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Social Demography of Health Seeking Experiences Among Transgender African Americans

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Abstract

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MPH, Walden University, 2011

MS, Hampton University, 2008

Dissertation Submitted in Partial Fulfillment

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Abstract

Access to and receipt of health care is an essential human right; however, transgender people often have negative health seeking experiences that give way to the many health disparities seen in the transgender community. Using the social ecological model, this study determined, through multiple logistic regressions, that correlations existed between socioeconomic, health behaviors, and sociocultural variables and 6 measures of health seeking experiences among transgender African Americans. Secondary data from the 2010 National Transgender Discrimination Survey were used, yielding a sample size of 253 transgender African Americans. Those in the African American transgender community at most risk for negative health seeking experiences had the following characteristics: (a) earned high school diplomas and beyond, (b) were in the workforce or looking to be in the workforce, (c) earned an annual salary exceeding $10,000, (d) did not want hormone therapy, (e) abused alcohol and drugs, (f) attempted suicide, (g) were uninsured or had public insurance, (h) were out in a medical setting, (i) were homosexual, (j) had family support, (k) were homeless, (l) were older in age, (m) self-identified as transgender before 18, (n) received first transgender related medical treatment after 17 years old, (o) lived outside of the New England region, and (p) preferred other health settings than emergency rooms. Exploring this aspect of transgenderism and health care has potential for positive social impact as results from this study could improve the lives of transgender African Americans by combating transphobia among health professionals and promoting culturally competent health care.

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Dedication

I would like to dedicate this dissertation to all African American transgender individuals who experience barriers regarding health access.

Acknowledgments

I would like to acknowledge my dissertation committee, who has been the guiding light throughout my dissertation process. I would like to thank my daughter and son, Alayna and Eric Jr., whose faces have been my motivation to press on. I would like to thank Carmen Straughn, my grandmother, for instilling in me the importance of education. Additionally, I would like to thank my mother Coralita, my husband Eric for never allowing me to give up when the tasks seemed too daunting, and my godfather Michael, for just being there for me all around. A special thank you to Marcus Wiggs, "thank you for … all of it". I would also like to express my sincerest gratitude to BlackTransMen.org and BlackTransWomen.org for their support. I would like to thank the National Center for Transgender Equality, the National Gay and Lesbian Task Force, and all who contributed to the ground-breaking research involved in the National Transgender Discrimination Survey. I would be remiss if I forgot the Fletchers as my in-house transgenderism experts. Lastly, but certainly not least, I would like to acknowledge and thank God—my father, my maker.

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Chapter 1: Introduction to the Study

Introduction

Health outcomes and health disparities for transgender African Americans were not only worse when compared to the United States' general population and other subgroups of the lesbian, gay, bisexual, and transgender (LGBT) population but also when compared to transgender people of other ethnic and racial groups. Health professionals could potentially use the information from this study to target health education, help to mitigate barriers to receiving health care, and to understand the unique differences in caring for this population. An even larger social change impact could be the improvement in the lives of transgender people by combating transphobia among health professionals and promoting culturally competent health care. This chapter addresses the background of transgenderism, the theory on which the study was based, the problem statement, the purpose of the study, the research questions and hypotheses, the limitations of this study, a definition of terms, and lastly a summary.

Background

Researchers have generally agreed that transgenderism stems from nonconformity between an individual's external sexual organs and his or her gender identity (AIDS Alert, 2011; Alegria, 2008, 2011; Brennan Barnsteiner, Siantz, Cotter, & Everett, 2012; Crosby & Pitts, 2007; Fitzpatrick, Euton, Jones, & Schmidt, 2005; Grant et al., 2010; Kelleher, 2009; Kenagy, 2005; Peate, 2008; Wilson et al., 2010; Wyss, 2004). A person's sex refers to his or her natal sex or the identified sex at birth based on his or her external sexual organs, and gender or gender identity refers to psychological, social, and cultural

aspects of masculinity and femininity (Alegria, 2011). Generally, it was expected that individuals will age to identify as the gender, male or female, according to what their natal sex indicated; however, transgender individuals do not meet this expectation. For example, a transgender man (trans man) would be an individual who was born with a vagina but dressed, acted, and identified as a man or person born with a penis. The same would apply for a transgender woman (trans woman), who would be an individual who was born with a penis but dressed, acted, and identified as a woman or person born with a vagina (Kenagy, 2002).

The range of transition in transgender persons in order to "pass" in society could range from minimal to complete anatomical reconstruction (Alegria, 2011); however, it was important to note that there was also a range in levels of discontentment a transgender individual might feel between his or her true gender and his or her assigned gender role, and an individual might not feel the need to make any changes to his or her physical bodies at all (Schrock, Reid, & Boyd, 2005). The measures that transgender individuals took to "pass" in order to combat body dysmorphia or gender identity disorder included, but were not limited to, dressing in clothes of their true gender identity, hormone therapy, padding, binding, packing, using stand to urinate devices (STUDs), and sex reassignment surgeries such as penectomy, orchidectomy, vaginoplasty, phalloplasty, mastectomy, and more (Alegria, 2011). However, even transitioning posed health risks as there is always the risk of death during any surgical procedure, and hormone therapies can lead to deep vein thrombosis, pulmonary embolism, altered liver function, and more (Peate, 2008). There were a number of

variables that determined whether a transgender individual decided to transition such as familial acceptance, health status, and financial situations (Alegria, 2008). Transgender persons remained marginalized, closeted, and at risk for negative psychosocial consequences, and those who did come out were at risk for discrimination, violence, gender dysphoria, mental health issues, and loss of relationships (Alegria, 2011; Fitzpatrick et al., 2005; Peate, 2008). Visual nonconformers, or those who were perceived as transgender individuals based on their outward appearance, were at most risk for antitransgender bias (Grant et al., 2010). Teenage transgender individuals have reported feelings of shame, fear, and self-consciousness as a consequence directly stemming from physical and sexual harassment they encountered in school (Wyss, 2004).

For some, the risks associated with coming out were too great; therefore, many trans women or male-to-female persons married, raised families, and conformed to socially accepted norms of their natal sex, and many trans men or female-to-male persons hid their gender identity by leading their lives as lesbians, a more accepted subgroup within the LGBT population (Alegria, 2011). Another cause for fear of transgender individuals to lead lives according to their true gender was that transgender persons were often depicted by the media as illicit sex workers, deviants, freaks, and persons who no one would want to be romantically involved with (Alegria, 2011). However, researchers have provided insight that relationships could be maintained at an acceptable level despite a partner's transgender transition (Alegria, 2008). African American transgender people represent a minority subgroup within the transgender minority group within the LGBT sexual minority population. Racial bias presented a substantial additional risk of

discrimination for transgender people of color in almost every area of health, which made their health care access and health outcomes drastically worse (Grant et al., 2010).

Unfortunately, most health care providers had insufficient knowledge of how to care for transgender patients (Alegria, 2011). Moreover, the attitude of nurses towards a transgender person's sexuality could greatly influence the quality of care provided and the chances of the transgender patient to return for health care (Peate, 2008). As public health professionals, it was necessary to ensure that all people have access to health care no matter how marginalized they might be. Even the Centers for Disease Control and Prevention (CDC) revised the national system for reporting HIV cases to capture sex assigned at birth and current gender identity as the transgender population has emerged as a high-risk group for HIV infection (National Library of Medicine, 2011).

One of the challenges related to eliminating health disparities was the relative lack of data on many of the contributing sociodemographic factors (Minnesota Department of Health [MDH], 2015). This research study addressed this gap in literature and has the potential for positive social impact. Furthermore, data have shown that the numerous factors that most influence a person's health status existed outside of the health care system; these included sociodemographic variables such as income, education level, neighborhood assets, access to healthy food, and housing stability (MDH, 2015). Social demography involves using demographic data and methods to describe, explain, and predict social phenomena (in this case negative health seeking experiences) by investigating the social status composition and distribution of a population, in this case African American transgender people; (MDH, 2015). This study was needed because the

results could provide a means of identifying those within the African American transgender community at highest risk of poor health outcomes resulting from disengagement from the health care system by determining the common social demography of these individuals. Sociodemographic characteristics were also vital for comprehending quality of health care disparities (MDH, 2015).

Statement of Problem

Members of the LGBT community represent sexual minorities, but transgender individuals represent the minority within this minority group; moreover, when it comes to health risks, health disparities, and negative health seeking experiences, being a racial minority further compounds these issues (Grant et al., 2010). For example, there are multiple health risks related to elevated blood pressure and increased allostatic load as a result of chronic identity-related stresses and discrimination (Brennan et al, 2012). Additionally, a 2005 study found that gender role more than sexual orientation was a predictor for suicidal symptoms (Fitzpatrick et al., 2005). The transgender community experiences a higher number of suicide attempts than the general population (Clements-Noelle, Mark, & Katz, 2006; Fitzpatrick et al., 2005; Grant et al., 2010; Kenagy, 2005; Mollon, 2012; Maguen & Shipherd, 2010). The National Transgender Discrimination Survey (NTDS) Report on Health and Health Care indicated that suicide attempts in African American transgender individuals were 7% higher than in Caucasian transgender individuals (Grant et al., 2010).

Some additional risks faced by members of the transgender community as outlined by Healthy People 2020 (2011) included a higher prevalence of HIV/STDs,

victimization, mental health issues, suicide attempts, and being uninsured. For example, prevalence of HIV/AIDS among African American transgender individuals was 30 times higher than among Caucasian transgender individuals (Grant et al., 2010; Samuel & Zaritsky, 2008). Despite these disparities, health care providers often lacked adequate knowledge of what it takes to care for transgender patients in order to combat their disparate health outcomes (Alegria, 2011). Moreover, the health providers' attitudes towards transgender people could influence their future health seeking behaviors (Peate, 2008). The social change potential of this research was improvement in the lives of transgender people by combating transphobia among health professionals and promoting culturally competent health care.

Brennan et al. (2012) discussed problems with regard to nurses and other health care providers disregarding the needs of transgender individuals because of lack of knowledge, ideological biases, and hetero-normative perspectives. Most nursing curricula failed to integrate core transgender concepts, experiences, and health and illness needs (Brennan et al., 2012). Therefore, education was not being provided in order to sufficiently address the health issues related to transgender individuals. These missed opportunities to reflect on and comprehend their own values, biases, prejudices, and comfort levels related to sex, gender, and sexual orientation diminishes the health care providers' ability to provide sensitive patient-focused care to this population (Brennan et al., 2012). A 2009 study found that only 10% of participating nurses had a basic level of knowledge regarding the transgender population (Rondahl, 2009). Additionally, Obedin-Maliver et al. (2011) indicated that inadequate time was dedicated to LGBT -related

topics among 176 medical schools across the United States and Canada. Ultimately, it was this lack of knowledge and understanding that has made transgender health care sometimes suboptimal and has created negative health experiences for transgender people (Alegria, 2011).

Many providers think of transgenderism in an abstract or faraway concept that they will not come into contact with; however, whether they realize or not, most health care providers will care for transgender patients at some point in their careers (Feldman & Bockting, 2003). Transgender Americans have often had negative health seeking experiences, including disrespect, harassment, violence, blatant refusal of service, and discrimination when accessing health care (Grant et al., 2010). Data on health seeking experiences from the 2010 NTDS revealed that 28% of 7,000 surveyed transgender people were harassed in medical settings, 2% were victims of violence in a medical setting, 50% had to teach their providers about caring for transgender individuals, and 19% were refused care due to being a transgender individual (Grant et al., 2010).

These numbers were even higher among people of color, including African Americans (Grant et al., 2010). Among African American respondents in the NTDS, 21% reported being refused medical care, and 34% postponed care due to fear of discrimination (Harrison-Quintana, Lettman- Hicks, & Grant, n.d.). Based on the aforementioned statistics, it was evident that negative health seeking experiences were applicable to only some transgender individuals, and which sociodemographic variables were associated with such experiences had yet to be analyzed. Of the many aspects of transgender health, I found no prior research on the comparison between the

sociodemographic variables of those within the transgender community with negative health seeking experiences and the sociodemographic variables shared by those with no such experiences, especially among the African American transgender population. Data showed people in this group were at a significant additional risk of discrimination due to the compounded influence of racial bias (Grant et al., 2010). One of the challenges related to eliminating health disparities was the relative lack of data on many of the contributing sociodemographic factors (MDH, 2015). This research addressed this gap in literature.

Purpose of the Study

The purpose of this quantitative study was to identify which of 18 sociodemographic variables correlated with any of the six measures of health seeking experiences among African American transgender people. The six dependent variables were measures of health seeking experiences: denial of medical care, verbally harassed in a medical setting, physically attacked or assaulted in a medical setting, postponement of medical care due to fear of bias, discrimination by medical providers, and medical providers lack of knowledge. The 18 independent sociodemographic variables fell under three subdivisions: education, income, and employment. The six health behavior variables were hormone therapy, gender surgeries, drug and alcohol abuse, tobacco use, suicide attempts, and access to health insurance. The nine sociocultural variables were visual nonconformity, outness, sexual orientation, relationship status, family support, living arrangements, age, location, and preferred health setting. This study was quantitative in nature as the data were numerical and measurable. The participants of this

study were African American transgender individuals. The participants came from the African American respondents to the 2010 NTDS.

Research Questions and Hypotheses

RQ1: Quantitative: Is there correlation between socioeconomic variables and measures of health seeking experiences among transgender African Americans?

$H_0$1: There will not be correlations between socioeconomic variables and negative health seeking experiences among transgender African Americans.

H_a1: There will be correlations between socioeconomic variables and negative health seeking experiences among transgender African Americans.

RQ2: Quantitative: Is there correlation between health behavior variables and measures of health seeking experiences among transgender African Americans?

$H_0$2: There will not be correlations between health behavior variables and negative health seeking experiences among transgender African Americans.

H_a2: There will be correlations between health behavior variables and negative health seeking experiences among transgender African Americans.

RQ3: Quantitative: Is there correlation between sociocultural variables and measures of health seeking experiences among transgender African Americans?

$H_0$3: There will not be correlations between sociocultural variables and negative health seeking experiences among transgender African Americans.

H_a3: There will be correlations between sociocultural variables and negative health seeking experiences among transgender African Americans.

Theoretical Framework

The theoretical framework for this study was Bronfenbrenner's (1979) social ecological model. This model illustrates the interchange among four levels: individual, relationship, community, and societal factors (CDC, 2015). The social ecological model could aid in understanding the range of factors that put transgender African Americans at risk for negative health seeking experiences (CDC, 2015). In this case, the key variables that the research focused on were as follows: health seeking experiences among transgender African Americans and contributing sociodemographic factors. The interrelationship between these two sets of variables was the topic explored because health care professionals could then identify any existing commonalities in sociodemographics among transgender African Americans with negative health seeking experiences for mitigation.

The individual level explored the biological and personal factors associated with health seeking experiences (CDC, 2015). Utilizing the data from the NTDS, an example of an individual-level sociodemographic factor was education. The relationship level explored relationship factors associated with health seeking experiences (CDC, 2015). An example of a relationship level sociodemographic factor from the NTDS was family support. The community level explored settings (CDC, 2015). An example of a community level sociodemographic factor from the NTDS was the preferred health care setting. The societal level looked at social and cultural norms associated with health seeking experiences (CDC, 2015). An example of a societal level sociodemographic factor from the NTDS was access to health insurance. This model was applicable because

by determining the sociodemographic variables of transgender African Americans at risk for negative health seeking experiences, public health professionals could target and tailor health initiatives to mitigate negative health seeking experiences.

Nature of the Study

This study was quantitative in nature as the data were numerical and measurable. It was a case control, correlational study as the research questions addressed correlations between the independent and dependent variables. Utilizing secondary data from the NTDS yielded a sample size of 371 African American transgender respondents. This survey was fielded to transgender and gender nonconforming people from September 11, 2008 until March 3, 2009 via convenience, venue-based, and snowball sampling (Grant et al., 2010). To address the research questions of this study, the independent variables were the following:

- socioeconomic variables: education, income, and employment;
- health behavior variables: hormone therapy, gender surgeries, drug and alcohol abuse, smoking, suicide attempts, and access to health insurance; and
- sociocultural variables: visual nonconformity, outness in medical settings, sexual orientation, relationship status, family support, living arrangements, age (current age, age of self-identification as transgender, and age of first transgender related treatment), location, and preferred health care setting—coded numerically for analysis.

The dependent variables were the following health seeking experiences:

- denied medical care,

- verbally harassed or disrespected in medical setting,
- physically attacked or assaulted,
- postponement of medical care due to fear of bias,
- discrimination by medical providers, and
- medical providers' lack of knowledge.

