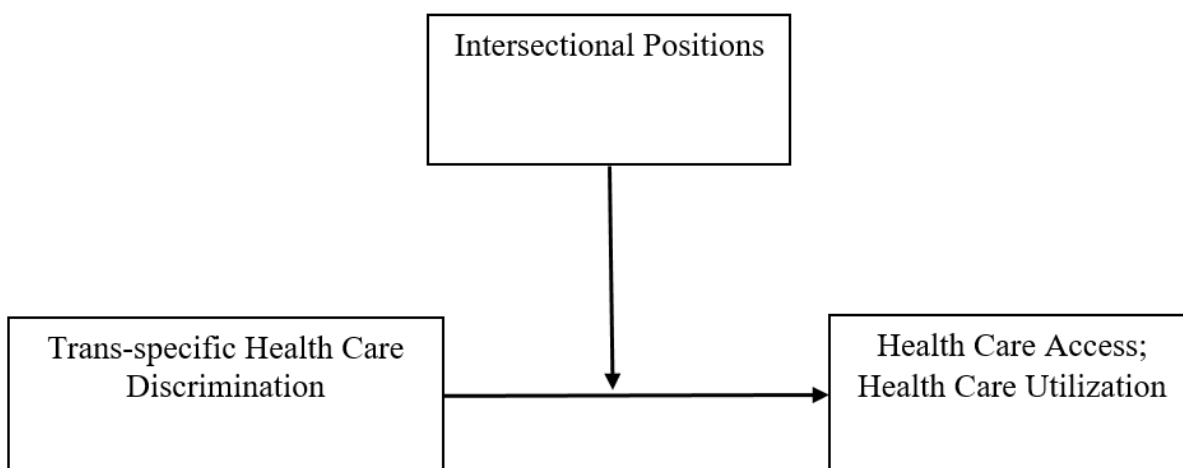
this theoretical framework to examine if the way in which trans-specific health care discrimination is related to health care access and utilization differs by intersectional position (e.g., Black transfeminine individual vs. White transfeminine individual; see Figure 2).

Quantitative analytic intersectionality is the application of intersectionality theory to quantitative analytic methods (Bauer & Scheim, 2019; Evans, 2019). Born of Black feminist thought (Crenshaw, 1989), intersectionality theory tells us that our experiences are uniquely informed by the intersections of social positions and the power or lack of power associated with these intersections. As such, focusing on just one form of marginalization (e.g., racism) when examining the experiences of those who are marginalized in multiple social positions (e.g., Black TGNC individuals) is insufficient. There are two different types of studies that can be used within this quantitative approach to intersectionality: intercategory, which examines experiences within a general population with considerations for multiple intersections of social positions and intracategory, which examines experiences at the intersections of social positions within a social group (McCall, 2005). Studies that utilize this analytic approach are guided to incorporate some or all of the following four characteristics: structure intersections in a way that reflects differences in power, describe inequities at the intersections of interest, incorporate theory that explains how inequities occur, and examine drivers of inequities. This theoretical framework guides me to propose my dissertation as an intracategory intersectional study that first examines Black and White TGNC differences in health care outcomes by intersectional position (i.e., race and gender identity combination) and then uses the Health Equity Promotion model (Fredriksen Goldsen et al., 2014) to examine how associations between health care discrimination and health care outcomes differ by intersectional positions. The use of these theoretical frameworks to guide my dissertation study will allow for the identification of possible

health care inequities at the intersections of race and gender identity among Black and White TGNC individuals and may indicate the need to incorporate intersectional considerations into interventions that reduce health care discrimination.

Figure 2

Proposed Moderation Model of Health Care Outcomes



Black TGNC Health Inequities

Health inequities are particularly pronounced for Black TGNC individuals (Lett et al., 2020). Black TGNC individuals are more likely to report having cardiovascular disease and worse general health when compared to both White TGNC and Black cisgender individuals. Compared to only White TGNC individuals, Black TGNC individuals are more likely to have diabetes, and compared to only Black cisgender individuals, they report more activity-limited and mentally unwell days. Additionally, similar inequities have been found among Black and White TGNC veterans (Brown & Jones, 2014). There is a greater prevalence of severe mental illness and medical conditions (e.g., congestive heart failure, kidney disease) in Black TGNC veterans when compared to their White counterparts. These are notable findings given that the

veteran population is one that should have shared access to health care resources. The uniqueness of these inequities for Black TGNC individuals suggests that studying inequities in TGNC and Black populations alone, without regard for the intersections of multiple forms of marginalization, is insufficient for addressing inequities for Black TGNC individuals.

Research shows that examining inequities at the intersections of race and gender identity is warranted. Gender identity differences in mortality risk have been found amongst Black and White individuals (Hughes et al., 2022). Black transfeminine and gender nonconforming individuals assigned male at birth have the greatest mortality risk when compared to Black individuals with other TGNC and cisgender identities and White TGNC and cisgender individuals. Among White TGNC and cisgender individuals, White transfeminine and gender nonconforming individuals assigned male at birth have a greater mortality risk. It has been posited that these differences in mortality risk are a function of transmisogyny (i.e., systemic marginalization that harms transfeminine individuals) and transmisogynoir (i.e., marginalization that harms Black transfeminine individuals; Krell, 2017), in that the experiences of frequent and chronic stressors (e.g., violence, discrimination) associated with being transfeminine or transfeminine and Black are likely responsible for their increased mortality risk. However, it should be noted that this study grouped TGNC individuals by sex. While this may be practically useful when examining sex-related phenomena (e.g., ovarian cancer; Miyagi et al., 2022), this type of grouping can make it difficult to tease apart and understand shared gender identity experiences.