Each health seeking experience was coded as a dichotomous or binary indicator; negative as 1 and not negative as 0. The health seeking experiences were selected by the presence of the word *experience* in question prompts on the NTDS survey related to health care in addition to researcher evaluation. The six dependent variables were measures of health seeking experiences and the 18 independent variables were varying sociodemographics divided into three subdivisions: socioeconomic, health behaviors, and sociocultural variables. The sociodemographic variables encompassed questions related to social, economic, cultural, demographic, and health behavioral factors in the NTDS. These included all but were not limited to the sociodemographic factors outlined by the 2015 MDH's Report to the Minnesota Legislature, which also indicated that socio-demographic factors cannot be one-size-fits-all" (MDH, pg. 7). To determine the differences in social demography between those with negative experiences and those without, logistic regression analysis was conducted (Sautter, Tippett, &Morgan, 2010) using SPSS statistical software.

Definition of Variables

Of the 24 variables utilized in this study, six were dependent and 18 were independent. Of the six dependent variables, none were defined as all terms were familiar

and several relied on the perception of the individual who completed the questionnaire. Of the 18 independent variables, only location and suicide attempts were excluded from definitions because all of these terms were familiar. A list of other relevant terms appears in Appendix C.

Access to health insurance: Access to health insurance refers to having health care and the type of health insurance usually used to cover doctor and hospital bills (Grant et al., 2010).

Age: Age in its traditional meaning was assessed, but this study also included age of self-identification as transgender and age of first transgender-related medical treatment.

Drug and alcohol abuse: Drug and alcohol abuse refers to intake of alcohol or misuse of drugs to cope with mistreatment faced as a transgender person (Grant et al., 2010).

Education: Education refers to the highest degree or level of school completed (Grant et al., 2010).

Employment status: Employment status refers to identification with one of the following: full-time, part-time, more than one job, self-employed, unemployed, on disability, student, retired, or home maker (Grant et al., 2010).

Family support: Family support refers to strength of family, partner, and friend relationships after disclosing transgender transition (Grant et al., 2010).

Hormone therapy: Hormone therapy refers to wanting or having hormones of one's true gender in order to develop the desired secondary sexual characteristics (Hudson's FTM Resource Guide, 2013).

Income: Income refers to the current gross annual household income before taxes (Grant et al., 2010).

Living arrangements: Living arrangements refers to identification with one of the following: homeless, living in a shelter, living in a group home, living in nursing facility, living in campus housing, living with parents, staying with friends, or living with partner or spouse (Grant et al., 2010).

Outness: Outness refers to a person's self-reporting or expressing to society as transgender (Grant et al., 2010).

Preferred health care setting: Preferred health care setting referred to the kind of place most often used for sickness or health advice, such as an emergency room, doctor's office, health clinic, free health clinic, VA clinic/hospital, and alternative medicine provider (Grant et al., 2010).

Receipt of gender surgeries: Gender surgery is an umbrella term for surgical procedures for altering one's body to match that of his or her true gender identity (Hudson's FTM Resource Guide, 2013).

Relationship status: Relationship status refers to identification with one of the following groups: single, partnered, civil union, married, separated, divorced, or widowed (Grant et al., 2010).

Sexual orientation: Sexual orientation was related to the attraction for a particular gender (Brennan et al., 2012).

Smoking: Smoking refers to having ever smoked 100 cigarettes in your life (Grant et al., 2010).

Visual noncomformity: Visual noncomformity is the degree to which a transgender person can be identified as transgender based on visual indicators (Grant et al., 2010).

Assumptions

Assumptions in research are important for providing the focus for theories (Nwake, 2012). The major assumption of the social ecological model on which this study was premised was that multiple aspects of the social and physical environments were necessary for the application of the model (Stokols, 1992). This assumption was necessary because for this study the sociodemographic variables focused on the social and physical environments of transgender African Americans. Assumptions in research are also important for guiding argumentation, evidence generation, and conclusions (Nwake, 2012). Another assumption was that survey respondents answered truthfully. Participation in the NTDS was voluntary; anonymity and confidentiality were ensured, and participants could have withdrawn at any time without consequences. This assumption was necessary because dishonest survey respondents could have diminished data quality leading researchers to draw incorrect conclusion. Assumptions in research are also important for guiding the selection of research methodology (Nwake, 2012). An assumption of this research was that quantitative research was objective and did not

account for the subjectivity of the researcher. This assumption was necessary because researcher bias is a form of response bias that could have influenced the results.

Scope and Delimitations

Even though there were many aspects of sexual minority health that could have been the topic of this study, health disparities of transgender African American was chosen because it was one of the areas most lacking in existing literature. Additionally, of all the sexual minorities researched, transgender individuals had the worst health outcomes and being a racial minority increased the disparity (Grant et al, 2010). A contributing factor to health disparities was negative health seeking experiences (Winter, 2012), and social demography was a key in understanding health disparities (MDH, 2015). Therefore, this study sought to determine if correlations existed between trends in the social demography and negative health seeking experiences among transgender African Americans.

To pursue this determination, two inclusion criteria were chosen. The first inclusion criterion was that participants self-identify as transgender because the study examined only the transgender subset of the LGBT population. The second inclusion criterion was that participants selected Black or African American for race/ethnicity because the study examined this specific racial minority because of their worsened health outcomes.

The social ecological model was chosen because historically, researchers had implemented it when they wanted to examine health outcomes that had varying social and environmental contributing factors. Kumar et al. (2012) utilized the social ecological

model as a framework for determinants of Influenza in U.S.; Cassel (2010) utilized the model to understand and mitigate obesogenic factors in Samoan populations; and Golden and Earp (2012) did a review of 157 health education, health promotion, and health intervention studies from 2002 and 2012 that utilized the social ecological framework.

There were other health promotion theories such as the health belief model, transtheoretical model, social cognitive theory, theory of reasoned action, and theory of planned behavior. The health belief model was not chosen because it failed to take into account social influences (Schiavo, 2007). The transtheoretical model was not chosen because behavioral adoptions were not the focus of this research (Schiavo, 2007). The social cognitive theory was not chosen because learning and stability of behavior was not the focus of this research (Schiavo, 2007). The theory of reasoned action was not chosen because behavioral intent was not applicable to this research (Schiavo, 2007). The theory of planned behavior was not chosen because the assumption that research participants had the opportunity and resources to not have negative health seeking experiences did not hold true for transgender African Americans (Schiavo, 2007). This research has the potential to be generalized to the African American transgender population at large because of the large sample size 253, which was 20 participants fewer of the calculated minimum sample size further discussed in Chapter 3. However, this generalizability may be limited because the participants were not recruited using random sampling.

Limitations

The major limitation of this study was that the population was highly marginalized and many were still closeted; therefore, a representative sample might not

have been possible. However, in order to combat this, secondary data from the NTDS was utilized. Unfortunately, this posed yet another limitation of bias on account of the like-mindedness of survey participants as they all thought to participate in the NTDS. Additionally, the survey utilized convenience sampling as opposed to random sampling. This might have limited the generalizability of the results to the entire African American transgender population. Another limitation was that the survey was administered over a 6-month interval and provided a snapshot of different issues of transgenderism from September 2008 to March 2009 (Grant et al., 2010), which might or might not hold true in current times.

Significance

Research in sexual minority health, specifically health disparities of transgender individuals, is still essential. Transgender people have often been victimized and discriminated against when accessing health care, thereby contributing to the health disparities experienced by this population (Grant et al., 2010). This study had significance in three major ways. First, results indicating a correlation between the sociodemographics of transgender African Americans and negative health seeking experiences could allow health professionals to mitigate these experiences by targeting those who are at risk via their social demography, thereby helping to eliminate the health disparities seen in this population. Second, this research could also aid health professionals in understanding the unique requirements for providing health services for transgender people. The third way in which this research was significant was because of the potential for positive social change. Significant results yielded from this study could

improve the lives of transgender people by combating transphobia among health professionals and promoting culturally competent health care.

Summary

African American transgender individuals represented a minority subgroup within the transgender minority group within the LGBT sexual minority population. Racial bias presented a substantial additional risk of discrimination for transgender people of color in almost every area of health, which made their health care access and health outcomes drastically worse than nonminority transgender persons (Grant et al., 2010). Public health professionals should work to ensure that all people have access to health care no matter how marginalized they might have been (Schiavo, 2007). The results of this study could have provided a means of identifying those at highest risk of poor health outcomes resulting from disengagement from the health care system by determining what sociodemographic variables influenced the presence or absence of negative health seeking experiences. The differences in sociodemographic variables between African American transgender individuals with negative health seeking experiences and African American transgender individuals without negative health seeking experiences determined by this research had the potential for large positive social impact. This analysis of differences could have provided public health professionals with a deeper understanding of what is needed to care for a population such as this and also would have allowed them to target and tailor health approaches to mitigate any barriers that lead to health disparities. This original contribution to research on transgender heath could have also supported antidiscrimination policies such as those highlighted in the Affordable

Care Act, which prohibited sex discrimination in hospitals, facilities, and health programs that receive federal financial assistance (Services and Advocacy for GLBT Elders [SAGE], & National Center for Transgender Equality [NCTE], 2012). Following this chapter is Chapter 2, which contains a review of literature related to transgenderism and the health of transgender persons.

Chapter 2: Literature Review

Introduction

According to Healthy People 2020 (2011), there was a higher prevalence of HIV/STDs, victimization, mental health issues, lack of insurance, and suicide among transgender individuals than among others. These measures of higher prevalence indicated that health disparities existed among the transgender community. Additionally, researchers have found that these disparities were most severe among African American transgender individuals (Grant et al, 2010). This study's purpose was to identify which of 18 sociodemographic variables correlated with any of the six measures of health seeking experiences among African American transgender people. The determination of any correlations might have provided a way for public health professionals to target and tailor health approaches to mitigate negative health seeking experiences.

In order to explore the social demography of health seeking experiences among African American transgender individuals, first an understanding of the transgender experience was necessary. There was a general consensus among researchers that transgenderism stemmed from nonconformity between an individual's external sexual organs and his or her gender identity (AIDS Alert, 2011; Alegria, 2008, 2011; Brennan et al., 2012; Crosby & Pitts, 2007; Fitzpatrick et al., 2005; Grant et al., 2010; Kelleher, 2009; Kenagy, 2005; Peate, 2008; Wilson et al., 2010; Wyss, 2004). Risks associated with transgenderism included that this population was extremely marginalized and many remained closeted, that posed many negative psychosocial consequences; such as gender dysphoria and mental health issues (Algeria, 2011; Fitzpatrick et al., 2005; Peate, 2008).

Transgender people experienced stigma, discrimination, violence, gender dysphoria, loss of economic and employment opportunities, heterosexist experiences, and loss of relationships (Alegria, 2008, 2011; Crosby & Pitts, 2007; Grant et al., 2010; Kelleher, 2009; Peate, 2008). Some of these consequences have been experienced as early as teenage years leading to shame, fear, and self-consciousness (Wyss, 2004). These psychosocial consequences also led to barriers to receiving health care and negative health seeking encounters experienced by this population.

Grant et al. (2010), who created the NTDS Report on Health and Health Care, found that of the over 7,000 survey participants,

- 28% postponed medical care due to discrimination;
- 28% experienced harassment in a health care setting,
- 2% experienced violence in a health care setting,
- 19% were refused treatment, and
- 50% cited a lack of provider knowledge on caring for transgender individuals.

When it came to Black respondents, 21% reported being refused medical care, and 34% postponed care due to fear of discrimination (Harrison-Quintana et al., n.d.). There has been research on several transgender-related issues; however, I found no research on the social demography of African American transgender individuals in relation to their health seeking experiences. Therefore, this review of literature explored articles published on the sociodemographics of transgender individuals and the health seeking behaviors of transgender individuals. My intention for this study was to test for correlations between the two.

The review includes literature pertinent to the 18 independent sociodemographic variables of African American transgender people: visual nonconformity, outness, age, location, education, income, relationship status, living arrangements, employment, access to health insurance, preferred health setting, hormone therapy, gender surgeries, drug and alcohol abuse, tobacco use, suicide attempts, family support, and sexual orientation. It also addresses literature relevant to the six dependent health seeking experiences variables: denial of medical care, verbally harassed in a medical setting, physically attacked or assaulted in a medical setting, postponement of medical care due to fear of bias, discrimination by medical providers, and medical providers lack of knowledge. This review also includes literature related to methodology and opportunities and challenges for transgender health care in the conclusion due to the potential positive social impact.

Literature Search Strategies

A combination of strategies was used to gather information for the literature review. I conducted searches on CINAHL Plus with full text and Medline with full text in addition to Google Scholar, Psycinfo, Socinfo, and LGBT Life. For all research databases, a number of parameters were set. First, search results were limited to peer-reviewed articles, studies published from 2003 to 2015, using the keyword *transgender* in combination with the variables one at a time: *visual nonconformity, outness, age, location, education, income, relationship status, living arrangements, employment status, access to health insurance, preferred health care setting, hormone therapy, receipt of gender surgeries, drug and alcohol abuse, smoking, suicide attempts, family support, sexual orientation, denial of medical care, verbally harassed or disrespected in medical*

setting, physically attacked or assaulted, postponement of medical care, discrimination by medical providers, and *medical providers' lack of knowledge*. The Healthy People 2020 website was also viewed in order to determine the status of transgender health in America.

Bronfenbrenner's (1979) social ecological model was also researched in order to detail the theoretical framework I planned to use. Literature on the health of transgender African Americans was limited; therefore, literature was reviewed on health of transgender people in general and the literature that addressed transgender African Americans was included. Additional reviews were conducted on literature related to methods and opportunities and challenges for health care providers as the potential for positive social impact was combating transphobia among health professionals and promoting culturally competent health care. In this chapter I present the research according to the aforementioned independent and dependent variables. In instances where research on transgender African Americans could not be found, research on the general transgender population was included. In instances where transgender research could not be found, research on the entire LGBT population was included. Of the 533 research studies found related to transgender health, 77 were utilized for the literature review.

Theoretical Foundation

The theoretical framework for this study was Bronfenbrenner's (1979) social ecological model. This model illustrates the interchange among four levels: individual, relationship, community, and societal factors (CDC, 2015). The major assumption of the social ecological model on which this study was premised was that multiple aspects of

the social and physical environments were necessary for the application of the model (Stokols, 1992). The individual level explored the biological and personal factors associated with health seeking experiences (CDC, 2015). Utilizing the data from the NTDS, an example of an individual-level sociodemographic factor was age. The relationship level explored relationship factors associated with health seeking experiences (CDC, 2015). An example of a relationship level sociodemographic factor from the NTDS was relationship status. The community level explored settings (CDC, 2015). An example of a community level sociodemographic factor from the NTDS was location. The societal level looks at social and cultural norms associated with health seeking experiences (CDC, 2015). An example of a societal level sociodemographic factor from the NTDS was visual nonconformity.

This model was most applicable over other theories such as: the health belief model, transtheoretical model, social cognitive theory, theory of reasoned action, and theory of planned behavior; because the varying levels of sociodemographic variables of transgender African Americans could determine who among that population is at risk for negative health seeking experiences

Literature Review

Visual Nonconformity

Visual nonconformity is the degree to which a transgender person could be identified as transgender based on visual indicators (Grant et al., 2010). The report on the NTDS continually highlighted visual nonconformity as a risk factor for transgender bias, smoking, and suicide attempts (Grant et al., 2010), though an explicit link between visual

nonconformity and health seeking experiences could not be found. Furthermore, no other research could be found on transgender individuals in relation to visual nonconformity utilizing the aforementioned research strategies. The report on the NTDS indicated that of the 6,456 transgender respondents, 22% were visual nonconformers (Grant et al., 2010). However, no measures were found that examined the percentage among transgender African American. The aim of this study was to determine if correlations existed between visual nonconformity as a sociocultural factor and negative health seeking experiences.

Outness

Outness, or the self-reporting or expressing to society as transgender (Grant et al., 2010), had both potentially positive and negative impacts; therefore, conflicting research was found. In the NTDS, Black respondents had the lowest rate of being out to family at 46% (Grant et al., 2010). Positive aspects of true gender identification included the following: congruency with self, enhanced interpersonal relationships, personal growth and resiliency, increased empathy, perspectives on both sexes, living beyond sexual binary, increased activism, and connection with the LGBT communities (Riggle et al., 2011, Schrock et al., 2005). Strain and Shuff (2010) also found outness to be inversely related to depression and anxiety and linearly related to self-esteem. Disclosure as transgender had also been associated with more social support when compared to transgender individuals with lower levels of outness (Maguen, Shipherd, Harris, & Welch, 2007). However, one of the negative impacts of coming out were that higher levels of outness were associated with an increased likelihood of cutting behaviors

(Walls, Laser, Nickels, & Wisneski, 2010); however, this study encompassed all sexual minorities and was not specific to transgender individuals.