More broadly, differences in health outcomes by gender identity have been found for TGNC individuals, although the findings are mixed. Findings from one study suggest that transmasculine and gender nonconforming individuals separately report higher odds of poor/fair

health when compared to transfeminine individuals and that transmasculine individuals report more mentally unhealthy days when compared to transfeminine and gender nonconforming individuals separately (Cicero et al., 2020; Kinney & Cosgrove et al., 2022). However, another study did not find any significant differences in general, mental, and physical health outcomes by gender identity among TGNC individuals (Fredriksen Goldsen et al., 2022). Although there is not a clear pattern in these findings, there may be important differences in the experiences of TGNC individuals by gender identity that influence their health outcomes in different ways, which would require tailoring of public health promotion strategies for this population. This highlights a need for TGNC health research that disaggregates findings by gender identity (Cicero et al., 2020; DuBois & Juster, 2022; Kinney & Cosgrove et al., 2022).

Black TGNC Health Care Inequities

For individuals who have a higher likelihood of poor health due to marginalization, healthcare access (e.g., having a primary care provider) and utilization (e.g., routine health care visits) are important leverage points for intervention efforts as they are vehicles through which individuals can properly manage their health (Almazan et al., 2022; Downing & Przedworksi, 2018; Gonzales & Henning-Smith, 2017). Indeed, diminished access to and utilization of health care is associated with worsening health conditions, worse general health, and the overutilization of emergency services in both TGNC and Black individuals (Chen et al., 2016; Progovac et al., 2018; Seelman et al., 2017; Teti et al., 2021; Whitehead et al., 2016; Willging et al., 2019).

While there is minimal research on how health care access and utilization impact the health of Black TGNC individuals, we do know that they experience diminished access to and utilization of healthcare. Compared to both White TGNC and Black cisgender individuals, Black TGNC individuals are more likely to be uninsured and are less likely to have a primary care provider

(James et al., 2017b; Lett et al., 2020). Additionally, Black TGNC individuals report higher rates (40%) of delaying care due to costs compared to all TGNC individuals (33%; James et al., 2017b). These findings indicate the need for research further examining health care access and utilization for Black TGNC individuals.

There is a gap in knowledge concerning gender identity differences in health care access and utilization amongst Black TGNC individuals, which makes it difficult to identify subgroups that are in need of more or tailored attention in research and public health. Overall we know that transmasculine, transfeminine, and gender nonconforming individuals all have higher odds of delaying care due to cost when compared to cisgender men (Downing & Przedworski, 2018). However, transfeminine individuals are more likely to have had a primary care visit and a primary care provider, when compared to cisgender men (Fredriksen Goldsen et al., 2022), but they are less likely to have a primary care provider when compared to cisgender women (Downing & Przedworski, 2018). Additionally, compared to transmasculine and transfeminine individuals, gender nonconforming individuals report lower rates of health care utilization (Almazan et al., 2022; Kinney & Cosgrove et al., 2022; Reisner & Hughto, 2019). There is also research that has found no significant differences in access and utilization of health care amongst TGNC individuals of different gender identities (Fredriksen Goldsen et al., 2022). Given that there are demonstrated differences in health care outcomes by both race and gender identity among TGNC individuals, research that examines how these outcomes differ at the intersections of these marginalized positions is needed.

Trans-specific Health Care Discrimination

In addition to the further specification of health care access and utilization inequities, the field of public health would benefit from increased knowledge of how the impact of trans-

specific health care discrimination on access to and utilization of healthcare may differ among Black and White TGNC individuals. Present differences in these associations would indicate the need to further examine how these experiences of trans-specific health care discrimination differ among those with different intersectional positions. Trans-specific health care discrimination is commonplace for TGNC individuals and it is an important contributing factor to health care access and utilization, and subsequently, inequitable health outcomes (James et al., 2017b; Poteat et al., 2013; Gonzales & Henning-Smith, 2017; White Hughto et al., 2016). These experiences can include health care professionals using the wrong pronouns or name for a patient, showing their discomfort treating a patient because of their gender identity, lacking the knowledge necessary to provide appropriate care, providing inadequate care, and refusing to provide care (Calleros et al., 2022; Kattari et al., 2015; Kosenko et al., 2013; Seelman et al., 2021). TGNC individuals have also reported experiencing verbal, sexual, and physical harassment from health care professionals (Cicero & Black, 2016; Seelman et al., 2021). These experiences of trans-specific health care discrimination have been shown to impact TGNC individuals' mental and physical health (Cicero et al., 2019; Garcia & Lopez, 2022; Seelman et al., 2021), which highlights the importance of further understanding these experiences and their impacts on Black and White TGNC individuals.

One of the ways through which health care discrimination can impact health is by reducing access to care or utilization of care when needed. Indeed, research has found that TGNC individuals' fear of health care discrimination leads to avoidance and delay of needed healthcare (James et al., 2017b; Poteat et al., 2013; White Hughto et al., 2016). Additionally, provider-perpetrated treatment refusal is associated with diminished utilization of care in TGNC individuals (White Hughto et al., 2016). Similar associations between racial health care

discrimination and diminished health care outcomes have been found for Black individuals (Gonzalez et al., 2021; Stepanikova & Oates, 2017). Thus far, we know that Black TGNC individuals report experiencing health care discrimination more often than all TGNC individuals (James et al., 2017b). In qualitative research that has examined health care experiences, Black TGNC individuals have noted that their experiences of discrimination within healthcare are unique to their position as both Black and TGNC (Jefferson et al., 2013; Perez-Brumer et al., 2018; Sherman et al., 2022). There is also evidence to suggest that reports of health care discrimination differ among TGNC individuals of different gender identities. One study has found that transmasculine individuals are more likely to report experiencing health care discrimination than both transfeminine and gender nonconforming individuals (Seelman et al., 2021). However, another study has found that gender nonconforming individuals are refused care less often than other TGNC individuals, but they report avoiding care due to fear of discrimination more often (Kinney & Cosgrove, 2022). Qualitative research suggests that experiences of trans-specific health care discrimination are unique, and potentially more harmful, for gender nonconforming individuals because of gender binarism (i.e., the prioritization of those with binary gender identities, or men and women; Frohard-Dourlent et al., 2017). This is shown in the experiences of gender nonconforming individuals who note that they encounter providers who lack an understanding of their gender identity as TGNC or with clinic policies that do not account for those who are neither men nor women (Kinney & Cosgrove, 2022). Taken together these findings suggest that both race and gender identity are important to consider when examining the associations between trans-specific health care discrimination and health care outcomes, as they are likely influenced by the unique experiences of systemic marginalization at

the intersections of racism and cissexism (e.g., transmisogynoir, gender binarism; Frohard-Dourlent et al., 2017; Krell, 2017).