Loss of relationships had been cited as a psychosocial consequence of transgenderism disclosure (Alegria, 2008). Another negative impact was that being out to medical professionals could have increased experiences of discrimination (Grant et al., 2010). Due to outness, there was an 8% increase of denial of medical service, a 3% increase in harassment in an ambulance, and a 1% increase in being attacked in a hospital (Grant et al., 2010). Even though these measures provided a direct correlation between outness and health seeking experiences, these measures were not exclusive to transgender African Americans, nor did they explore all 6 of the health seeking experience explored in this study.

Age

Age in its traditional meaning in relation to transgender health was assessed, but the review of literature also included age of self-identification as transgender and age of first transgender related medical treatment. It was the expectation that older humans have more health issues than younger humans. Many transgender people over the age of 65 made this self-determination during times when transgenderism was more stigmatized than it has been since, which resulted in many transgender people hiding their identities and coming out later in life (SAGE, & NCTE, 2012). The problem lies in the challenges transgender older adults face when accessing health care namely "a health care system and national aging network that were ill-prepared to provide culturally competent care" (SAGE, & NCTE, pg. 1). Authors of the University of Washington's 2011 Aging and

Health Report found that 33% of older transgender adults reported being in poor health and 22% could not afford to seek health care (Fredriksen-Goldsen et al., 2011). Furthermore, researchers found that aging providers were less tolerant of transgender individuals than the general health care system (Mjelde-Mossey, 2009). Older transgender adults also had lower health-related quality of life when compared to their younger counterparts (Motsman, Meier, Ponnet, T'Sjoen, 2012). Where aging fell in rank of sociodemographic risks of negative health seeking experiences had yet to be determined.

Transgender youth also often experienced assault and harassment (Dietert, & Dentice, 2013; Sausa, 2005; Wyss, 2004,). Researchers produced results from the NTDS that indicated that 78% of K-12 students who identified as transgender reported being harassed, 35% being physically assaulted, and 12% being sexually assaulted (Grant et al., 2010). The age of persons self-identifying as transgender has fallen during the last decade to even preteen or prepubescent ages (Milrod, 2012); at the time of the NTDS, the authors reported that most transgender individuals transitioned between the age of 18 and 44 (Grant et al., 2010). This result could have been reflected by the administration of the survey to transgender individuals 18 years old and older. NTDS' researchers also showed that transgender men in the sample transitioned earlier than transgender women (Grant et al., 2010). Erich, Tittenworth, and Kersten (2010) found that when comparing people belonging to minority groups to White people, 73.3% of their minority sample compared to 68.3% of their White sample became aware of true gender before the age of 12, 6.7% of their minority sample compared to 14.3% of their White sample became aware of true

gender between the age of 12 and 21 years old, and 15.6% of their minority sample compared to 12.7% of their White sample became aware of true gender after the age of 21. Additionally, there have been cases around the world where before the age of 18 (the legal age for gender surgeries in the United States) transgender youth diagnosed with gender dysphoria have received gender surgeries (Milrod, 2012). There were no cases found of adolescent African American transgender individuals receiving gender surgeries and no link found between age of self-identifying and age of first transgender related treatment to health seeking experiences. This study attempted to address this gap in the literature on transgender health.

Location

This research utilized secondary data from the NTDS. The NTDS provided mostly descriptive statistics with few links between the sociodemographic data and the health seeking experiences data collected. The survey was administered in all 50 states, Puerto Rico, Guam and the U.S. Virgin Islands. As for location the following trends for 24 state and 5 regions were detected. Of the states assessed, Tennessee, Oregon, Connecticut, and Florida had the highest rates of medical service refusal at 28%, 22%, 22%, and 22% respectively. Michigan, Oregon, Georgia, Florida, and New York had the highest rates of postponing medical services due to discrimination at 35%, 33%, 31%, 29%, 29%, respectively. North Carolina, Illinois, Virginia, and Massachusetts had the lowest rates of medical service refusal at 11%, 11%, 13%, and 14%, respectively. Indiana, Wisconsin, New Jersey, Texas, and Virginia had the lowest rates of postponing medical services due to discrimination at 18%, 18%, 19%, 19%, and 19&, respectively

(Grant at al., 2010). These were measures for only 2 of the 6 health seeking experiences in this study. Verbally harassed or disrespected in medical setting, physically attacked or assaulted, discrimination by medical providers, and medical providers' lack of knowledge were not explored; furthermore, the aforementioned measures were indicative for the entire transgender sample not exclusive to only African American transgenders. The 5 regions highlighted in the NTDS report were the Mid-Atlantic region, the Midwestern region, the New England region, the Western region and the Southern region. Data were examined at the regional level to encompass states and territories with too few respondents for meaningful analysis (Grant et al., 2010). For the Mid-Atlantic region, 17% were refused medical care and 27% postponed medical care due to discrimination (Grant et al., 2010). For the Midwestern region, 19% were refused medical care and 27% postponed medical care due to discrimination (Grant et al., 2010). For the New England region, 15% were refused medical care and 27% postponed medical care due to discrimination (Grant et al., 2010). For the Western region, 19% were refused medical care and 31% postponed medical care due to discrimination (Grant et al., 2010). For the Southern region, 22% were refused medical care and 27% postponed medical care due to discrimination (Grant et al., 2010). The Western region had 31% reporting postponed medical care due to discrimination while all other regions tied at 27% (Grant et al., 2010). The South had the highest rate of refusal of medical care at 22%, while the New England region had the lowest rate at 15% (Grant et al., 2010). Verbally harassed or disrespected in medical setting, physically attacked or assaulted, discrimination by medical providers, and medical providers' lack of knowledge were not explored; furthermore, the

aforementioned measures were indicative for the entire transgender sample not exclusive to only transgender African Americans. Additional research was found relating location to transgender health issues. Kenagy, (2005), found that 26% of transgender individuals surveyed were denied medical care, and 52% had difficulty accessing 1 or more health services in the previous year. This study was not exclusive to transgender African Americans. In Chicago, 12%, 3%, and 14% of transgenders surveyed were refused routine care, mental health care and emergency health care respectively (Kenagy, & Bostwick, 2005). In Virginia 20% of transgender individuals surveyed reported having to educate their health care providers about transgender health needs (Bradford, Reisner, Honnold, & Xavier, 2013). These studies were not exclusive to transgender African Americans. However, researchers of one study based in Massachusetts found that the difference in health seeking experiences were minimal between transgender individuals and cisgender individuals (Conron, Scott, Stowell, & Landers, 2012). The authors of the study acknowledged that the observations made could have resulted from selection bias, misclassification bias, unexamined effect modification, limited context-specific variability in outcomes, and insufficient breadth or outcomes (Conron et al., 2012). Ultimately, even though links between location and health seeking experiences were found in existing literature, no study was found that explored location in terms of all 6 health seeking experiences detailed in this study, no study was found that examined transgender African Americans exclusively.

Education

Education referred to the highest degree or level of school completed (Grant et al., 2010). Authors of reports from the NTDS indicated that 13% of transgenders with less than a high school education utilized the emergency room (ER) for primary care (Grant et al., 2010). Other reports indicated that higher education levels correlated to positive health outcomes and better quality of life (Grant et al., 2010; Motman et al., 2012); and many studies were in agreement with the CDC's Special Feature on Socioeconomic Status and Health that more educated people tended to be healthier (CDC, 2011; Krueger, Hummer, & Chang, 2015; Picker, 2015). However, even though among the sample of over 6000 transgender individuals, almost 50% reported having bachelors or masters degrees when compared to 27% of the general population at that time, at each educational attainment respondents had lower incomes than the general population (Grant et al., 2010). This indicated that a higher level of education did not shield transgenders from discrimination, this could hold true for discrimination when seeking health care. None of the aforementioned measures were exclusive to transgender African Americans and no explicit link was found between educational attainment and health seeking experiences. In the study produced by Erich, Tittsworth, and Kersten, (2010), they indicated that White transgenders have higher levels of education than transgender individuals of color. No examination of measures in relation to health seeking experiences was detected in their study either.

Income

Income referred to the current gross annual household income before taxes (Grant et al., 2010). Many researchers agreed with the CDC's Special Feature on Socioeconomic Status and Health that people with higher incomes tended to be healthier (CDC, 2011, Picker, 2015). However, the researchers on the NTDS reported that from the sample of 6450, transgender individuals were 4 times as likely to have a household income that was $10,000 per year less than comparable persons in the general population (Grant et al., 2010). Additionally, White transgender individuals have reported higher annual incomes than minority transgenders (Erich et al., 2010). Assessments of transgender populations indicated that as many as 60 % of transgender individuals lived below the poverty level (Feldman, & Bockting, 2003; Xavier, 2006). No further research was found that correlated income levels to health among transgender individuals and none were found that correlated income levels to health seeking experiences.

Relationship Status

Relationship status referred to identification with one of the following groups: single, partnered, civil union, married, separated, divorced or widowed (Grant et al., 2010). The authors that drafted the report for the NTDS indicated that 36% of the sample was single, 27% were partnered, 1% were in a civil union, 22% were married, 3% were separated, 11% were divorced, and 1% were widowed (Grant et al., 2010). According to results from the NTDS, 45% experienced termination of relationships with partners after disclosing transgender transition (Grant et al., 2010). The aforementioned measures from the NTDS were not exclusive to transgender

African Americans. Erich et al. (2010) found that when comparing transgender minorities to transgender Whites, 13.3% of their minority sample were cohabitating compared to 9.5% of their White sample, 13.3% of their minority sample were married compared to 34.9% of their White sample, 64.4% of their minority sample were single compared to 31.7% of their White sample, 0% of their minority sample were separated compared to 3.2% of their White sample, and 6.7% of their minority sample were cohabitating compared to 20.6% of their White sample. Transgender individuals in a relationship experienced higher health related quality of life when compared to their single counterparts (Motsman, Meier, Ponnet, T'Sjoen, 2012; Weyers, et al., 2009; Wierckx, et al., 2011). No research was found that indicated where relationship status ranked among other sociodemographics in terms of risk of negative health seeking experiences.

Living Arrangements

Living arrangements referred to identification with one of the following: homeless, living in a shelter, living in a group home, living in nursing facility, living in campus housing, living with parents, staying with friends, living with partner or spouse, living in own house, apartment or condo, or house (Grant et al., 2010). Grant, et al., (2010), at the time of the NTDS, found that 32% of transgender individuals owned their residence, 43% rented, 8% resided with a partner or spouse who paid, 4% resided with friends or family temporarily, 7% lived with parents, 4% lived on campus or university housing, 0.1% lived in a nursing or adult care facility, 0.5% lived in a group home, and 1.7% of respondents were homeless or living in a shelter. According to the report from

the NTDS, 19% of respondents reported being homeless at some point in their lives due to being transgender and 2% of the sample was currently homeless; a rate almost twice the national rate (Grant et al., 2010). Transgender African Americans had the highest rate of homelessness among all racial groups, the highest rate of living in group homes or foster care, the lowest rate of residence ownership, the highest rate of being evicted, the highest rate of sleeping on friends' couches, the highest rate of sex with others for temporary room and board, and the highest rate of harassment in a shelter (Grant et al., 2010). With the exception of transgender American Indians, transgender African Americans had the highest rate of living with family and friends when compared to the other racial groups, living with family members, having to move into less expensive residences, being denied a home or apartment, having to move back in with family or friends, using equity in home to pay for living expenses, outright denial of shelter access, physical assault at a shelter, sexual assault at a shelter, and being forced to live as the wrong gender to keep shelter access (Grant et al., 2010). The authors of the report also found that transgender individuals who experienced homelessness were more vulnerable to mistreatment in public settings (Grant et al., 2010). It was assumed that the public settings are inclusive of those providing health and medical services. The authors of another study emphasized the disparate homelessness rate by affirming that even though the LGBT community represented 3-5% of the American population, 35% of homeless youth were LGBT (Yu, 2010); furthermore a sample taken from a New York based transitional housing facility indicated that 11% of residents self-identified as transgender (Nolan, 2012). The authors from another study found that among transgender women of

African American, Hispanic, and Asian/Pacific ethnic groups, transgender African American women had the highest rates of living in halfway houses, treatment centers, being homeless, living in shelters, or on the street (Nemoto, Bodeker, Iwamoto, 2011). The aforementioned research was exclusive to transgender women with histories of sex work. In terms of campus living, 5% of the NTDS sample was denied campus housing, 20% were denied gender-appropriate housing, and 100% were denied access to gender appropriate bathroom facilities (Grant et al., 2010). The aforementioned measures were not exclusive to the African American respondents. Transgender individuals also found barriers in absence of trans-affirming language, campus training on concerns of transgender students, trans-affirming campus health care access and transgender allies on campus (Singh, Meng, & Hansen, 2013). Students reported lack of trans-affirming environments of on-campus health care facilities; namely lack of provider knowledge. The other 5 health seeking experiences explored in this study were not addressed, thus providing an opportunity to address that gap in the research literature.

Employment

Employment status referred to identification with one of the following: full-time, part-time, more than one job, self-employed, unemployed, on disability, student, retired, or home maker (Grant et al., 2010). The authors of the report from the NTDS indicated double the rate of unemployment, with quadruple the rate for transgender individuals of color; those unemployed reported double the rate of doing sex work or selling drugs, twice the rate of being homeless, 85% more incarceration, double the HIV rate, and double the rate of drinking and drug abuse (Grant et al., 2010). The NTDS' authors also

reported that the 26% becoming unemployed due to being transgender, reported quadruple rate of homelessness, 70% more alcohol and drug abuse, 85% more incarceration, double the rate of sex work and drug dealing and double the HIV rate when compared to those who did not lose a job due to transgender bias (Grant et al., 2010). The survey analysis revealed that 36% of respondents who reported having lost their jobs due to bias also reported being denied medical service (Grant et al, 2010). However, this could be attributed to loss of employer provided medical benefits. Unemployed transgenders also experienced lower health related quality of life when compared to their employed counterparts (Motsman, Meier, Ponnet, T'Sjoen, 2012). The researchers of a study based out of Virginia yielded results indicating that white-collar positions and longevity in job were factors that were correlated to keeping jobs after transitioning (Xavier et al., 2013). Authors of another study pointed out that most colleges lacked the sufficient knowledge and resources to aid transgender students with career development; a service that had already been modified to help students with disabilities, cultural and language barriers and even the gay, lesbian, and bisexual students (Scott, Belke, & Barfield, 2011). No direct measure was found, among the literature reviewed, between employment and the 6 health seeking experiences explored in this study.

Access to Health Insurance

Access to health insurance referred to having health care and the type of health insurance usually used to cover doctor and hospital bills (Grant et al., 2010). Overall, transgender individuals were less likely than the general population to have health insurance or be insured by an employer and more likely to utilize Medicare and Medicaid

(Grant et al., 2010). Transgender African Americans had the worst health insurance coverage compared to all other racial groups (Erich et al., 2010; Grant et al, 2010). However, when compared to White transgender individuals, the difference in private insurance was 27% in favor of whites, the difference in Medicaid and Medicare 13% in favor of Blacks, and the difference in being uninsured was 14% in favor of Blacks (Grant et al., 2010). From the NTDS Report, 48% and 50% of transgender individuals postponed medical care because they could not afford it when sick or injured or pursuing preventive care, respectively (Grant et al., 2010). The authors of the NTDS found that 37% of NTDS respondents with private insurance postponed medical care when sick or injured, 46% with public insurance and 86% with no insurance (Grant et al., 2010). They also found that 39% of NTDS respondents with private insurance postponed preventive care, 44% with public insurance and 88% with no insurance (Grant et al., 2010). This measure was not exclusive to the African American respondents. Authors of a Virginia based study found that 29% of the sample did not have health insurance and also found that 41% encountered discrimination when attempting to access health insurance; 27% eventually received health insurance, while 14% remained without health insurance due to discrimination (Bradford, Reisner, Honnold, & Xavier, 2013). Unfortunately, even when insured, most insurance policies exclude transgender related care (Gorton, 2006). No measures or research was found that correlated access to health insurance to the 6 health seeking experiences used in this study.

Preferred Health Setting

Preferred health care setting referred to the kind of place most often used for sickness or health advice (Grant et al., 2010). The authors of the report from the NTDS indicated that 60% of transgender individuals primarily utilized a doctor's office, 28% utilized health centers and clinics, and 4% utilized the emergency room (Grant et al., 2010). A link was highlighted between preferred medical setting and denial of medical care, where 24% of doctors' offices and hospital users had this negative health seeking experience, 13% of emergency room users, 11% of mental health clinic users, 5% of emergency medical transport (EMT)s and 3% of drug treatment program users (Grant et al, 2010). The NTDS' researchers also found 1% of NTDS respondents reported being attacked in emergency rooms and 2% reported being attacked in doctors' offices (Grant et al., 2010). None of the aforementioned measures were exclusive to transgender African Americans. Authors of a Virginia based study reported results that showed that when lacking insurance, transgender individuals utilize the ER for care (Xavier et al., 2013). Researchers have also found that approximately 40% of transgender persons in the United States lack a primary care physician; however, almost 50% of those with a primary care physician have not informed their insurance carrier about being transgender (Feldman & Bockting, 2006). This study could potentially fill some gaps in the existing literature related to preferred health settings of transgenders by attempting to find correlations between preferred health settings and all 6 health seeking experiences.