Current Study

In order to create targeted efforts that reduce health inequities for Black TGNC individuals, a deeper understanding of Black TGNC health care inequities is needed. Examining health care inequities at the intersections of race and gender identity aligns with an intersectional praxis in research (Bauer, 2014; Bauer & Scheim, 2019; McCall, 2005; Wesp et al., 2019). This praxis calls us to acknowledge that systems of marginalization (e.g., racism, cissexism) intersect to create unique experiences for multiply marginalized individuals that cannot be examined or addressed through efforts that focus on differences within only one social category. At this time, there is paucity of research examining differences in healthcare access and utilization among Black and White TGNC individuals at the intersections of both race and gender identity. Examining these differences may indicate intersectional positions that are in need of tailored attention in research and health promotion efforts. Additionally, there is a paucity of research examining how the associations between health care discrimination and health care access and utilization differ amongst Black and White TGNC individuals. Differences at the intersections of race and gender identity in these associations would suggest the need for further investigation into the nature of health care experiences and how they may be differentially informed by intersectional forms of marginalization. Indeed, it may be the case that experiences of health care discrimination for Black TGNC individuals include elements of racism or are exacerbated due to Black TGNC individuals also experiencing systemic racism. In line with the Health Equity Promotion model (Fredriksen Goldsen et al., 2014) and quantitative analytic intersectionality

(McCall, 2005; Bauer & Scheim, 2019; Evans, 2019), I propose an intracategorical intersectional dissertation study examining the following research questions:

RQ 1) Are the differences in health care access & health care utilization by intersectional positions among Black and White TGNC individuals (e.g., Black transfeminine vs White transmasculine individuals; Black transfeminine vs Black gender nonconforming individuals)?

RQ 2) Do the associations between trans-specific health care discrimination and health care access & utilization differ by intersectional positions among Black & White TGNC individuals?

Adequate healthcare access and regular health care utilization are crucial for the management of one's health (Gonzales & Henning-Smith, 2017; Kachen & Pharr, 2020; Reisner & Hughto, 2019), especially when considering present inequities in health outcomes for Black TGNC individuals. Previous literature has found inequitable differences in health (Brown & Jones, 2014; Hughes et al., 2022) and health care outcomes for Black TGNC individuals when compared to White TGNC individuals (Lett et al., 2020). Additionally, the mixed findings by gender identity in health and health care outcomes (Downing & Przedworski, 2018; Fredriksen Goldsen et al., 2022; Kinney & Cosgrove, 2022) among all TGNC individuals and the unique forms of gender identity specific marginalization (i.e., transmisogyny, transmisogynoir, gender binarism; Krell, 2017; Frohard-Dourlent et al., 2017) lead me to propose a series of competing hypotheses. Overall, I hypothesize that both intersectional positions (RQ1) and trans-specific health care discrimination (RQ2) will be significantly associated with health care access and utilization. Additionally, I hypothesize that intersectional positions will moderate the association between trans-specific health care discrimination and health care outcomes (RQ2). Experiencing trans-specific health care discrimination will be associated with decreased odds of accessing and

utilizing healthcare. In line with an understanding of transmisogyny and transmisogynoir as drivers of inequities for transfeminine and Black transfeminine individuals (Hughes et al., 2022; Krell, 2017), it may be possible that White transfeminine and Black transfeminine individuals will have decreased odds of accessing and utilizing care when compared to their same race counterparts and that Black transfeminine individuals will have the lowest odds overall. I hypothesize that the association between trans-specific health care discrimination and health care outcomes will be exacerbated by the unique intersections of racism and cissexism. For example, Black transfeminine individuals who have experienced discrimination will have lower odds of accessing and utilizing care when compared to Black gender nonconforming and transmasculine individuals. In line with an understanding that gender binarism shapes experiences of trans-specific health care discrimination (Frohard-Dourlent et al., 2017), it may instead be the case that gender nonconforming individuals, of either race, who experience discrimination have lower odds of accessing and utilizing care when compared to other TGNC individuals. This proposed dissertation study will provide useful knowledge to researchers, healthcare providers, and policymakers that can be used to promote health equity for Black TGNC individuals.

CHAPTER 2) METHOD

Overview of the United States Transgender Survey

The current study is a secondary data analysis of the United States Transgender Survey (USTS; James et al., 2019). The USTS was administered in 2015 by the National Center for Transgender Equality (NCTE) and it is the largest national survey of transgender and gender-nonconforming individuals ($N = 27,715$) making it an ideal dataset for examining health care experiences and outcomes among TGNC individuals. The USTS collected self-reported data regarding various dimensions of TGNC life (e.g., education, employment, and health). The survey was created by the National Center for Transgender Equality in collaboration with individuals who have related research, advocacy, and/or lived expertise. To ease comparability of USTS responses with national data, some survey questions were adapted from national surveys (e.g., American Community Survey, Current Population Survey; James et al., 2017a; United States Census Bureau, 2022a; United States Census Bureau, 2022b). This dissertation is focused on how anti-Black racism, and its intersections with cissexism, affects Black TGNC individuals and uses race as a proxy for exposure to racism (Lett et al., 2022). As such, this dissertation will only use USTS data from Black and White TGNC adults. Institutional review board (IRB) approval has been obtained for the proposed dissertation study (eIRB# 25025). A data use agreement with the Inter-university Consortium for Political and Social Research, the manager of the USTS data, has been obtained.

Participants

Participants were recruited using a variety of targeted convenience sampling methods (see description of sampling weights and representativeness in the Analytic Approach section below; James et al., 2017a). Prior to data collection, an outreach coordinator worked with other

National Center for Transgender Equality staff to create recruitment materials (e.g., email and social media language and graphics) and lists of active organizations, within the U.S., that were TGNC-specific or –inclusive (e.g., lesbian, gay, bisexual, transgender, and queer organizations). These organizations were contacted and asked to share recruitment materials for the survey with their members. Of the over 800 organizations contacted, approximately 400 organizations agreed to support the survey by sharing the recruitment materials. Some of these supporting organizations also agreed to host survey-taking stations at their events and facilities. In addition to collaborating with organizations, the National Center for Transgender Equality created a website that hosted the survey and provided information about it (e.g., frequently asked questions, list of supporting organizations). They also shared recruitment materials via their own communication channels (e.g., social media, email listservs) and at in-person events (e.g., conferences, speaking engagements).

Inclusion criteria included identifying as transgender and/or gender nonconforming, being 18 years or older, and residing in the United States (i.e., all 50 states, Washington D. C., Puerto Rico, Guam, and the U.S. Virgin Islands). The analytic sample for the proposed dissertation will only include Black (transfeminine $n = 243$; transmasculine $n = 277$; gender nonconforming individuals $n = 262$) and White (transfeminine $n = 7897$; transmasculine $n = 6400$; gender nonconforming individuals $n = 7896$) TGNC adults ($M_{age} = 31.2$, $SD_{age} = 13.4$). The majority of participants were well educated; with over a third of participants (37.6%) having completed some college and just over a quarter (25.5%) completed their Bachelor's degree. Participants were approximately evenly distributed across the United States (Northeast: 21.1%, Midwest: 21.9%, South: 27.5%, West: 29.4%). Over half of participants (65.6%) were employed, 21.3% were out of the workforce, and 12.6% were unemployed. Over half (53.5%) of

participants reported a household income less than \$50,000 and nearly a quarter (22.8%)

reported a household income of \$50,000 to \$100,000. The majority (87.8%) of participated had health insurance coverage (see Table 16 for complete sample characteristics).

Table 18

Sample Characteristics

Variable	BTF (<i>n</i> = 243)	BTM (<i>n</i> = 277)	BGNC (<i>n</i> = 262)	WTF (<i>n</i> = 7897)	WTM (<i>n</i> = 6400)	WGNC (<i>n</i> = 7896)	Total (<i>n</i> = 22,975)
	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)
Age							
18-24	55 (22.6)	83 (30)	155 (59.2)	1723 (21.8)	3026 (47.3)	4721 (59.8)	9763 (42.5)
25-44	131 (53.9)	167 (60.3)	101 (38.6)	3347 (42.4)	2751 (43)	2723 (34.5)	9220 (40.1)
45-65+	57 (23.5)	27 (9.7)	6 (3.2)	2827 (35.8)	623 (9.8)	452 (5.8)	3992 (17.4)
Census Region							
Northeast	42 (17.3)	59 (21.3)	56 (21.4)	1461 (18.5)	1454 (22.8)	1775 (22.5)	4847 (21.1)
Midwest	41 (16.9)	42 (15.2)	47 (18)	1767 (22.4)	1418 (22.2)	1707 (21.6)	5022 (21.9)
South	116 (47.7)	124 (44.8)	113 (43.1)	2204 (28)	1700 (26.6)	2071 (26.2)	6328 (27.5)
West	43 (17.7)	51 (18.4)	43 (16.4)	2457 (31.1)	1820 (28.4)	2337 (30)	6751 (29.4)
Educational Attainment							
Less than high school; High school grad (incl. GED)	56 (23)	35 (12.7)	32 (12.2)	1089 (13.8)	1076 (16.8)	1250 (15.8)	3538 (15.4)
Some college (no degree)	92 (37.9)	105 (37.9)	116 (44.3)	2718 (34.4)	2379 (37.2)	3240 (41)	8650 (37.6)
Associate's Degree	31 (12.8)	31 (11.2)	20 (7.6)	833 (10.5)	499 (7.8)	479 (6.1)	1893 (8.2)
Bachelor's Degree	44 (18.1)	60 (21.7)	62 (23.7)	2094 (26.5)	1526 (23.8)	2075 (26.3)	5861 (25.5)

Table 18 (continued).

Variable	BTF (<i>n</i> = 243)	BTM (<i>n</i> = 277)	BGNC (<i>n</i> = 262)	WTF (<i>n</i> = 7897)	WTM (<i>n</i> = 6400)	WGNC (<i>n</i> = 7896)	Total (<i>n</i> = 22,975)
	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)
Graduate or professional degree	20 (8.2)	46 (16.6)	32 (12.2)	1163 (14.7)	920 (14.4)	852 (10.8)	3033 (13.2)
Employment Status							
Employed	143 (58.9)	195 (70.4)	157 (59.9)	5221 (66.1)	4405 (68.8)	4946 (62.6)	15067 (65.6)
Unemployed	37 (15.2)	40 (14.4)	42 (16)	888 (11.2)	769 (12)	1126 (14.3)	2902 (12.6)
Out of the labor force; Missing	63 (26)	42 (15.2)	63 (24.1)	1788 (22.7)	1226 (19.2)	1824 (23.2)	5006 (21.9)
Insurance Status							
No	51 (21)	52 (18.8)	57 (21.8)	1047 (13.3)	732 (11.5)	870 (11)	2809 (12.2)
Yes	192 (79)	225 (81.2)	205 (78.2)	6850 (86.7)	5668 (88.6)	7026 (89.0)	20166 (87.8)
Household income							
No income	18 (7.4)	12 (4.3)	17 (6.5)	229 (2.9)	208 (3.3)	292 (3.7)	776 (3.4)
\$1 to \$9,999	46 (18.9)	31 (11.2)	45 (17.2)	683 (8.6)	739 (11.5)	1040 (13.2)	2584 (11.2)
\$10,000 to \$24,999	56 (23)	48 (17.3)	47 (17.9)	1368 (17.3)	1268 (19.8)	1403 (17.8)	4190 (18.2)
\$25,000 to \$49,999	51 (21)	69 (24.9)	61 (23.3)	1613 (20.4)	1345 (21.0)	1607 (20.4)	4746 (20.7)
\$50,000 to \$100,000	36 (14.8)	64 (23.1)	45 (17.2)	1957 (24.8)	1460 (22.8)	1677 (21.2)	5239 (22.8)
\$100,000 or more	18 (7.4)	31 (11.2)	23 (8.8)	1501 (19.0)	812 (12.7)	1062 (13.4)	3447 (15)
Missing	18 (7.4)	22 (7.9)	24 (9.2)	546 (6.9)	568 (8.9)	815 (10.3)	1993 (8.6)

Note. BTF = Black transfeminine individuals, BTM = Black transmasculine individuals, BGNC = Black gender nonconforming individuals, WTF = White transfeminine individuals, WTM = White transmasculine individuals, WGNC = White gender nonconforming individuals.