Hormone Therapy

Hormone therapy introduces hormones of one's true gender in order to develop the desired secondary sexual characteristics (Hudson's FTM Resource Guide, 2013). According to the researchers from the NTDS, hormone therapy was more utilized than gender surgeries; 62% of respondents indicated having some form of hormone therapy and 23% more reported wanting it (Grant et al., 2010). In 2009, Sanchez, Sanchez, and Danoff concluded that as many as 63% male-to-female transgender individuals utilized hormones unsupervised by a medical professional (Sanchez, Sanchez, & Danoff, 2009). This measure was not surprising as transgender-related hormone therapy is not widely viewed as a medical necessity by medical or insurance providers (Xavier et al., 2013). However, a major limitation of the Sanchez, Sanchez, & Danoff study was that the study was subjected to sample bias as it only included respondents from New York City and excluded female-to-male transgender individuals. Researchers have also indicated that use of hormones improved the health related quality of life among transgender individuals (Colizzi, Costa, Pace, & Todarello, 2013; Gorin-Lazard, 2012; Meier, Fitzgerald, Pardo, & Babcock, 2011; Motsman, Meier, Ponnet, T'Sjoen, 2012; Newfield, Hart, Dibble, & Kohler, 2006). In addition to improvement of health related quality of life, after medical and surgical transitions, family relationships were reported to improve (Grant et al., 2010). However, one researcher correlated hormone therapy to physical abuse (Nuttbrock et al., 2014). The physical abuse was not explicitly inclusive or exclusive of medical settings and was only limited to transgender women. Additionally hormone therapies could lead to deep vein thrombosis, pulmonary embolism, altered liver

function, meningioma and more (Knight & McDonald, 2013; Peate, 2008; Wierckx et al., 2011). No research was found on any relationships between hormone therapies and health seeking experiences among transgenders, much less African American transgenders.

Gender Surgeries

Gender surgery was an umbrella term for surgical procedures for altering one's body to match that of his or her true gender identity (Hudson's FTM Resource Guide, 2013). The majority of respondents of the NTDS reported wanting gender surgeries (Grant et al., 2010). However, most gender surgeries were not covered by insurance and typically carried a high price tag. According to results yielded from the NTDS, among male to female transgender individuals: 21% reported having breast augmentation surgery and 53% reported wanting it, 25% reported having orchiectomy (testicle removal) and 61% reported wanting it, and 23% reported having vaginoplasty and 64% reported wanting it (Grant et al., 2010). According to results from the NTDS, among female to male transgender individuals: 43% reported having chest surgery and 50% reported wanting it, 21% reported having a hysterectomy and 58% reported wanting it, 4% reported having metoidioplasty (creation of penis from clitoris) and 53% reported wanting it, and 2% reported having phalloplasty and 27% reported wanting it (Grant et al., 2010). These measures were not exclusive to African Americans and no mention was made on whether receipt of gender surgeries influenced health seeking experiences. Research has shown however, that receipt of facial feminization and other gender surgeries has improved the health-related quality of life of transgender individuals (Ainsworth & Spiegel, 2010). In addition to improvement of health related quality of life,

after medical and surgical transitions, family relationships improved (Grant et al., 2010). However, no research was found that correlated receipt of gender surgeries to any of the 6 dependent health seeking experiences variables in this study.

Alcohol and Drug Abuse

Drug and alcohol abuse referred to intake of alcohol or use of drugs to cope with mistreatment faced as a transgender person (Grant et al., 2010). According to the NTDS' researchers, 8% of the sample was currently abusing drugs and alcohol, and 26% used or have used alcohol and drugs over their lifetime to cope with transgender based discrimination and bias (Grant et al., 2010). Of transgender individuals employed in sex work and drug sales 19% reported currently using drugs and alcohol and 36% reporting ever using drugs and alcohol (Grant et al., 2010). Of transgender individuals unemployed due to discrimination 12% reported currently using drugs and alcohol and 28% reported never using drugs and alcohol (Grant et al., 2010). Among those in the NTDS study who had been physically attacked, 15% used alcohol and drugs and among those sexually assaulted, 16% used alcohol and drugs (Grant et al., 2010). Of those who reported drug and alcohol use, 4% were 65 years and older, and 9% were between the ages of 18 and 44 years old (Grant et al., 2010). These measures were not exclusive to transgender African Americans nor were the discrimination and bias reported explicitly health setting based. Spicer, (2010) indicated in a study that as many as 26-62% of transgender women had a substance abuse disorder. Lombardi, (2007) found that 17% and 30% of transgender individuals reported using amphetamines, methamphetamines, cocaine, crack, or

heroin in the past 30 days and past year respectively. The author also found that 36% and 29% used marijuana in the past 30 days and past year respectively (Lombardi, 2007). Furthermore, alcohol, tobacco and marijuana were the most popular substances used by the transgender individuals in the study (Lombardi, 2007). No research was found that provided any associations between alcohol and drug abuse and health seeking experiences.

Tobacco Use

Tobacco use referred having ever smoked 100 cigarettes in your life (Grant et al., 2010). Transgenders reported smoking 10% more than the general U.S. population; also, transgender men and cisgender men smoked more than transgender women and cisgender women (American Lung Association, 2010; American Lung Association, 2010; Grant et al., 2010). The results from the NTDS indicated that visual conformers were less likely to be smokers than visual nonconformers by 10%; also 40% and 45% of transgender individuals who had been physically and sexually assaulted respectively smoked (Grant et al., 2010). This suggested that stressors from discrimination that nonconformers experience may lead to increased rates of smoking, therefore, a link between negative health seeking experiences and smoking may be implied. However, these measures were not exclusive to transgender African Americans.

Suicide Attempts

Nuttbrock et al. (2009) found that attempted suicide rates among transgender individuals were much higher than the general population at 28-35%. Clements-Noelle et

al., (2006) aimed to determine predictors of suicide attempts among 515 transgender individuals. The researchers found that younger age, depression, a history of substance abuse treatment and forced sex, and gender-based discrimination and victimization were all independently associated with suicide attempts (Clements-Noelle, Marx, & Katz, 2006). In order to study the interactive effects of gender role and sexual orientation in regards to suicide risk and related pathopsychology, Fitzpatrick et al. (2005) utilized 77 sexual minorities in a cross-sectional study. The researchers found that gender-role or not having congruency between natal sex and gender identity was a unique predictor of suicidal symptoms (Fitzpatrick et al., 2005). Maguen and Shipherd, (2010), examined the frequency and predictors of suicide attempts among transgender individuals. They concluded, via the survey of 153 transgender participants, that female sex assigned at birth, psychiatric hospitalization, and having experienced transgender related violence are factors associated with attempting suicide. The report from the NTDS indicated that 41% of the 6450 respondents at some time attempted suicide, a rate 25 times higher than the general population (Grant et al., 2010). The attempted suicide rate of 41% rose to 44%, 44%, 51%, 55%, 61%, and 64% for visual nonconformers, those that were out, having low household income, being harassed or bullied in school, being a victim of physical assault, and of sexual assault respectively (Grant et al., 2010). According to authors of the NTDS, transgender African Americans had higher attempted suicide rates than Whites or the general population as a whole (Grant et al., 2010). One possible contradiction was that research has shown that transgender individuals in receipt of hormone therapy and gender surgeries had better quality of life (Ainsworth & Spiegel, 2010; Motsman, Meier,

Ponnet, T'Sjoen, 2012; Newfield, Hart, Dibble, & Kohler, 2006); however, according to the NTDS, those who medically transitioned reported a 12% increase in suicide attempts and those who surgically transitioned reported a 4% increase when compared to transgenders who have not (Grant et al., 2010). One possible explanation is that the suicide attempts occurred prior to transition measures as ages were not recorded for receipt of hormone therapies nor gender surgeries. It is unknown whether these measures hold true for transgender African Americans.

Family Support

Family Support referred to strength of family, partner, and friend relationships after disclosing transgender transition (Grant et al., 2010). Forty three percent of respondents of the NTDS maintained the majority of family bonds, and 70% of respondents indicated that communication with children continued after disclosing transgender status (Grant et al., 2010). However, 57% of respondents reported familial rejection after disclosing transgender transition, 29% experienced limited contact with children due to other parent, and 13% experienced loss or limited contact with children due to court involvement (Grant et al., 2010). None of the aforementioned measures were exclusive to transgender African Americans and none have been linked to health seeking experiences. However, with the exception of transgender American Indians, transgender African Americans reported the lowest rates of improved family relationships (Grant et al., 2010). This low rate of improvements could be due to transgender African Americans reporting the highest level of family support being just as strong after coming out at 55% (Grant et al., 2010). Also with the exception of transgender American Indians,

transgender African Americans had the lowest rates of being directly rejected by their children (Grant et al., 2010). Transgender African Americans also reported the lowest level of familial rejection among ethnic minorities and a 5% higher rate of improved parenting situations when compared to transgender Whites (Grant et al., 2010). Transgender African Americans reported the highest rates of indirect limitation or denial of relationships with their children by ex-partner/spouse and courts at 33% and 29% respectively when compared to all other ethnic groups (Grant et al., 2010). With the exception of transgender Asians, transgender African Americans had the lowest rate of loss of close friendships after disclosure when compared to all racial groups (Grant et al., 2010). Erich et al. (2010) showed that 80% of transgender individuals in their study reported satisfactory, very good, or excellent support from significant others after coming out, 78% of transgenders in their study reported satisfactory, very good, or excellent support from significant others after coming out, 77.1% of transgender individuals in their study reported satisfactory, very good, or excellent support from mother others after coming out compared to 64.9% from fathers, 71.9% of transgender individuals in their study reported satisfactory, very good, or excellent support from siblings after coming out, 77.3% of transgender individuals in their study reported satisfactory, very good, or excellent support from relatives after coming out, and 92.6% of transgender individuals in their study reported satisfactory, very good, or excellent support from friends after coming out. The aforementioned measures were not exclusive to transgender African Americans. However, the researchers did indicate that transgender individuals of color had higher support from significant others and friends when compared to transgender

Whites (Erich et al., 2010). In terms of health, family acceptance had been associated with better health outcomes (Ryan et al., 2010). This study could potentially find the risk of negative health seeking experiences associated with family support.

Sexual Orientation

Sexual orientation was related to the attraction for a particular gender (Brennan et al., 2012). According to the NTDS report, 21% of transgender individuals identified as gay or lesbian, 23% as bisexual, 20% as queer, 21% as heterosexual, 4% as asexual, and 11% reported as other (Grant et al., 2010). These measures were not exclusive to African Americans. Researchers from another study indicated that of 45 transgender individuals of color and 63 transgender White individuals, 2.2% of transgender minorities compared to 30.2% of transgender White individuals reported as lesbian, 11% of minority transgender individuals compared to 7.9% of White transgender individuals reported as gay males, 8.9% of minority transgender individuals compared to 25.4% of White transgender individuals reported as bisexual, and 68.9% of minority transgender individuals compared to 27% of White transgenders reported as straight (Erich et al., 2010). No research was found that attempted to determine associations between the sexual orientation of transgender individuals and their health seeking experiences.

Denial of Medical Treatment

Denial of medical care was one of the six health seeking experiences to be assessed and 19% of transgender respondents in the NTDS reported being denied medical service by doctors and other health care providers; for African American or Black respondents the percentage rose to 21% (Grant et al., 2010). The researchers of one

Virginia based study found that not only were some doctors unwilling to treat, once transgender status is revealed to some doctors, transgender status becomes the focus of care due to psychological concerns rather than the illness or condition they initially went in for (Xavier et al., 2013). No study was found that examined the sociodemographics of those who experience denial of medical care.

Verbally Harassed/Disrespected in a Medical Setting

Verbal harassment in a medical setting was yet another health seeking experience to be analyzed in this study and 28% of transgender respondents in the NTDS reported being verbally harassed in medical settings (Grant et al., 2010). The authors of the NTDS report also indicated that 25% were harassed in the doctor's office or hospital, 16% reported harassment in the emergency room, 12% reported this in the mental health clinic, and 7% in the ambulance or EMT (Grant et al., 2010). These measures were not exclusive to transgender African Americans nor was further research found that associated any sociodemographics with this negative health seeking experience.

Physically Attacked/Assaulted in a Medical Setting

To be physical attacked or assaulted in a medical setting was an unfortunate health seeking experience to be had by any American but 2% of transgender respondents in the NTDS reported being physically attacked in a medical setting and 6% of transgender African Americans reported this negative health seeking experience; this was higher than all other racial groups (Grant et al., 2010). Of the total NTDS sample, 1% also reported being physically assaulted in the emergency room, 1% reported this in the mental health clinics, and 1% in ambulance or EMT (Grant et al., 2010). "This was my

hell': the violence experienced by gender nonconforming youth in US high schools" was a research article written by Wyss in 2004 that expanded upon violence against transgender individuals, inclusive of health settings. This article highlighted that the negative psychosocial consequence of transgenderism, i.e., violence, can begin as early as in the teen years (Wyss, 2004). No further research was found that attempted to detect correlations between sociodemographics and this health seeking experience among transgender African Americans.

Postponement of Medical Care due to Fear of Bias

Postponement of medical care, even for preventive services, could be a potentially dangerous practice; however, 25% of the NTDS respondents reported postponing medical care due to fear of discrimination from medical providers and this percentage increased to 34% among transgender African Americans surveyed (Grant et al., 2010). Approximately 70% of transgender men in the United States reported that they delayed seeking care because of fear of discrimination from health care professionals (Newfield, Hart, Dibble, & Kohler, 2006). No further research was found that associated sociodemographic with this health seeking experience among transgender African Americans.

Discrimination by Medical Providers

In general, medical providers were supposed to be oath driven professionals sworn to do no harm; unfortunately, 28% of the NTDS respondents avoided medical treatment due to experiences of discrimination and disrespect by medical providers and 33% avoided preventive care (Grant et al., 2010). The authors of the report from the NTDS indicated that of the sample of 6450 transgender individualss, 24% reported

discrimination by medical providers in a doctor's office or hospital, 13% reported this in an emergency room, 11% in mental health clinics, and 5% in an ambulance or EMT (Grant et al., 2010). Authors of a Virginia based study reported that all of the female to male participants reported emotional and physical pain due to insensitivity of gynecologists (Xavier et al., 2013). The author of another study found that 60% of transgender individuals reporting to a drug or alcohol treatment program experienced discrimination from facilities' staff (Lombardi, 2007). Shires and Jaffee (2015), found that being native American, identifying as queer or asexual, achieving a graduate degree, living fulltime in nonbirth gender, receipt of hormone therapies or gender surgeries, and possession of preferred gender i.e. were associated with experiences of health care discrimination; while being 45 years old or older or earning over $60,000 annually were associated with decreased risk of health care discrimination. This study was not exclusive to transgender African American, did not explore all 18 sociodemographic variables of this study and was only inclusive of female-to-male transgender individuals.

Medical Provider' Lack of Knowledge

Transgender individuals having to educate practitioners about transgender health was due to medical providers' lack of knowledge. Fifty percent of NTDS respondents reported having to educate health care providers about aspects of transgender care (Grant et al., 2010). However, this measure was not exclusive to transgender African Americans. Researchers of a Virginia based study found that some doctors have admitted to not being trained on transgender care (Xavier et al., 2013). In 2011, Algeria published a study in the Journal of the American Academy of Nurse Practitioners aimed at educating nurse

practitioners on the definition and range of transgenderism, social influences on transgender persons, and health care for transgender persons and found that there was a lack of knowledge on the part of nurse practitioners in regards to transgender health. Brennan et al. (2012) aimed to address the gap in literature regarding sexual minority concepts in nursing curricula. To accomplish this, over 30 articles were reviewed. The researchers found that gaps in nurses' knowledge consisted of: life span perspectives on developmental needs and their impact on health concerns, health promotion and disease prevention in regard to the uniqueness of sexual minorities, mental health concerns, specific needs of the transgender population, barriers to health care, interventions and resources, and legal and policy issues of sexual minorities (Brennan, et al., 2012). The Journal of the American Medical Association published an article by Juno Obedin-Maliver and others in 2011. The research presented in this article explored the reported hours of LGBT-related curricular content among 186 medical schools in the United States and Canada. The researchers found that the majority of schools did not cover topics in the required curriculum that were LGBT related (Obedin-Maliver, et al., 2011). In 2009, Rondahl conducted a study in which 124 medical and nursing students were surveyed to determine their knowledge about homosexuality. Upon analysis of the data, the researcher concluded that there was a deficit in homosexual knowledge across the board of the sample irrespective of gender or religion (Rondahl, 2009). Limitations of this study as it relates to this study were that the researchers focused on Lesbians, Gays, Bisexuals, and Transgenders as opposed to transgender individuals exclusively, and the study was based in Sweden so the results might not hold true for the transgender

population in America. Researchers from the AIDS Research Institute sought to investigate the high HIV Prevalence in the transgender African American community in San Francisco. Utilizing a quantitative survey with 71 participants the researchers revealed that African American transgender individuals have extremely high HIV prevalence, mental health issues, experience insensitivity and ignorance from medical providers and need increased access to transgender specific resources and services (Rose, Scheer, Balls, Page-Schafer, Farland, 2008). Samuel and Zaritsky, (2008), offered case scenarios detailing the unpreparedness of some health care professionals when treating transgender patients. Their study also provided secondary statistics highlighting the worsened health outcomes of African American transgender individuals (Samuel, & Zaritsky, 2008). To fill existing gaps in the current literature, this study explored all 18 sociodemographic variables in terms of risk associated with experiencing medical providers who lacked knowledge of transgender health.