To abide by the data use agreement, categories have been collapsed to reduce identifiability by small cell sizes. For age, “45-64” and “65+;” for educational attainment, “Less than high school” and “High school grad (incl. GED);” for employment status, “Out of labor force” and “Missing;”

for insurance status, “No” and “Missing.” Missing responses made up less than 1% of the overall sample for each variable with collapsed categories.

Procedure

The National Center for Transgender Equality collected data for the USTS from January to December 2015 via an online format (James et al., 2017). After consenting, participants answered questions about their health and quality of life. Upon completion, participants could choose to enter a drawing for three cash prizes (one \$500, two \$250). The survey was available in both English and Spanish.

Measures

See Appendix A for included USTS survey questions (James et al., 2016; James et al., 2017a).

Intersectional Positions

The race and gender identity variables (described below) will be combined into a cross-stratified intersectional positions variable for the current study. This variable will not contain a reference category in order to not suggest that there is a “normal” or “ideal” intersectional position (Cicero et al., 2020). Black transfeminine individuals will be coded as “1,” Black transmasculine individuals will be coded as “2,” Black gender non-conforming individuals will be coded as “3,” White transfeminine individuals will be coded as “4,” White transmasculine individuals will be coded as “5,” and White gender non-conforming individuals will be coded as “6.”

Race/Ethnicity. Participants were prompted with, “Although the choices listed below may not represent your full identity or use the language you prefer, for this survey please select the choice that most accurately describes your racial/ethnic identity.” and directed to select only one of the following choices: “Alaska Native,” “American Indian,” “Asian/Asian American,”

“Biracial/Multiracial,” “Black/African American,” “Latino/a/Hispanic,” “Middle Eastern/North African,” “Native Hawaiian/Pacific Islander,” “White/European American,” “A racial/ethnic identity not listed above (please specify).” Participants who selected “Biracial/Multiracial” or “A racial/ethnic identity not listed above (please specify)” were directed to follow up questions wherein they could select all of the racial/ethnic identities that best described them from the list of identities described above. The National Center for Transgender Equality provided a recoded variable that used the American Community Survey categories for racial/ethnic identities:

“Alaska Native/American Indian alone,” “Asian/Native Hawaiian/Pacific Islander,” “Biracial/Multiracial/Not listed,” “Black/African American alone,” “Latino/a/Hispanic alone,” “White/Middle Eastern/North African alone.” This recoded variable will be used for the current dissertation given the analytic use of the survey sampling weights (described in the Analytic Approach section) that were created using 2014 American Community Survey data. In accordance with my focus on anti-Black racism, only participants in the, “Black/African American alone” or “White/Middle Eastern/North African alone” categories will be included in the analyses. These participants will be referred to as Black and White in the current study.

Sex and Gender Identity. Participants were asked, “What sex were you assigned at birth, on your original birth certificate.” They were required to answer this question before proceeding in the survey and they could select, “Male” or “Female.” Participants were later asked, “If you had to choose only one of the following terms, which best describes your current gender identity?” and were provided with the following responses: “Cross-dresser,” “Woman,” “Man,” “Trans woman (MTF)”, “Trans man (FTM)”, “NB/Genderqueer.” Using the sex-at-birth and current gender identity responses, the National Center for Transgender Equality created a new gender variable with the following categories: Cross-Dresser, Trans Women, Trans Men,

Assigned Female at Birth (AFAB) NB, and Assigned Male at Birth (AMAB) NB. Those who selected “Male” as their sex and “Woman” or “Trans woman (MTF)” as their gender identity were recoded as “Trans Woman” in the new gender variable. Those who selected “Female” as their sex and “Man” or “Trans man (FTM)” as their gender identity were recoded as “Trans Men.” Those who selected “NB/Genderqueer” as their gender identity were recoded as AFAB NB or AMAB NB dependent upon their self-reported sex at birth. Participants in the AFAB and AMAB NB categories will be collapsed into one gender nonconforming category for the current study. Those who identified as “cross-dresser” will not be included within analyses as the USTS defined this response option as a gender nonconforming behavior rather than a gender identity. These decisions were made because of the current dissertation’s focus on those who are transfeminine, transmasculine, and gender non-conforming (Kachen & Pharr, 2020) and their experiences of cissexism within healthcare writ large, which does not explicitly include or disaggregate by sex-specific healthcare (e.g., gynecology, hormone therapy; Miyagi et al., 2022).

Health Care Access

In line with prior research that has shown the importance of access to routine care for health maintenance (Gonzales & Henning-Smith, 2017; Kachen & Pharr, 2020; Reisner & Hughto, 2019), health care access will be measured with one variable, having a primary care provider. Participants were asked a series of questions about their experiences with health care providers. They were first asked, “Thinking about the doctor or provider you go to for your trans-related health care (such as hormone treatment), how much do they know about providing health care for trans people?” and they could select a response which indicated they did not have a trans-related provider or how much (i.e., almost everything to almost nothing, not sure) their provider knew. Those who selected a response indicating that they do have a trans-related

provider were then asked, “Do you also go to your trans-related health care provider for your routine health care, like physicals, flu, diabetes, etc.?” Participants could select from the following responses: “Yes, I see my trans health care provider for my routine health care,” “No, I see a different doctor or health care provider for my routine healthcare,” and “No, I do not get any routine health care.” Those who indicated that they did not have a trans-specific provider in response to the first question or that they see another provider for their routine care in response to the second question were then asked, “How much does your routine health care provider (who you see for physical, flu, diabetes, etc.) know about health care for trans people?” Participants could select from the following responses: “I don’t have a routine health care provider,” “They know almost everything about trans health care,” “They know most things,” “They know some things,” “They know almost nothing,” and “I am not sure.” The health care access outcome variable will be created using the responses from second and third question in this series. Participants who selected “No, I do not get any routine health care,” in response to the second question, or “I don’t have a routine health care provider,” in response to the third question, will be coded as “0.” Participants who selected, “Yes, I see my trans health care provider for my routine health care” or “No, I see a different doctor or health care provider for my routine healthcare,” in response to the second question, or a response indicating that they have a primary care provider (e.g., “They know most things”) in response to the third question will be coded as “1.” The coding scheme for this variable was selected to assist in interpretability of parameter estimates.

Health Care Utilization

In line with prior research which has shown the importance of regular health care visits and not avoiding care for health maintenance (Gonzales & Henning-Smith, 2017; Kachen &

Pharr, 2020; Reisner & Hughto, 2019), health care utilization will be measured with two variables, having a visit and avoiding care due to fear of trans-specific health care discrimination in the past year. Having a visit in the past year was captured via the following question, “In the past year, have you seen a doctor or health care provider?” which was modified from a question in the Centers for Disease Control and Prevention’s annual Behavioral Risk Factor Surveillance System (Centers for Disease Control and Prevention, 2022). Participants who responded “Yes” will be coded as “1,” while those who responded “No” will be coded as “0.” Avoiding care due to fear of trans-specific health care discrimination will be captured via the following question, “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 person?” Those who selected “No” will be coded as 0, while those who selected “Yes” will be coded as “1.” The coding for these variables was selected to ease interpretability in parameter estimates.

Trans-specific Health Care Discrimination

This measure was assessed using a list of 10 different discriminatory experiences that can occur within a health care setting. Participants who indicated that they had had a visit in the past year were asked, “In the past year, did you have any of these happen to you, as a trans person, when you went to see a doctor or health care provider?” The list of discriminatory experiences included: being respected by their provider (reverse coded), needing to teach a provider about trans health, trans-specific treatment refusal, other treatment refusal, invasive questioning, harsh/abusive language usage from their provider, physical abuse from their provider, verbal harassment in the health care setting, physically attacked in the health care setting, unwanted sexual contact in the health care setting. Participants could select either “Yes” or “No” in response to each discriminatory experience. The National Center for Transgender Equality

created a composite variable indicating whether a participant had experienced any of the discriminatory experiences. Responses indicating no experience with trans-specific health care discrimination (i.e., not reporting any discriminatory experience) will be coded as “0,” while responses indicating experience (i.e., selecting at least one discriminatory experience) with health care discrimination will be coded as “1.” This composite variable will be used for the dissertation because of its focus on trans-specific health care discrimination overall rather than a specific type of discriminatory experience.

Demographic Variables

The current study will include age, census region, educational attainment, employment status, health insurance status, and household income as demographic variables. For age, participants were asked, “What is your current age?” and were provided with a list of ages from 18 to 99, and “100 and above” from which they could select their response. The National Center for Transgender Equality recoded this response into the following American Community Survey categories: “18 – 24,” “25 – 44,” “45 – 64,” “65 plus.” These categories were coded sequentially starting at “0” for those in the “18 – 24” category. For census region, participants were asked, “What United States (U.S.) state or territory do you currently live in?” Participants were required to respond to this question before progressing further in the survey and could select their place of residence from a list of all U.S. states and territories. The National Center for Transgender Equality recoded these responses into census regions, excluding those in U.S. territories (i.e., Northeast, Midwest, South, West). These categories will be coded in the order presented starting at “0” for those in the Northeast. For educational attainment, participants were asked, “What is the highest level of school or degree have you completed?” Participants could select from a list 13 educational levels, from “Less than 8th grade” to “Professional degree (e.g., MD, JD).” The

National Center of Transgender Equality recoded responses into the following ACS categories:

“Less than high school,” “High school grad (incl. GED),” “Some college (no degree),”

“Associate’s Degree,” “Bachelor’s Degree,” and “Graduate or professional degree.” For

employment status, participants were asked “What is your current employment status?”

Participants could select up to all of the following choices: work considered illegal (e.g., sex

work); full-time work; part-time work; self-employment; unemployed and looking for work;

unemployed, but not looking for work; unemployed due to disability; student; retired; stay-at-

home; and “Not listed above (please specify).” The National Center for Transgender Equality

recoded these responses into the following categories: “Employed,” “Unemployed,” and, “Out of

the labor force.” For health insurance status, participants were asked “Are you currently covered

by any health insurance or health coverage plan?” Participants who selected “Yes” will be coded

as “1” and those who selected “No” will be coded as “0.” To determine household income,

participants were first asked a series of questions regarding the size and composition (e.g.,

number of relatives in their household). Depending on the size and composition of participants’

households, they were either asked, “What was your total combined individual income (before

taxes) in 2014?;” “What was your total combined family income (before taxes) in 2014?;” or

“How much was your total combined household income (before taxes) in 2014? Participants

could select their income from a list of 18 income ranges, from “No income” to “150,000 or

more.” The National Center for Transgender Equality combined and recoded these responses

into a household income variable with the following categories, “No income;” “\$1 to \$9,999;”

“\$10,000 to \$24, 999;” “\$25, 000 to \$49,999;” “\$50,000 to \$99,999;” “\$100, 000 or more.”

The educational attainment and health insurance status questions were adapted from the American Community Survey (United States Census Bureau, 2022b), and the employment status

question was adapted from the Current Population Survey (United States Census Bureau, 2022a). The recoded variables of the above measures were selected either due to the planned use of survey sampling weights that were derived from ACS data (see Analytic Approach) for description or to facilitate interpretability of responses. The educational attainment, employment status, and household income variables will be used to demonstrate the impact of known racism- and cissexism-related structural inequities (e.g., poverty, employment discrimination; King et al., 2022; Zarwell et al., 2022). As such, these variables will not be included in the central analyses as covariates as they are on the path from systemic marginalization to health inequities for both Black and TGNC individuals, and may introduce overadjustment bias (Lett et al., 2020; Schisterman et al., 2009). The covariates for the current study will include age, census region, and health insurance status (Lett et al., 2020; Lett et al., 2021). There are regional differences in the frequency of trans-specific health care discrimination experiences (Cicero et al., 2019; Kattari et al., 2015; Truszczynski et al., 2022). There are also differences in health care outcomes by age (Tran et al., 2022). Although, health insurance is a measure of health care access it precedes the health care access and utilization outcomes in the current dissertation (Gonzales & Henning-Smith, 2017; Kachen & Pharr, 2020).