Literature Related to Methods

For the purpose of this research, multiple logistic regressions was the statistical technique utilized. Sautter et al. (2010), researched the social demography of Internet dating. In order to accomplish this research, the researchers utilized logistic regression. This research provided an example of statistical methods useful in exploring social demography. Shires, and Jaffee, (2015), also utilized logistic regressions in order to test associations between demographics and health seeking experiences.

Conclusion

The transgender community is a subgroup of the LGBT community. This subgroup remained the most marginalized of all the LGBT subgroups and when compounded with focusing only on African American transgender individuals, the marginalization got even greater. The result of this was few articles found focusing specifically on the subpopulation of African American transgender individuals. Therefore, this literature review also encompassed research that focused on the transgender community, as a whole, and the articles selected were those that mentioned or were applicable to the target population of this research: transgender African Americans. Based on the literature review, four main themes emerged. The transgender health seeking experience was truly unique, not only in comparison to the general population, but also to the other subgroups of the LGBT community. Health disparities existed among this population, and these disparities were even greater among transgender African Americans potentially due to compounded racial bias. The exploration of social demography could aid in the understanding and mitigation of these disparities. Transitioning and as a result passing in society also seemed to be a major theme as this outward noncompliance to societal constructed gender roles led to transphobia, discrimination and victimization. Lastly, there were major challenges in health care with respect to this population as providers often lacked the knowledge necessary to care for transgenders which indicated a culturally incompetent health care system. Students entering the health and medical fields were not adequately educated on health issues unique to the transgender population which bred a lack of trust from transgender

individuals of health care providers. Since studies have examined the aforementioned dynamic, opportunities also presented themselves to mitigate this challenge and initiate positive social impact.

Due to the marginalization of transgender African Americans, a robust amount of literature related to their health could not be found. Furthermore, of those that were applicable: some were limited to one geographic region, or focused on either male to female or female to male transgender individuals exclusively, and most failed to target African American transgender individuals who researchers have found had worse health outcomes when compared to other racial groups in the transgender population. An existing gap in the literature was found that this study hoped to help fill. The study addressed the African American transgender community, from a range of geographic locations, encompassing both male to female and female to male transgender individuals. Furthermore, the study tested correlations between sociodemographic variables of a sample of the African American transgender population and their health seeking experiences in hopes of providing more knowledge to health care professionals to aid in mitigating transphobia, eliminating health disparities, and promoting culturally competent health care. The methodology that this study used in order to address the existing gap in knowledge is detailed in Chapter 3, which covered research design and rationale, instrumentation, threats to validity, ethical procedures, and a summary.

Chapter 3: Research Method

Introduction

This chapter of the study details the research paradigm followed and methodology used in this research. Information on the population, the sample, sampling technique, data collected, data collection instrument, threats to validity, ethical procedures, and data analysis are presented. This study was quantitative in nature as the data collected were numerical, or could be coded numerically, and measurable. The participants of this study were African American transgender individuals. The purpose of this study was to identify which of 18 sociodemographic variables correlated with any of the six measures of health seeking experiences among African American transgenders. The determination of any correlations could have allowed public health professionals to target and tailor health approaches to mitigate possible barriers and also allowed them to have a deeper understanding of what was needed to care for a population such as this. According to Healthy People 2020 (2011), the importance of this was in the data that suggested that there was a higher prevalence of HIV/STDs, victimization, mental health issues, lack of insurance, and suicide among transgender individuals than among others; these trends were worse among African American transgender individuals (Grant et al., 2010). These measures indicated that health disparities existed among the African American transgender community.

Research Design and Rationale

The research questions in this case control study sought to address the relationships between socioeconomic, sociocultural, and health behavioral indicators and

health seeking experiences among transgender African Americans. The three socioeconomic variables were education, income, and employment. The six health behavior variables were hormone therapy, gender surgeries, drug and alcohol abuse, tobacco use, suicide attempts, and access to health insurance. The nine sociocultural variables were visual nonconformity, outness, sexual orientation, relationship status, family support, living arrangements, age, location, and preferred health setting. These independent variables were selected from the NTDS because all of them addressed some social, environmental, cultural, economic, health behavioral, or demographic characteristic and all variables were outlined in the 2015 MDH Report to the Minnesota Legislature, which focused on using social demography to measure quality of health care.

The dependent variables selected were denial of medical care, verbally harassed or disrespected in medical setting, physically attacked or assaulted in a medical setting, postponement of medical care, discrimination by medical providers, and medical providers' lack of knowledge. The health seeking experiences were selected by the presence of the word *experience* in question prompts on the NTDS related to health care in addition to researcher discretion. Case-control study paradigm was utilized to identify factors (sociodemographics) that might contribute to an outcome (negative health seeking experiences) by comparing cases that had such an outcome (negative health seeking experiences) with controls that did not have that outcome (not negative health seeking experiences). This design choice was consistent with the case control research design needed to advance knowledge of disparities in sexual minority health. The MDH (2015) asserted that sociodemographic variables were important to mitigating health disparities

because many health status factors were found outside the health care system. Resource constraints included limited sample due to the marginalized nature of the African American transgender population (Alegria, 2011). Time constraints are usually not a concern for case control studies because they typically take less time than other research designs. Furthermore, the outcome or negative health seeking experiences analyzed in this study had already occurred.

Methodology

Population

The population researched in this study was African American transgender individuals; more specifically, men and women of African descent who experienced nonconformity between their true gender identity and their external sexual organs. A sample of 253 African American transgender individuals was yielded utilizing secondary data from the NTDS inclusive of only the respondents who selected both Black and transgender on the NTDS. In this case control study, cases were African American transgenders with negative health seeking experiences and controls were African American transgenders without negative health seeking experiences.

Sampling

The survey was made available for six months and utilized convenience sampling techniques to target transgender people and also utilized venue-based sampling and snowball sampling (Grant et al., 2010). These sampling strategies were utilized by the authors of the NTDS because the population was marginalized and they desired to maximize participation in order to yield as robust a sample as possible (Grant et al.,

2010). The survey was announced via 800 transgender-led or transgender-serving organizations (Grant et al, 2010). The required sample size could not be determined for statistical analysis based on a population size table because an accurate count of the total number of African American transgender individuals was not known due to the highly marginalized and closeted nature of this community. Furthermore, most sample size calculators were used when random sampling was utilized, which was not the case for the NTDS. Therefore, a sample size formula was utilized to determine if the sample of 371 Black respondents met the minimum sample size required.

The formula used was $(\text{Z-score})^2 * \text{StdDev}*(1-\text{StdDev})/(\text{margin of error})^2$; where the corresponding *z* score for a 90% confidence interval was 1.65, the standard deviation was .5 and the margin of error was 10% or 0.1. Upon calculation in accordance with the aforementioned formula, the sample size required was 273. Even though the NTDS sample of Black respondents of 371 was in excess of 273, this sample only includes two of the three inclusion criteria: transgender and Black. Upon Institutional Review Board (IRB) approval, the third inclusion criterion of fulltime status was going to be implemented and the sample size of 371 should not have decreased below 273. It did however fall to 253, but the expectation was that it would not have decreased to lower than 273. Additionally, once IRB granted access to the data, the sample size of the cases (African American transgenders with negative health seeking experiences) and controls (African American transgender without health seeking experiences) was determined.

Data Collection

From September 11, 2008 to March 3, 2009, the NTDS was made available to transgender people via a network of approximately 800 transgender-led or transgender serving organizations, 150 active online communities, and direct administration of paper surveys to hard-to-reach subpopulations like homeless transgenders (Grant et al., 2010). The recruitment strategy of convenience, venue-based, and snowball sampling was designed to maximize responses (Grant et al., 2010). Participation was voluntary and confidential (Grant et al., 2010). In order to gain access to the data set, the assistant to the Executive Director of The Task Force, Adam Wexelbaum, was contacted via e-mail. Wexelbaum responded and gave me the contact information to Sandy James, who was the Survey Project Manager of the National Center for Transgender Equality, the organization responsible for the study. I contacted Sandy James via e-mail and she responded not only with permission but she was willing to share the data in both STATA and SPSS (Appendix A).

The survey questions were based on the experiences of known transgender people and were formatted in a variety of question types (Grant et al., 2010). No historical or legal documents were used as sources of data. For the purposes of this study, the data set utilized was the sample on the NTDS that selected transgender on Question 4, and Black or African American on Question 11. In order to answer the research question, the independent variables, including three socioeconomic variables (education, income, and employment), six health behavior variables (hormone therapy, gender surgeries, drug and alcohol abuse, tobacco use, suicide attempts, and access to health insurance), and nine

sociocultural variables (visual nonconformity, outness, sexual orientation, relationship status, family support, living arrangements, age, location, and preferred health setting), were coded numerically for analysis. The sociodemographic variables encompassed all questions related to social, economic, cultural, health behavior, and demographic factors.

The dependent variables were the following health seeking experiences: denial of medical care, verbally harassed in a medical setting, physically attacked or assaulted in a medical setting, postponement of medical care due to fear of bias, discrimination by medical providers, and medical providers lack of knowledge. The health seeking experiences were selected by the presence of the word *experience* in question prompts on the NTDS survey related to health care, along with researcher discretion. To determine the differences in social demography between those with negative health seeking experiences (cases) and those without (controls), logistic regression was used (Sautter et al., 2010).

Instrumentation

The instrument or NTDS was a ground breaking survey that was developed over 8 months from 2009 to 2010 by a group of social science and health researchers, transgender advocates, lawyers, and statisticians (Grant et al., 2010). The survey was not previously used and the authors failed to publish any reliability or validity measures. In order to gain access to the actual survey, the same measures were taken to gain access to the raw data as mentioned in the previous section. The instrument contained a variety of demographic questions, a series of questions regarding gender identity, questions regarding which people in respondents' lives knew of their status as transgender or

gender nonconforming, and questions to collect respondents' experiences in a variety of settings like health care, including in employment, education, health care, family life, places of public accommodation, jail or prison, homeless shelters, housing, and in interactions with police. The survey was made available online and in print and was available in English and Spanish (Grant et al., 2010).

Operationalization

Education was the first independent socioeconomic variable. Education referred to the highest degree or level of school completed (Grant et al., 2010). The items of this variable required a check the answer response as only one option could be selected.

Table 1

Education Codes

Education	Code
Elementary and/or junior high	1
Some high school to 12th grade	2
High school graduate/GED	3
Less than 1 year of college credits	4
Technical school degree	5
One or more years of college, no degree	6
Associate degree	7
Bachelor's degree	8
Master's degree	9
Professional degree	10
Doctorate degree	11

Income was the second independent socioeconomic variable. Income referred to the current gross annual household income before taxes (Grant et al., 2010). The items of this variable required a check the answer response as only one option could be selected.

Table 2

Income Codes

Income	Code
Below $10K	1
$10K - $19,999	2
$20 - $29,999	3
$30K - $39,999	4
$40K - $49,999	5
$50K - $59,999	6
$60K - $69,999	7
$70K - $ 79,999	8
$80K - $89,999	9.
$90K - $99,999	10
$100K - $ 149,999	11
$150K - $199,99	12
$200K - $250K	13
Over $250K	14

Employment status was the third independent socioeconomic variable. Employment status referred to identification with one of the following: full-time, part-time, more than one job, self-employed, unemployed, on disability, student, retired, or home maker (Grant et al., 2010). This variable was measured via mark all that apply on the NTDS. The items of this variable were scored dichotomously: full-time, part-time, more than one job, self-employed (business owner), self-employed (contract worker) – any selected = 1 and none selected = 0.

Table 3

Employment Codes

Employment	Code
Yes	1
No	0

Hormone therapy was the first independent health behavior variable. Hormone therapy introduced hormones of one's true gender in order to develop the desired secondary sexual characteristics (Hudson's FTM Resource Guide, 2013). This variable was measured on a 4-point rating scale on the NTDS: Do not want it = 1, want it someday = 2, have had it = 3, not applicable =4.

Table 4

Hormone Therapy Codes

Hormone Therapy	Code
Do not want it	1
Want it someday	2
Have had it	3
Not applicable	4

Gender surgeries was the second independent health behavior variable. Gender surgery was an umbrella term for surgical procedures for altering one's body to match that of his or her true gender identity (Hudson's FTM Resource Guide, 2013). The items of this variable were: Top/Chest/Breast surgery, male to female removal of testes, male to female genital surgery, female to male removal of uterus,

female to male genital surgery, and female to male phalloplasty. This variable was measured on a 4-point rating scale.

Table 5

Gender Surgeries Codes

Gender Surgeries	Code
Do not want it	1
Want it someday	2
Have had it	3
Not applicable	4

Drug and Alcohol Abuse was the third independent health behavior variable. Drug and alcohol abuse referred to intake of alcohol or misuse of drugs to cope with mistreatment faced as a transgender person (Grant et al., 2010). This variable was measured by a check the answer response as only one option could be selected.

Table 6

Drug and Alcohol Codes

Drug & Alcohol Abuse	Code
Yes	1
Yes, not currently	2
No	3
Not applicable/no mistreatment	4

Tobacco use was the fourth independent health behavior variable. There were 2 items used to measure this variable using a check the answer response as only one option can be selected. The first item: have you ever smoked 100 cigarettes in your life, and the second item: frequency of current smoking.

Table 7

Tobacco Use Codes

Ever Smoked vs. Code

Smoking	Code
No	0
Yes	1

Smoking Frequency vs. Code

Smoking	Code
Daily	1
Occasionally	2
Not at all	3

Suicide attempts was the fifth independent health behavior variable. Suicide attempts referred to attempting to end one's own life. This variable was measured using a check the answer response as only one option could be selected. The NTDS prompt was "Have you ever attempted to commit suicide?"

Table 8

Suicide Attempts Codes

Suicide Attempts	Code
No	0
Yes	1

Access to health insurance was the sixth independent health behavior variable. Access to health insurance referred to having health care and the type of health insurance usually used to cover doctor and hospital bills (Grant et al., 2010). The items of this variable required a check the answer response as only one option could be selected.

Table 9

Access to Health Insurance Codes

Access to Health Insurance	Code
No health insurance coverage	1
Through current/former employer	2
Through another's employer	3
Purchased insurance	4
Medicare	5
Medicaid	6
Military/Campus/VA/Tri-Care	7
Student Health Insurance	8
Other Public Insurance	9
Other	10

Visual nonconformity was the first independent sociocultural variable. Visual nonconformity was the degree by which a transgender can be identified as transgender based on visual indicators (Grant et al., 2010). This variable was measured on a 5-point rating scale on the NTDS in response to the prompt "people can tell I am transgender/gender nonconforming even if I do not tell them".

Table 10

Visual Nonconformity Codes

Visual Nonconformity	Code
Always	1
Most of the time	2
Sometimes	3
Occasionally	4
Never	5

Outness was the second independent sociocultural variable. Outness referred to the self-reporting or expressing to society as transgender (Grant et al., 2010). This variable was measured via Guttman Scaling on the NTDS with the prompt "I tell people that I am transgender/gender nonconforming. This item of this variable was scored dichotomously: Never vs. yes to close friends, casual friends, work colleagues, family, everyone.

Table 11

Outness Codes

Outness	Code
Never	0
Yes	1

Sexual Orientation was the third independent sociocultural variable. Sexual orientation was related to the attraction for a particular gender (Brennan et al., 2012). This variable was measured by a check the answer response as only one option could be selected.

Table 12

Sexual Orientation Codes

Sexual Orientation	Code
Gay/Lesbian/Same gender attraction	1
Bisexual	2
Queer	3
Heterosexual	4
Asexual	5
Other	6

Relationship Status was the fourth independent sociocultural variable. Relationship status referred to identification with one of the following groups: Single, partnered, civil union, married, separated, divorced or widowed (Grant et al., 2010). The items of this variable required a check the answer response as only one option could be selected.

Table 13

Relationship Status Codes

Relationship Status	Code
Single	1
Partnered	2
Civil Union	3
Married	4
Separated	5
Divorced	6
Widowed	7

Family Support was the fifth independent sociocultural variable. Family Support referred to strength of family, partner, and friend relationships after

disclosing transgender transition (Grant et al., 2010). The items of this variable were measured using a check the answer response as only one option can be selected. The items were: my family is as strong today as before I came out, my family relationships are slowly improving after coming out, my relationship with my spouse or partner ended, the other parent has limited or stopped my relationship with my children, a court/judge limited or stopped my relationship with my children, my children chose not to speak with me or spend time with me, my parents or family chose not to speak with me or spend time with me, I was victim of domestic violence by a family member, I have lost close friends.

Table 14

Family Support Codes

Family Support	**Code**
Yes	1
No	2
N/A	3

Living Arrangements was the sixth independent sociocultural variable. Living arrangements referred to identification with one of the following: homeless, living in a shelter, living in a group home, living in nursing facility, living in campus housing, living with parents, staying with friends, living with partner or spouse, renting house, apartment or condo, or owning house, apartment or condo (Grant et al., 2010). The items of this variable required a check the answer response as only one option could be selected.

Table 15

Living Arrangements Code

Living Arrangements	Code
Homeless	1
Shelter	2
Facility/Foster Care	3
Nursing/Adult Care Facility	4
Campus/University Housing	5
With parents/family	6
With friends/family temporarily	7
With partner/spouse/other who pays	8

Age was the seventh independent sociocultural variable. Age for the purposes of this research not only referred to amount of years alive but also the age of self-identification as transgender and age of first transgender-related medical treatment. This continuous variable solicited write-in responses; however was recoded for analysis in accordance with the recodes used in the descriptive statistics reported in the NTDS Report.

Table 16

Age Codes

Age in Years Alive
Age of first transgender related medical treatment

Age	Code
18 - 24 years old	1
25 - 44 years old	2
45 - 54 years old	3
55 – 64 years old	4
65+ years old	5

Age of Self-identification as Transgender

Age	Code
Under 18	0
18 - 24 years old	1
25 - 44 years old	2
45 - 54 years old	3
55 – 64 years old	4
65+ years old	5

Location was the eighth independent sociocultural variable. Location referred to the state of current residency. This continuous variable solicited write-in responses; however zip codes reported was coded.

Table 17

Location Codes

Region	Code
North East	1
MidWest	2
South	3
West	4

Preferred health setting was the ninth independent sociocultural variable. Preferred health setting referred to the kind of place most often used for sickness or health advice (Grant et al., 2010). The items of this variable required a check the answer response as only one option could be selected.

Table 18

Preferred Health Setting Codes

Preferred Health Setting	Code
Emergency Room	1
Doctor's Office	2
Health Clinic/Center I pay for	3
Free Health Clinic	4
VA Clinic/Hospital	5
Alternative Medicine Provider	6
N/A/Do Not use Health Care Provider	7

Denial of medical care was the first dependent health seeking experience variable. This variable had several items and was measured by a check the answer response as only one option could be selected. The items were doctor's office or hospital, emergency room, rape crisis center, mental health clinic, ambulance or EMT.

Table 19

Denial of Treatment Codes

Denial of Treatment	Code
No	0
Yes	1

Verbally harassed or disrespected was the second dependent health seeking experience variable. This variable had several items and was measured by a check the answer response as only one option could be selected. The items were doctor's office or hospital, emergency room, rape crisis center, mental health clinic, ambulance or EMT.

Table 20

Verbally Harassed/Disrespected Codes

Verbally Harassed or Disrespected	Code
No	0
Yes	1

Physically attacked or assaulted was the third dependent health seeking experience variable. This variable had several items and was measured by a check the answer response as only one option could be selected. The items were doctor's office or hospital, emergency room, rape crisis center, mental health clinic, ambulance or EMT.

Table 21

Physically Attacked/Assaulted Codes

Physically Attacked or Assaulted	Code
No	0
Yes	1

Postponement of health care was the fourth dependent health seeking experience variable. This variable had several items and was measured by a check the answer response as only one option could be selected. The items were : I have postponed or not tried to get needed medical care when I was sick of injured because of disrespect or discrimination from doctors and other health care providers, I have postponed or not tried to get needed checkups or preventive medical care because of disrespect or discrimination from doctors and other health care providers.

Table 22

Postponement of Health Care Codes

Postponement of Health Care	Code
No / N/A	0
Yes	1

Discrimination by medical providers was the fifth dependent health seeking experience variable. This variable was measured by a check the answer response as only one option could be selected.

Table 23

Discrimination by Medical Providers Codes

Discrimination by Medical Providers	Code
No / N?A	0
Yes	1

Medical providers' lack of knowledge was the sixth dependent health seeking experience variable. This variable was measured by a check the answer response as only one option could be selected.

Table 24

Medical Providers' Lack of Knowledge Codes

Medical Providers' Lack of Knowledge	Code
No / N/A	0
Yes	1

Data Analysis Plan

RQ1: Quantitative: Is there correlation between socioeconomic variables and measures of health seeking experiences among transgender African Americans?

$H_0$1: There will not be correlations between socioeconomic variables and negative health seeking experiences among transgender African Americans.

H_a1: There will be correlations between socioeconomic variables and negative health seeking experiences among transgender African Americans.

RQ2: Quantitative: Is there correlation between health behavior variables and measures of health seeking experiences among transgender African Americans?

$H_0$2: There will not be correlations between health behavior variables and negative health seeking experiences among transgender African Americans.

H_a2: There will be correlations between health behavior variables and negative health seeking experiences among transgender African Americans.

RQ3: Quantitative: Is there correlation between sociocultural variables and measures of health seeking experiences among transgender African Americans?

$H_0$3: There will not be correlations between sociocultural variables and negative health seeking experiences among transgender African Americans.

H_a3: There will be correlations between sociocultural variables and negative health seeking experiences among transgender African Americans.

To test the associations of socioeconomic, sociocultural, and health behavioral factors with the likelihood of having negative health seeking experiences, logistic regressions were used - analyzed using SPSS statistical software. The data was cleaned in

a three step process. Respondents were removed: if answers were illogical, if they indicated not being transgender, and if survey was incomplete, contained duplicate responses or informed consent not completed (Grant, et al, 2010). Odds ratios were calculated for the effects of the 18 socioeconomic, sociocultural, and health behavioral variables on the likelihood of denial of medical care, being verbally harassed in a medical setting, being physically attacked or assaulted in a medical setting, experiencing postponement of medical care due to fear of bias, discrimination by medical providers, and experiencing medical providers' lack of knowledge. These health seeking experiences were coded as dichotomous or binary indicators. For example, participants who experienced denial of medical care or cases will be coded as a negative health seeking experience = 1. However, participants who did not experience denial of medical care or controls was coded as not a negative health seeking experience = 0. This dependent variable required the use of multiple logistic regressions for investigating whether the health seeking experience reported was related to the independent variables of visual nonconformity, outness, age, location, education, income, relationship status, living arrangements, employment, access to health insurance, preferred health setting, hormone therapy, gender surgeries, drug and alcohol abuse, tobacco use, suicide attempts, family support and sexual orientation.

Statistical Analyses

In order to determine if correlations existed between the independent and dependent variables, multiple logistic regressions were used. Prior to the logistic regression analyses, univariate analysis was conducted. All variables were nominal,

therefore, frequencies were calculated and presented in tables. Also prior to the logistic regression analyses, a correlation matrix was generated to determine multicollinearity among independent variables; if the correlation coefficient was greater than 0.75, then the variables would have been suspected of multicollinearity. Linear regression analysis was done to evaluate the degree of multicollinearity among the suspected independent variables (Shires, & Jaffe, 2015). Degree of multicollinearity would have been determined by the variance inflation factor (VIF) which would have been calculated by the R^2 from the linear regression ($VIF=1/(1-R^2)$). If the variance inflation factor was over 5 for any of the suspected independent variables then variables would have been combined under a new variable or one of the variables would have been dropped from the analysis. If it was found that multicollinearity did not exist among the independent variables, then the analyses proceeded to the logistic regressions. These procedures were conducted in SPSS to investigate whether the risk of negative health seeking experiences among African American transgender individuals was related to their social demography. The p value was assessed to determine the significance of the associations and the odds ratio was assessed to determine the strength of associations. Since the data were analyzed using a confidence interval of 90%, only correlations that yielded a p value of less than 0.1 were accepted as significant indicating a less than 10% chance of false positives. P values of less than 0.1 meant that the alternative hypotheses could be accepted and correlations existed and null hypotheses could be rejected; conversely, p values of more than 0.1 meant that the null hypotheses could not be rejected in favor of the alternative. Regarding strength of association the odds ratio was the indicator. A calculated odds ratio

of more than 1.0 indicated that transgenders with the independent variable in question had higher odds of having negative health seeking experiences that those without that sociodemographic. Alternately, a calculated odds ratio of less than 1.0 indicated that transgenders with the sociodemographic in question had a lesser odds of having negative health seeking experiences that those without that sociodemographic. Further explanation of calculation of odds ratio were in table 25.

Table 25

Odds Ratio Calculation

Odds Ratio = (A / C) / (B / D) = (AD) / (BC)

Exposure (Visual Noncomformity)	Cases Negative Health Seeking Experiences	Controls Not Negative Health Seeking Experiences
Visual Noncomformer	A	B
Visual Conformer	C	D

The quality of the sample played a major role in statistical analysis. The data for this study were collected via convenience sampling rather than random sampling; therefore, the strength of the statistical analysis was diminished. Considering the marginalization of the transgender population, the role of this sampling design into the statistical analysis is accepted without weighting the survey.

Threats to Validity

External validity referred to the generalizability of study results to the universal population (Carlson, and Morrison, 2009). In general, threats to external validity were high in case control studies (Carlson, and Morrison, 2009). This proposed study had threats to external validity. The first threat was to population validity where by the

sample might not have been representative of the population because random sampling was not utilized and could have threatened the generalizability of findings. This threat was addressed by having a sample inclusive of respondents from all 50 states, DC, Puerto Rico, Guam, and the U.S. Virgin Islands. Another threat was the Hawthorne effect where by survey participants alter their responses due to the novelty of being involved in research. This could have threatened external validity because generalizability could have been affected if participants were responding dishonestly. This threat was addressed in the cover letter of the survey, where participants were informed that they would have anonymity and confidentiality and could withdraw from the survey at any time without penalty (Grant et al, 2010).

Internal validity refers to the strength of the inferences (Carlson, and Morrison, 2009). Most threats to internal validity will not be applicable to this study because this study is assessing correlations not causation. However, social desirability bias and design contamination are 2 threats to internal validity detected. Social desirability bias occurs when respondents select the more favorable answer versus the truth. This bias is considered to be a threat to internal validity because the NTDS addresses personal questions about drug and alcohol abuse, for example. This threat was addressed in the cover letter of the survey, where participants were informed that they did not have to answer any questions they did not wish to answer (Grant et al., 2010). Design contamination occurs when respondents have an interest in the research succeeding or failing. This is a threat to internal validity because transgender individuals often are discriminated against and at the time of the survey (2008-2009) were still seeking equal

rights like marriage equality which was not granted until 2015. Therefore, a survey titled NTDS might tempt respondents to overplay discrimination experiences in order to bring discrimination to light in search of equal rights. This threat was addressed by encouraging respondents to answer truthfully and by ensuring their confidentiality (Grant et al., 2010). Construct validity refers to the degree that the research is assessing what it intends to assess (Carlson, and Morrison, 2009). This survey was ground-breaking and only used a single version of the survey during one span of time. A replication study would address this threat to construct validity.

Ethical Procedures

Permission to use data from the NTDS was granted on April 8, 2015 (Appendix A). The survey was reviewed by the Office for Research Protections, home of the IRB at Pennsylvania State University and determined the study was exempt from IRB review found in Appendix B (Grant et al., 2010). However, for the purpose of this study, the data was not reviewed until IRB approval was received from Walden University. As required by the IRB the instrument began with informed consent. They survey allowed for anonymity, survey refusal, and survey incompletion due to discomfort (Grant et al., 2010). Utilizing a convenience sample might have introduced bias on account of the like-mindedness of study participants as they all thought to become members of the recruitment organizations. This may limit the generalizability of the results to the entire African American transgender population. In compliance with IRB, respondents' zip codes were not provided for use in research projects that were not submitted for review by an IRB (Grant et al., 2010). Data storage procedures, data dissemination, and data

destruction measures were omitted in the reporting of the survey findings but for the purposes of this study the data was stored on a password protected computer located in a locked office The data sets will be stored for 5 years and will be destroyed after 5 years have passed. The report indicated that with proper approvals the NTDS data will be made available to the public (Grant et al., 2010). The only other ethical concern is that the creators of the NTDS and the supporting organizations such as The National Center for Transgender Equality and the National Gay and Lesbian Task Force all had a vested interest in sexual minority rights which presented itself as a potential conflict of interest.

Summary

For this research, correlations between socioeconomic, sociocultural, and health behavior variables and health seeking experiences were assessed. The sample was consisted of 253 African American transgender individuals by way of secondary data from the NTDS. The data collected was coded in numerical form for data analysis utilizing SPSS. In this instance, the dependent variables were health seeking experiences and were coded as negative or 1 and not negative = 0. The independent variables were reported using multiple data formats and therefore was coded numerically for comparison utilizing dummy variables, if necessary. A linear regression was conducted to analyze the independent variables and to test for multicollinearity. Upon establishment of lack of multicollinearity, the logistic regression analysis was conducted to determine associations between the independent variables assessed and experiences receiving health care and the strength of any found associations. The next chapter, Chapter 4 addressed data collection and analysis, and results.

Chapter 4: Results

Introduction

The purpose of this quantitative, case-control, correlational study was to assess which of 18 sociodemographic variables; divided into three subdivisions (socioeconomic, health behavior, and sociocultural variables) correlated with measures of health seeking experiences among African American transgenders. Using SPSS statistical software, all data were analyzed with logistic regressions to test the null hypotheses. Each subdivision corresponds to a separate research question; the research questions and their hypotheses are presented below:

RQ1: Quantitative: Is there correlation between socioeconomic variables and measures of health seeking experiences among transgender African Americans?

$H_0$1: There will not be correlations between socioeconomic variables and negative health seeking experiences among transgender African Americans.

H_a1: There will be correlations between socioeconomic variables and negative health seeking experiences among transgender African Americans.

RQ2: Quantitative: Is there correlation between health behavior variables and measures of health seeking experiences among transgender African Americans?

$H_0$2: There will not be correlations between health behavior variables and negative health seeking experiences among transgender African Americans.

H_a2: There will be correlations between health behavior variables and negative health seeking experiences among transgender African Americans.

RQ3: Quantitative: Is there correlation between sociocultural variables and measures of health seeking experiences among transgender African Americans?

$H_0$3: There will not be correlations between sociocultural variables and negative health seeking experiences among transgender African Americans.

H_a3: There will be correlations between sociocultural variables and negative health seeking experiences among transgender African Americans.

This chapter covered results from the data analysis. This chapter also addressed data collection, an evaluation of statistical assumptions, data treatment, descriptive statistics and summary.

Data Collection

The data for this research were collected during the administration of the NTDS. This survey was fielded to transgender and gender nonconforming Americans from September 11, 2008 until March 3, 2009 via convenience, venue-based, and snowball sampling (Grant et al., 2010). The results of the survey were published in 2010 with a sample of 6,456 participants; however, no response rate was given

Data Treatment

Upon gathering the necessary documents for IRB approval, the codebook for the data was sent. The Walden IRB approval number for this study is 02-18-16-0071832. This codebook led to data treatment not being administered as planned in Chapter 3. The following treatments were made to 10 independent variables: education, income, employment, gender surgeries, tobacco use, and access to health insurance, visual nonconformity, outness, family support, and location.

Education was condensed from 11 values to five.

Table 26

Education Recodes

Education	Code
No High School Diploma	1
High School Diploma / GED	2
Some College	3
College Degree	4
Graduate Degree	5

Income was condensed from 14 values to five.

Table 27

Income Recodes

Income	Code
>$10K	1
$10K - $19,999	2
$20K - $49,999	3
$50K - $99,999	4
$100K +	5

Employment was expanded from two values to three.

Table 28

Employment Recodes

Employment	Code
Out of workforce – Not looking	1
Out of workforce – Unemployed	2
In workforce	3

Gender surgeries were condensed from four values to two.

Table 29

Gender Surgeries Recode

Receipt of Transitioning Gender Surgeries	Code
No	0
Yes	1

Tobacco use was condensed from five values to four.

Table 30

Tobacco Use Recodes

Tobacco Use (Smoking)	Code
Current daily	1
Current occasional	2
Former smoker	3
Never smoked	4

Access to health insurance was condensed from 10 values to three.

Table 31

Access to Health Insurance Recode

Access to Health Insurance	Code
Insured private	1
Insured public	2
Uninsured	3

Visual nonconformity was condensed from five values to three.