Analytic Approach

Sample characteristics, bivariate associations, and regression diagnostics will be examined to describe the sample, determine the inclusion of selected covariates, and assess statistical model assumptions (e.g., multicollinearity, influential observations, normality of the residuals; Agresti, 2019; Field, 2013; Zhang, 2016). Descriptive statistics will be used to describe the overall sample and each intersectional position. Bivariate associations (e.g., chi-square and Cramer's V tests) among predictor, covariate, and outcome variables (i.e., trans-

specific health care discrimination, intersectional positions, age, census region, health insurance status, having a primary care provider, having a visit in the past year, and avoiding care due to fear of trans-specific health care discrimination) will be examined (see Table 17 and Table 18).

Covariates that are not significantly associated ($p < .05$) with an outcome variable and at least one predictor variable will be excluded from the central analyses (de Boer et al., 2015).

Participants identified as outliers (e.g., high Cook's D values; Agresti, 2019; Zhang, 2016) will be retained for sensitivity analyses to assess their influence. Multiple imputation methods may be considered if missing data is at random. Missing data will be examined by comparing participants with missing data on variables of interest to those who do not. Maximum likelihood estimation will be utilized due to its iterative process of fitting parameter estimates within generalized linear models (Agresti, 2019). The following analyses will be conducted in R.

Three multivariate hierarchical logistic regression models will be used to examine the associations between intersectional positions and health care outcomes (i.e., having a visit in the past year, having a primary care provider, avoiding care due to fear of trans-specific health care discrimination; RQ1) and whether the associations between trans-specific health care discrimination and health care outcomes (i.e., having a primary care provider, avoiding care due to fear of trans-specific health care discrimination) differ by intersectional positions (RQ2). Any covariates that are not excluded from these analyses will be added in the first step, predictors (i.e., intersectional positions, trans-specific health care discrimination) will be added in the second step, and the interaction of the predictor variables will be added in the last step. The interaction variable will be the product of the trans-specific health care discrimination and intersectional position variables. To include categorical predictors (e.g., age, census region intersectional positions) in these models, artificially coded variables will be used to indicate

membership in each non-zero coded level of the predictors (e.g., a variable representing participants in the 25 – 44 age group. A Bonferroni corrected significance level ($\alpha = .05/3 = .017$) will be employed for the correction of multiple comparisons. As such, parameter estimates will be considered significant if their 98.3% confidence intervals do not contain 1. Odds ratios, 98.3% confidence intervals, and model fit indices (e.g., pseudo R^2 , chi-square goodness of fit tests, deviance) and will be reported for all analyses (Agresti, 2019).

In line with proposing this dissertation as an intracategorical intersectional study (Bauer & Scheim, 2019; Evans, 2019), the intersectional positions variable intentionally does not include a reference category (“0”) and all of the logistic regression models will be intercept-free (Cicero et al., 2020). These decisions were made so that logistic regression models do not have an intersectional position (e.g., White transfeminine individuals) as the basis of all comparisons that is subsequently assumed to have the most favorable or desirable odds of the health care outcomes examined. This approach is aligned with the understanding that intersectionality means being exposed, or not exposed, to multiple forms of marginalization (e.g., cissexism, racism) creates unique experiences and intersectional forms of marginalization (e.g., transmisogynoir; Krell, 2017) that should be examined from multiple perspectives. Applying this approach means that the parameter estimate for each artificially coded intersectional position (e.g., Black transfeminine individuals) variable (or the interaction of the intersectional positions and health care discrimination variables is a comparison of that intersectional position to the overall sample (e.g., Black trans women vs all participants). In any model wherein the intersectional position variable, or the interaction variables that include it, are statistically significant, post-hoc contrasts will be used to estimate pairwise odds ratios that compare the odds of healthcare outcomes of any intersectional position with another intersectional position (e.g., Black transfeminine

individuals who experience discrimination vs. White transfeminine individuals who experience discrimination). Using this approach will allow me to potentially explore all comparative combinations of the intersectional positions variable, and their interactions with the health care discrimination variable. This will lead to a fuller understanding of how the exposure to cissexism, racism, and its intersections potentially impact health care outcomes among Black and White TGNC individuals.

Findings from health equity research are used to inform public health strategies, such as the creation of policies and interventions that are targeted to reduce inequities in marginalized groups. As such, representativeness of national samples is an important methodological consideration. The NCTE used convenience sampling methods for the USTS which resulted in a TGNC sample that is disproportionately White, younger, and more highly educated compared to the general US population at the time (Lett & Everhart, 2022). There are three methods that can and have been used to address this issue: weighted analyses, matched analyses, and unweighted analyses (Lett & Everhart, 2022). For the first method, the NCTE provides survey sampling weights that utilize data from the 2014 American Community Survey (ACS). When applied, these weights adjust for race/ethnicity, age, and educational attainment to approximate a more nationally representative sample. However, there are critiques of the utilization of these survey weights. The unweighted USTS sample includes nearly 800 Black participants (nearly 3% of the overall sample), who are then upweighted to 3200 participants (approximately 12% of overall sample) when the weights are applied. As such, weighted findings about Black TGNC participants, that are presented as nationally representative, may incorporate unknown selection bias. The TGNC individuals who participated in the USTS may be meaningfully different from those who did not (Lett & Everhart, 2022). This is especially important when considering Black

TGNC individuals who may encounter barriers (e.g., economic inequities; Lett et al., 2020) that may have prohibited their ability to participate in an online survey. Additionally, there is evidence that suggests that transgender individuals are more likely to be non-White when compared to cisgender individuals (Herman et al., 2017). Therefore, the use of the 2014 ACS data to create survey weights may not be appropriate given that the ACS did not collect inclusive gender identity data.