Table 32

Visual Nonconformity Recodes

Visual Nonconformity	Code
Not conforming	1
Somewhat conforming	2
Conforming	3

Outness in medical setting was adopted instead of outness in general.

Table 33

Outness Recodes

Out in a Medical Setting	Code
Not out	0
Out	1

Family support was expanded from two values to three.

Table 34

Family Support Recodes

Family Support (Family as strong today as before transgender)	Code
Yes	1
No	2
N/A	3

Location was expanded from four to six values.

Table 35

Location Recodes

Location	Code
New England (CT, MA, ME, NH, RI, VT)	1
Mid Atlantic (DC, DE, MD, NJ, NY, PA, VA, WV)	2
South (AL, AR, FL, GA, KY, LA, MS, NC, OK, SC, TN, TX)	3
MidWest (IA, IL, IN, KS, MI, MN, MO, ND, NE, OH, SD, WI)	4
West (AK, AL, AZ, CO, HI, ID, MT, NM, NV, OR, UT, WA, WY)	5
California (CA)	6

Discrepancies in Data

One discrepancy in the data collection plan was the elimination of one out of three inclusion criteria. This study had two inclusion criteria: transgender, and African American. When the first inclusion criterion (transgender) was applied to the data set via selection of cases, the sample size decreased from 6,450 to 4,032. Next, when the second inclusion criterion (African American) was applied to the data set via selection of cases,

the sample size decreased from 4,032 to 253. Even though the sample size formula (Z-score)^2 * StdDev*(1-StdDev)/(margin of error)^2 yielded a suggested sample size 273, a sample size of 253, was still considered representative of the African American transgender population.

Testing Statistical Assumptions

Multicollinearity - A correlation matrix was generated to determine multicollinearity among independent variables. None of the correlation coefficients were greater that 0.75; therefore, none of the variables were suspected of multicollinearity. As a result the VIF was not calculated.

Missing Data - Before descriptive statistics are produced the data was screened for missing data. A Missing Completely At Random (MCAR) test was performed which produced a significance of 0.109 indicating that the data was missing at random which suggests that there is no pattern to the missing data therefore the threat of bias is diminished. No means could be created to replace missing data because the data set only included nominal data.

Descriptive Statistics

The independent variables were 18 sociodemographic variables presented in 3 subdivisions: socioeconomic, health behavior, and sociocultural.

The first socioeconomic (SE) variable was *Education*. The results of the frequency table showed that the category of some college had the highest percentage at 43.4% and having any graduate degree had the lowest percentage at 9.4%.

Table 36

SE Descriptive Statistics: Education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no high school degree	27	10.7	11.5	11.5
	high school only	46	18.2	19.6	31.1
	some college	102	40.3	43.4	74.5
	college degree	38	15.0	16.2	90.6
	graduate degree (any)	22	8.7	9.4	100.0
	Total	235	92.9	100.0	
Missing	System	18	7.1		
Total		253	100.0		

The second SE variable was *Income*. The results of the frequency table showed that an income under $10K had the highest percentage at 36.3% and an income above $100K had the lowest percentage at 4%.

Table 37

SE Descriptive Statistics: Income

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	<$10K	81	32.0	36.3	36.3
	$10K-$19,999	28	11.1	12.6	48.9
	$20K-$49,999	59	23.3	26.5	75.3
	$50K-$99,999	46	18.2	20.6	96.0
	$100K+	9	3.6	4.0	100.0
	Total	223	88.1	100.0	
Missing	System	30	11.9		
Total		253	100.0		

The third SE variable was *Employment*. The results of the frequency table showed that being out of the workforce and not looking to be in the workforce had the lowest percentage at 17.6% and being in the workforce had the highest percentage at 55.5%.

Table 38

SE Descriptive Statistics: Employment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	in workforce	132	52.2	55.5	55.5
	out of workforce – unemployed	64	25.3	26.9	82.4
	out of workforce - not looking	42	16.6	17.6	100.0
	Total	238	94.1	100.0	
Missing	System	15	5.9		
Total		253	100.0		

The first health behavior (HB) variable was *Hormone Therapy*. The results of the frequency table showed that having received hormone therapy had the highest percentage at 54% and not wanting hormone therapy had the lowest percentage at 6.5%.

Table 39

HB Descriptive Statistics: Hormone Therapy

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	do not want it	16	6.3	6.5	6.5
	want it someday	57	22.5	23.0	29.4
	have had it	134	53.0	54.0	83.5
	N/A	41	16.2	16.5	100.0
	Total	248	98.0	100.0	
Missing	System	5	2.0		
Total		253	100.0		

The second HB variable was *Gender Surgeries*. The results of the frequency table showed that majority of the sample had not received gender surgery: 66.4% compared to 33.6%.

Table 40

HB Descriptive Statistics: Gender Surgeries

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no	142	56.1	66.4	66.4
	yes	72	28.5	33.6	100.0
	Total	214	84.6	100.0	
Missing	System	39	15.4		
Total		253	100.0		

The third HB variable was *Tobacco Use*. The results of the frequency table showed that those who never smoked had the highest percentage at 35.8% and those who were former smokers had the lowest percentage at 14.2%.

Table 41

HB Descriptive Statistics: Tobacco Use

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	current daily	74	29.2	31.9	31.9
	current occasional	42	16.6	18.1	50.0
	former smoker	33	13.0	14.2	64.2
	never smoked	83	32.8	35.8	100.0
	Total	232	91.7	100.0	
Missing	System	21	8.3		
Total		253	100.0		

The fourth HB variable was *Drug & Alcohol Abuse (to cope with mistreatment)*. The results of the frequency table showed that no abuse of drugs and alcohol had the

highest percentage at 62.6% and current abuse of drugs and alcohol had the lowest percentage at 16.1%.

Table 42

HB Descriptive Statistics: Drug & Alcohol Abuse

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	37	14.6	16.1	16.1
	yes, not currently	49	19.4	21.3	37.4
	No	144	56.9	62.6	100.0
	Total	230	90.9	100.0	
Missing	System	23	9.1		
Total		253	100.0		

The fifth HB variable was *Attempted Suicide*. The results of the frequency table showed that the majority of the sample had attempted suicide: 52.8% compared to 47.2%.

Table 43

HB Descriptive Statistics: Suicide Attempts

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no	110	43.5	47.2	47.2
	yes	123	48.6	52.8	100.0
	Total	233	92.1	100.0	
Missing	System	20	7.9		
Total		253	100.0		

The sixth (HB) variable was *Access to Health Insurance*. The results of the frequency table showed that the privately insured had the highest percentage at 36.9% and the uninsured had the lowest percentage at 29.4%.

Table 44

HB Descriptive Statistics: Access to Health Insurance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	insured private	79	31.2	36.9	36.9
	insured public	72	28.5	33.6	70.6
	Uninsured	63	24.9	29.4	100.0
	Total	214	84.6	100.0	
Missing	System	39	15.4		
Total		253	100.0		

The first sociocultural (SC) variable was *Visual Nonconformity*. The results of the frequency table showed that somewhat conforming had the highest percent at 55.9% and conforming had the lowest percentage at 15.7%.

Table 45

SC Descriptive Statistics: Visual Nonconformity

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	not conforming	67	26.5	28.4	28.4
	somewhat conforming	132	52.2	55.9	84.3
	Conforming	37	14.6	15.7	100.0
	Total	236	93.3	100.0	
Missing	System	17	6.7		
Total		253	100.0		

The second SC variable was *Outness in a Medical Setting*. The results of the frequency table showed that the majority of the sample was out or mostly out in medical settings: 60% compared to 40%.

Table 46

SC Descriptive Statistics: Outness

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	not out/partly out	92	36.4	40.0	40.0
	out/mostly out	138	54.5	60.0	100.0
	Total	230	90.9	100.0	
Missing	System	23	9.1		
Total		253	100.0		

The third SC variable was *Age*. The results of the frequency tables showed that the majority of the sample had a current age between 25 and 44 years old at 63.7%. Most of the sample self-identified as transgender before the age of 17 at 62.3%. Most of the sample received their first transgender related medical treatment between the ages of 18-44 years old at 88.6%.

Table 47

SC Descriptive Statistics: Age

Current age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-24	66	26.1	29.2	29.2
	25-44	144	56.9	63.7	92.9
	45-54	11	4.3	4.9	97.8
	55-64	5	2.0	2.2	100.0
	Total	226	89.3	100.0	
Missing	System	27	10.7		
Total		253	100.0		

Age first self-identified as transgender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-17	137	54.2	62.3	62.3
	18-24	62	24.5	28.2	90.5
	25-44	19	7.5	8.6	99.1
	45-54	2	.8	.9	100.0
	Total	220	87.0	100.0	
Missing	System	33	13.0		
Total		253	100.0		

Age first got any trans-related medical care

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-17	13	5.1	7.4	7.4
	18-24	78	30.8	44.3	51.7
	25-44	78	30.8	44.3	96.0
	45-54	6	2.4	3.4	99.4
	55-64	1	.4	.6	100.0
	Total	176	69.6	100.0	
Missing	System	77	30.4		
Total		253	100.0		

The fourth SC variable was *Location*. The results of the frequency table showed that the California region had the highest percent at 30% and the West, Alaska, Hawaii region had the lowest percentage at 2.9%.

Table 48

SC Descriptive Statistics: Location

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	new England	11	4.3	4.5	4.5
	mid-atlantic	62	24.5	25.5	30.0
	South	48	19.0	19.8	49.8
	mid-west	42	16.6	17.3	67.1
	west, Alaska, Hawaii	7	2.8	2.9	70.0
	California	73	28.9	30.0	100.0
	Total	243	96.0	100.0	
Missing	System	10	4.0		
Total		253	100.0		

The fifth SC variable was *Relationship Status*. The results of the frequency table showed that being single had the highest percent at 58.9% and divorced had the lowest percentage at 1.2%.

Table 49

SC Descriptive Statistics: Relationship Status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Single	145	57.3	58.9	58.9
	partnered	67	26.5	27.2	86.2
	civil union	5	2.0	2.0	88.2
	Married	22	8.7	8.9	97.2
	separated	4	1.6	1.6	98.8
	Divorced	3	1.2	1.2	100.0
	Total	246	97.2	100.0	
Missing	System	7	2.8		
Total		253	100.0		

The sixth SC variable was *Living Arrangements*. The results of the frequency table showed renting his/her homes had the highest percentage at 44.4% and living in a nursing/adult care facility had the lowest percentage at 0.4%.

Table 50

SC Descriptive Statistics: Living Arrangements

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Homeless	15	5.9	6.0	6.0
	Shelter	17	6.7	6.8	12.8
	group home facility/foster care	11	4.3	4.4	17.2
	nursing/adult care facility	1	.4	.4	17.6
	campus/university housing	6	2.4	2.4	20.0
	with parents/family	18	7.1	7.2	27.2
	with friends/family temporarily	24	9.5	9.6	36.8
	with partner/spouse/other who pays	18	7.1	7.2	44.0
	house/apt/condo I rent	111	43.9	44.4	88.4
	house/apt/condo I own	29	11.5	11.6	100.0
	Total	250	98.8	100.0	
Missing	System	3	1.2		
Total		253	100.0		

The seventh SC variable was *Preferred Health Setting*. The results of the frequency table showed that doctors' offices had the highest percentage at 44.5% and alternative medicine providers had the lowest preference at 0.5%.

Table 51

SC Descriptive Statistics: Preferred Health Settings

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	emergency room	33	13.0	15.6	15.6
	doctor's office	94	37.2	44.5	60.2
	health clinic/center I pay for	41	16.2	19.4	79.6
	free health clinic	29	11.5	13.7	93.4
	VA clinic/hospital	4	1.6	1.9	95.3
	alternative medicine provider	1	.4	.5	95.7
	n/a do not use health care provider	9	3.6	4.3	100.0
	Total	211	83.4	100.0	
Missing	System	42	16.6		
Total		253	100.0		

The eighth SC variable was *Family Support*. The results of the frequency table showed that no family support had the highest percent at 46.9% and family support being not applicable had the lowest percentage at 11.1%.

Table 52

SC Descriptive Statistics: Family Support

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	95	37.5	42.0	42.0
	No	106	41.9	46.9	88.9
	not applicable	25	9.9	11.1	100.0
	Total	226	89.3	100.0	
Missing	System	27	10.7		
Total		253	100.0		

The ninth SC variable was *Sexual Orientation*. The results of the frequency table showed heterosexuals and homosexuals tied for the highest percentage at 29.5% and true other had the lowest percentage at 0.5%.

Table 53

SC Descriptive Statistics: Sexual Orientation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	gay, lesbian, same-gender attracted	65	25.7	29.5	29.5
	Bisexual	27	10.7	12.3	41.8
	queer, pansexual, nonbinary attracted	56	22.1	25.5	67.3
	Heterosexual	65	25.7	29.5	96.8
	Asexual	6	2.4	2.7	99.5
	true other	1	.4	.5	100.0
	Total	220	87.0	100.0	
Missing	System	33	13.0		
Total		253	100.0		

The dependent variables (DV) were 6 health seeking experiences variables.

The first DV was *Denial of Medical Treatment*. The results of the frequency table showed that the majority of the sample had not been denied medical treatment: 75.4% compared to 24.6%.

Table 54

DV Descriptive Statistics: Denial of Medical Treatment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no	132	52.2	75.4	75.4
	yes	43	17.0	24.6	100.0
	Total	175	69.2	100.0	
Missing	System	78	30.8		
Total		253	100.0		

The second DV was *Verbally Harassed or Disrespected in a Medical Setting*. The results of the frequency table showed that the majority of the sample had not been verbally harassed/disrespected in a medical setting: 63.5% compared to 36.5%.

Table 55

DV Descriptive Statistics: Verbal Harassment/Disrespect in a Medical Setting

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	120	47.4	63.5	63.5
	Yes	69	27.3	36.5	100.0
	Total	189	74.7	100.0	
Missing	System	64	25.3		
Total		253	100.0		

The third DV was *Physically Attacked or Assaulted in a Medical Setting*. The results of the frequency table showed that the majority of the sample had not been physically attacked or assaulted in a medical setting: 93.3% compared to 6.7%.

Table 56

DV Descriptive Statistics: Physical Attack/Assault in a Medical Setting

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	236	93.3	93.3	93.3
	yes	17	6.7	6.7	100.0
	Total	253	100.0	100.0	

The fourth DV was *Postponement of Medical Care due to Discrimination*. The results of the frequency table showed that the majority of the sample did not postponed medical care due to fear of discrimination: 67% compared to 33%.

Table 57

DV Descriptive Statistics: Postponement of Medical Care Due to Fear of Bias

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	152	60.1	67.0	67.0
	Yes	75	29.6	33.0	100.0
	Total	227	89.7	100.0	
Missing	System	26	10.3		
Total		253	100.0		

The fifth DV was *Discrimination by Medical Providers*. The results of the frequency table showed that the majority of the sample had not experienced discrimination by medical providers: 82.2% compared to 17.8%.

Table 58

DV Descriptive Statistics: Discrimination by Medical Providers

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no	208	82.2	82.2	82.2
	yes	45	17.8	17.8	100.0
	Total	253	100.0	100.0	

The sixth DV was *Medical Providers' Lack of Knowledge*. The results of the frequency table showed that the majority of the sample had not experienced medical providers' lack of knowledge: 50.6% compared to 49.4%.

Table 59

DV Descriptive Statistics: Medical Providers' Lack of Knowledge

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no	85	33.6	50.6	50.6
	yes	83	32.8	49.4	100.0
	Total	168	66.4	100.0	
Missing	System	85	33.6		
Total		253	100.0		

Results from Logistic Regression Analysis: Socioeconomics (SE)

The first SE logistic regression tested the correlational relationship between the independent, socioeconomic variables (education, income, employment) and the dependent variable (denial of medical treatment). The first SE logistic regression showed that the model was significant at determining the existence of correlations between the socioeconomic variables and denial of medical treatment as shown by the Chi-Square value (X^2=6.285, df = 3, p < .1). A p value of .1 was chosen because the equation for

suggested sample size yielded a suggested sample size of 679 when 0.05 was used, which was not a realistic sample size based on the data source. Furthermore, the Nagelkerke pseudo R^2 indicated that the model accounted for 5.4% of the variance in the dependent variables and the Cox and Snell R^2 further indicated that the model accounted for 3.7% of the variance in the dependent variable. The Hosmer and Lemeshow Test was not significant (p = .340) indicating that the model was a good fit for these data points. The results from the 2X2 classification table indicated that the model correctly classified 74.4% of all cases. The results from this logistic regression showed that the 3 independent socioeconomic variables, education, income, and employment did not have a significant correlational relationship with denial of medical treatment with p values all above 0.1 at .511, .465, and .128, respectively.