The second method attempts to address the small subsample and weighting issues by creating a propensity score matched sample (e.g., matching Black TGNC participants to White TGNC participants; Lett et al., 2020; Lett et al., 2021). This method uses a matching algorithm to find participant pairs (or triples, quadruples, etc.) that have similar values on selected covariates (Stuart et al., 2013). This ideally results in a sample wherein the matched groups share similar distributions on these selected variables, meaning they may no longer need to be adjusted for in subsequent analyses. The third method, unweighted analyses, simply uses the sample in its entirety without applying the provided survey sampling weights (Turban et al., 2020; Turban et al., 2021). These alternative methods do result in arguably less nationally representative findings. However, they can be used to avoid overconfidence in the assumed representativeness and unaddressed selection bias in weighted analyses (Lett & Everhart, 2022). These methods also allow for the identification of potential inequities that can be further examined in more intentionally representative research.

Following previous TGNC health inequities research, I plan to conduct the central analyses using all three of these analytic methods: weighted analyses, matched analyses, and unweighted analyses. The analytic steps described previously will be used for each method. For the matched analyses, I will create a 1:2 matched sample of Black and White TGNC participants

to lessen the amount of participants left unmatched. Participants will be matched on age, census region, and health insurance status. Covariate balance will be assessed via the absolute standardized mean difference (ASMD) between matched groups (Stuart et al., 2013). If ASMD values are inadequate ($ASMD \leq 0.1$), the associated covariate will remain in the subsequent analyses. to address. By using these three methods together for my dissertation, I intend to present a fuller understanding of potential health care inequities among Black and White TGNC individuals and address the issues of representativeness when defaulting to only using weighted analyses. I will present findings from all three methods regardless of whether they differ in the amount or direction of significant findings. I also plan to discuss the differences, by analytic method, in the generalizability of the findings. For example, the matched findings will be generalizable to Black and White TGNC individuals who share the sample characteristics of the matched sample.

Table 19*Central Study Variables*

Variable	Analytic Role	Coding
Intersectional Positions	RQ1 Predictor, RQ2 Moderator	1 = Black transfeminine individuals 2 = Black transmasculine individuals 3 = Black gender non-conforming individuals 4 = White transfeminine individuals 5 = White transmasculine individuals 6 = White gender non-conforming individuals
Trans-specific health care discrimination	RQ2 Predictor	0 = No experience of trans-specific health care discrimination in the past year 1 = At least one experience of trans-specific health care discrimination
Age	RQ1 & RQ2 Covariate	0 = 18 – 24 1 = 25 – 44 2 = 45 – 64 3 = 65+
Census Region	RQ1 & RQ2 Covariate	0 = Northeast 1 = Mideast 2 = South 3 = West
Having a primary care provider	RQ1 & RQ2 Outcome	0 = No primary care provider 1 = Have a primary care provider
Having a visit in the past year	RQ1 Outcome	0 = No visit in the past year 1 = Visit in the past year
Avoiding care due to fear of trans-specific health care discrimination in the past year	RQ1 & RQ2 Outcome	0 = Did not avoid care due to fear in the past year 1 = Did avoid care due to fear in the past year

Note. RQ = Research Question. RQ1 = Are the differences in health care access & health care utilization by intersectional positions among Black and White TGNC individuals (e.g., Black transfeminine vs White transmasculine individuals; Black transfeminine vs Black gender nonconforming individuals)? RQ2 = RQ 2) Do the associations between trans-specific health

care discrimination and health care access & utilization differ by intersectional positions among Black & White TGNC individuals?

Table 20

Trans-specific Health Care Discrimination, Health Care Access, and Health Care Utilization

Variable	BTF (n = 243)	BTM (n = 277)	BGNC (n = 262)	WTF (n = 7897)	WTM (n = 6400)	WGN C (n = 7896)	Total (n = 22,975)
	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>
Health Care Discrimination							
No	123 (61.5)	154 (61.1)	156 (74.3)	4423 (62.4)	3207 (55.6)	4885 (73.5)	12948 (64.2)
Yes	71 (29.2)	91 (36.1)	48 (22.9)	2458 (34.7)	2426 (42.1)	1550 (23.3)	6644 (32.9)
Missing	6 (3)	7 (2.8)	6 (2.9)	211 (3.0)	133 (2.3)	213 (3.2)	576 (2.9)
Having a primary care provider							
No	58 (23.9)	61 (21.7)	97 (37)	1662 (21)	1412 (22.1)	2171 (27.5)	5460 (23.8)
Yes	185 (76.1)	217 (78.3)	165 (63.0)	6235 (79.0)	4988 (77.9)	5725 (72.5)	17,515 (76.2)
Having a visit in the past year							
No	43 (17.7)	25 (9)	52 (19.8)	805 (10.2)	634 (9.9)	1248 (15.8)	2807 (12.2)
Yes	200 (82.3)	252 (91)	210 (80.2)	7092 (89.8)	5766 (90.1)	6648 (84.2)	20168 (87.8)
Avoiding care due to fear of discrimination							
No	182 (74.9)	197 (71.1)	200 (76.3)	6325 (80.1)	4438 (69.3)	6456 (81.8)	17798 (77.5)
Yes	61 (25.1)	80 (28.9)	62 (23.7)	1556 (19.7)	1952 (30.5)	1420 (18.0)	5131 (22.3)
Missing	0	0	0	16 (0.2)	10 (0.2)	20 (0.3)	46 (0.2)

Note. The counts for the discrimination variable does not equal the total because only participants who had a visit in the past year saw this question. The total used for the percentages is the amount of participants who were directed to the discrimination question.

To abide by the data use agreement, categories have been collapsed to reduce identifiability by small cell sizes. For primary care provider and having a visit in the past year, “No” and “Missing.” Missing responses made up less than 1% of the overall sample for each variable with collapsed categories.