Table 60

SE Logistic Regression 1: Denial of Medical Treatment

								90% C.I.for EXP(B)	
		B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
Step 1[a]	Education	-.128	.195	.432	1	.511	.879	.638	1.213
	INCOME	-.115	.157	.534	1	.465	.892	.689	1.154
	Employment	.379	.249	2.319	1	.128	1.460	.970	2.198
	Constant	-1.039	.821	1.599	1	.206	.354		

a. Variable(s) entered on step 1: Education, INCOME, Employment.

The second SE logistic regression tested the correlational relationship between the independent, socioeconomic variables (education, income, employment) and the dependent variable (verbal harassment/disrespect in a medical setting). The second SE logistic regression showed that the model was significant at determining the existence of

correlations between the socioeconomic variables and being verbally harassed/disrespected in a medical setting as shown by the Chi-Square value (X^2=8.195, df = 3, p < .1). Furthermore the Nagelkerke pseudo R^2 indicated that the model accounted for 6.1% of the variance in the dependent variables and the Cox and Snell R^2 further indicated that the model accounted for 4.5% of the variance in the dependent variable. The Hosmer and Lemeshow Test was significant (p = .061) indicating that the model was not a good fit for the data. The results from the 2X2 classification table indicated that the model correctly classified 62.2% of all cases. The results from this logistic regression showed that the 2 independent socioeconomic variables had significant correlational relationships with the verbal harassment/disrespect in a medical setting dependent variable. Income showed no significant correlational relationship with verbal harassment/disrespect in a medical setting with a p value of .187. However, education and employment had a correlational relationship with verbal harassment/disrespect in a medical setting with p values of 0.039 and 0.030 respectively. For education, the strength of the correlation was an odds ratio of 1.449; indicating that when compared to those with no high school diploma, transgender African Americans with higher levels of education were more likely to experience verbal harassment/disrespect in a medical setting by a factor of 1.449. For employment, the strength of the correlation was an odds ratio of 1.651; indicating that when compared to those out of workforce and not looking, transgender African Americans out of workforce but looking or in workforce were more likely to experience verbal harassment and disrespect in a medical setting by a factor of 1.651.

Table 61

SE Logistic Regression 2: Verbal Harassment/Disrespect in a Medical Setting

								90% C.I.for EXP(B)	
		B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
Step 1[a]	Education	.371	.179	4.274	1	.039	1.449	1.079	1.947
	INCOME	-.194	.147	1.739	1	.187	.824	.647	1.049
	Employment	.501	.230	4.736	1	.030	1.651	1.130	2.411
	Constant	-1.944	.771	6.363	1	.012	.143		

a. Variable(s) entered on step 1: Education, INCOME, Employment.

The third SE logistic regression tested the correlational relationship between the independent, socioeconomic variables (education, income, employment) and the dependent variable (physically attacked/assaulted in a medical setting). The third SE logistic regression showed that the model was insignificant when compared to baseline model without the independent variables at determining the existence of correlations between the socioeconomic variables and physically attacked/assaulted as shown by the Chi-Square value (X^2=4.152, df = 3, p >.1). The Nagelkerke pseudo R^2 indicated that the model accounted for 4.6% of the variance in the dependent variables and the Cox and Snell R^2 further indicated that the model accounted for 1.9% of the variance in the dependent variable. The Hosmer and Lemeshow Test was not significant (p = .762) indicating that the model was a good fit for the data. The results from the 2X2 classification table indicated that the model correctly classified 92.7% of all cases. The results from this logistic regression showed that 1 independent socioeconomic variable had a significant correlational relationship with the physical attack/assault in a medical setting dependent variable. Education and income showed no significant correlational

relationship with physical attack/assault in a medical setting with p values of .849 and .983, respectively. However, employment had a correlational relationship with physical attack/assault in a medical setting with a p value of .051. The strength of the correlation was an odds ratio of 1.945; indicating that when compared to those out of workforce and not looking, transgender African Americans out of workforce but looking or those in workforce were more likely to experience physical attack /assault in a medical setting by a factor of 1.945.

Table 62

SE Logistic Regression 3: Physical Attack/Assault in a Medical Setting

								90% C.I.for EXP(B)	
		B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
Step 1[a]	Education	.055	.290	.036	1	.849	1.057	.656	1.701
	INCOME	-.005	.221	.000	1	.983	.995	.692	1.431
	Employment	.665	.342	3.793	1	.051	1.945	1.109	3.413
	Constant	-3.874	1.257	9.503	1	.002	.021		

a. Variable(s) entered on step 1: Education, INCOME, Employment.

The fourth SE logistic regression tested the correlational relationship between the independent, socioeconomic variables (education, income, employment) and the dependent variable (postponement of medical care due to fear of discrimination). The fourth SE logistic regression showed that the model was significant at determining the existence of correlations between the socioeconomic variables and postponement of medical care due to fear of discrimination as shown by the Chi-Square value (X^2=6.415, df = 3, p < .1). Furthermore the Nagelkerke pseudo R^2 indicated that the model accounted for 4.1% of the variance in the dependent variables and the Cox and Snell R^2 further

indicated that the model accounted for 3.0% of the variance in the dependent variable. The Hosmer and Lemeshow Test was insignificant (p = .947) indicating that the model was a good fit for the data. The results from the 2X2 classification table indicated that the model correctly classified 65.6% of all cases. The results from this logistic regression showed that 2 independent socioeconomic variables had a significant correlational relationship with the postponement of medical care due to fear of discrimination dependent variable. Income showed no significant correlational relationship with postponement of medical care due to fear of bias with a p value of .110. However, education and employment had a correlational relationship with postponement of medical care due to fear of bias with p values of 0.098 and 0.083 respectively. For education, the strength of the correlation was an odds ratio of 1.317; indicating that when compared to those with no high school diploma, transgender African Americans with higher levels of education were more likely to experience postponement of medical care due to fear of bias by a factor of 1.317. For employment, the strength of the correlation was an odds ratio of 1.437; indicating that when compared to those out of work force and not looking, transgender African Americans out of workforce but looking or in workforce were more likely to postponement of medical care due to fear of bias by a factor of 1.437.

Table 63

SE Logistic Regression 4: Postponement of Medical Care Due to Fear of Bias

								90% C.I.for EXP(B)	
		B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
Step 1[a]	Education	.276	.167	2.741	1	.098	1.317	1.002	1.733
	INCOME	-.210	.131	2.558	1	.110	.811	.653	1.006
	Employment	.362	.209	3.002	1	.083	1.437	1.019	2.026
	Constant	-1.537	.712	4.663	1	.031	.215		

a. Variable(s) entered on step 1: Education, INCOME, Employment.

The fifth SE logistic regression tested the correlational relationship between the independent, socioeconomic variables (education, income, employment) and the dependent variable (discrimination by medical providers). The fifth SE logistic regression showed that the model was significant at determining the existence of correlations between the socioeconomic variables and discrimination by medical providers as shown by the Chi-Square value (X^2=6.784, df = 3, p < .1). Furthermore the Nagelkerke pseudo R^2 indicated that the model accounted for 4.8% of the variance in the dependent variables and the Cox and Snell R^2 further indicated that the model accounted for 3.1% of the variance in the dependent variable. The Hosmer and Lemeshow Test was insignificant (p = .869) indicating that the model was a good fit for the data. The results from the 2X2 classification table indicated that the model correctly classified 79.9% of all cases. The results from this logistic regression showed that the 2 independent socioeconomic variables had significant correlational relationships with the discrimination by medical providers' dependent variable. Employment showed no significant correlational relationship with discrimination by medical providers with a p value of .647. However,

education and income had significant correlational relationships with discrimination by medical providers with p values of 0.021 and 0.055 respectively. For education, the strength of the correlation was an odds ratio of 1.576; indicating that when compared to those with no high school diploma, transgender African Americans with higher levels of education were more likely to experience discrimination by medical providers by a factor of 1.576. For income, the strength of the correlation was an odds ratio of 1.123; indicating that when compared to those earning less than $10K, transgender African Americans earning more were more likely experience discrimination by medical providers by a factor of 1.123.

Table 64

SE Logistic Regression 5: Discrimination by Medical Providers

								90% C.I.for EXP(B)	
		B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
Step 1[a]	Education	.455	.197	5.346	1	.021	1.576	1.140	2.178
	INCOME	-.309	.161	3.691	1	.055	.734	.563	.956
	Employment	.116	.252	.210	1	.647	1.123	.741	1.700
	Constant	-2.224	.854	6.783	1	.009	.108		

a. Variable(s) entered on step 1: Education, INCOME, Employment.

The sixth SE logistic regression tested the correlational relationship between the independent, socioeconomic variables (education, income, employment) and the dependent variable (medical provider's lack of knowledge). The sixth SE logistic regression showed that the model was insignificant when compared to baseline model without the independent variables at determining the existence of correlations between the socioeconomic variables and medical provider's lack of knowledge as shown by the

Chi-Square value (X^2=1.813, df = 3, p >.1). Furthermore the Nagelkerke pseudo R^2 indicated that the model accounted for 1.5% of the variance in the dependent variables and the Cox and Snell R^2 further indicated that the model accounted for 1.1% of the variance in the dependent variable. The Hosmer and Lemeshow Test was not significant (p = .487) indicating that the model was good fit for the data. The results from the 2X2 classification table indicated that the model correctly classified 55.9% of all cases. The results from this logistic regression showed that the 3 independent socioeconomic variables, education, income, and employment did not have a significant correlational relationship with the dependent variable (medical providers' lack of knowledge) with p values all above 0.1 at .935, .884, and .231, respectively.

Table 65

SE Logistic Regression 6: Medical Providers' Lack of Knowledge

								90% C.I.for EXP(B)	
		B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
Step 1[a]	Education	.014	.173	.007	1	.935	1.014	.764	1.347
	INCOME	-.020	.140	.021	1	.884	.980	.778	1.233
	Employment	.281	.235	1.433	1	.231	1.325	.900	1.951
	Constant	-.466	.760	.376	1	.540	.628		

a. Variable(s) entered on step 1: Education, INCOME, Employment.

Results from Logistic Regression Analyses: Health Behaviors (HB)

The first HB logistic regression tested the correlational relationship between the independent, health behavior variables (hormone therapy, gender surgeries, drug and alcohol abuse, tobacco use, suicide attempts, and health insurance) and the dependent variable (denial of medical treatment). The first HB logistic regression showed that the

model was significant at determining the existence of correlations between the health behavior variables and denial of medical treatment as shown by the Chi-Square value (X^2=19.420, df = 6, p < .1). The Nagelkerke pseudo R^2 indicated that the model accounted for 16.6% of the variance in the dependent variables and the Cox and Snell R^2 further indicated that the model accounted for 11.4% of the variance in the dependent variable. The Hosmer and Lemeshow Test was not significant (p = .733) indicating that the model was good fit for the data. The results from the 2X2 classification table indicated that the model correctly classified 74.4% of all cases. The results from this logistic regression showed that 1 independent health behavior variable had a significant correlational relationship with the denial of medical treatment dependent variable. Hormone therapy, gender surgeries, drug and alcohol misuse, tobacco use, and access to health insurance showed no significant correlational relationships with denial of medical treatment with p values of .587, .115, .110, .241, and .120, respectively. However, suicide attempts had a significant correlational relationship with denial of medical treatment with a p value of .048. The strength of the correlation was an odds ratio of 2.240; indicating that when compared to those who had not attempted suicide, transgender African Americans who had attempted suicide were more likely to experience denial of medical treatment by a factor of 2.240.

Table 66

HB Logistic Regression 1: Denial of Medical Treatment

								90% C.I.for EXP(B)	
		B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
Step 1[a]	Hormone Therapy	-.160	.294	.295	1	.587	.852	.525	1.383
	Gender Surgeries	-.689	.437	2.487	1	.115	.502	.245	1.030
	Drug/Alcohol Misuse	-.417	.261	2.551	1	.110	.659	.429	1.013
	Tobacco Use	-.196	.167	1.376	1	.241	.822	.625	1.082
	Suicide Attempts	.806	.407	3.918	1	.048	2.240	1.146	4.377
	Health Insurance	.388	.250	2.412	1	.120	1.474	.977	2.224
	Constant	-.164	1.193	.019	1	.891	.849		

a. Variable(s) entered on step 1: Hormone Therapy, Gender Surgeries, Drug/Alcohol Misuse, Tobacco Use, Suicide Attempts, Health Insurance.

The second HB logistic regression tested the correlational relationship between the independent, health behavior variables (hormone therapy, gender surgeries, drug and alcohol abuse, tobacco use, suicide attempts, and health insurance) and the dependent variable (verbal harassment/disrespect). The second HB logistic regression showed that the model was significant at determining the existence of correlations between the health behavior variables and verbal harassment/disrespect as shown by the Chi-Square value (X^2=19.013, df = 6, p < .1). The Nagelkerke pseudo R^2 indicated that the model accounted for 14.8% of the variance in the dependent variables and the Cox and Snell R^2 further indicated that the model accounted for 10.9% of the variance in the dependent variable. The Hosmer and Lemeshow Test was not significant (p = .612) indicating that the model was a good fit for the data. The results from the 2X2 classification table indicated that the model correctly classified 78.5% of all cases. The results from this logistic regression

showed that 2 independent health behavior variables had significant correlational relationships with the verbal harassment/disrespect variable. Gender surgeries, tobacco use, suicide attempts and access to health insurance showed no significant correlational relationships with verbal harassment/disrespect in medical setting with p values of .834, .518, .507, and .272, respectively. However, receipt of hormone therapy had a significant correlational relationship with verbal harassment/disrespect with a p value of .093. The strength of the correlation was an odds ratio of .660; indicating that when compared to those who did not want hormone therapy, transgender African Americans who wanted or had hormone therapy were less likely to experience verbal harassment/disrespect by a factor of .660. Drug and alcohol abuse also had a significant correlational relationship with verbal harassment/disrespect with a p value of .002. The strength of the correlation was an odds ratio of .450; indicating that when compared to those who abuse drugs and alcohol, transgender African Americans who were former abusers and nonabusers were less likely to experience verbal harassment/disrespect by a factor of 0.450.

Table 67

HB Logistic Regression 2: Verbal Harassment/Disrespect in a Medical Setting

							90% C.I.for EXP(B)	
		B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
Step 1[a]	Hormone Therapy	-.416	.247	2.829	1	.093	.660	.439	.991
	Gender Surgeries	-.076	.366	.044	1	.834	.926	.508	1.690
	Drug/Alcohol Misuse	-.800	.256	9.723	1	.002	.450	.295	.685
	Tobacco Use	.094	.146	.418	1	.518	1.099	.865	1.396
	Suicide Attempts	.238	.359	.440	1	.507	1.269	.703	2.288
	Health Insurance	.232	.211	1.208	1	.272	1.261	.891	1.786
	Constant	1.790	1.038	2.973	1	.085	5.987		

a. Variable(s) entered on step 1: Hormone Therapy, Gender Surgeries, Drug/Alcohol Misuse, Tobacco Use, Suicide Attempts, Health Insurance.

The third HB logistic regression tested the correlational relationship between the independent, health behavior variables (hormone therapy, gender surgeries, drug and alcohol abuse, tobacco use, suicide attempts, and health insurance) and the dependent variable (physical attack/assault). The third HB logistic regression showed that the model was insignificant when compared to baseline model without the independent variables at determining the existence of correlations between the health behavior variables and physical attack/assault as shown by the Chi-Square value (X^2=6.881, df = 6, p >.1). The Nagelkerke pseudo R^2 indicated that the model accounted for 8.6% of the variance in the dependent variables and the Cox and Snell R^2 further indicated that the model accounted for 3.5% of the variance in the dependent variable. The Hosmer and Lemeshow Test was not significant (p = .743) indicating that the model was a good fit for the data. The results from the 2X2 classification table indicated that the model correctly classified 92.8% of all

cases. The results from this logistic regression showed that 1 independent health behavior variable had a significant correlational relationship with the physical attack/assault variable. Gender surgeries, drug and alcohol abuse, tobacco use, suicide attempts and access to health insurance showed no significant correlational relationships with physical attack/assault in medical setting with p values of .583, .744, .631, .849, and .2, respectively. However, receipt of hormone therapy had a significant correlational relationship with physical attack/assault with a p value of .041. The strength of the correlation was an odds ratio of .456; indicating that when compared to those who did not want hormone therapy, transgender African Americans who wanted or had hormone therapy were less likely to experience physical attack/assault in a medical setting by a factor of .456.

Table 68

HB Logistic Regression 3: Physical Attack/Assault in a Medical Setting

							90% C.I.for EXP(B)	
		B	S.E.	Wald	Df	Sig.	Exp(B)	Lower	Upper
Step 1[a]	Hormone Therapy	-.786	.384	4.188	1	.041	.456	.242	.857
	Gender Surgeries	.333	.606	.302	1	.583	1.395	.515	3.783
	Drug/Alcohol Misuse	-.126	.385	.107	1	.744	.882	.468	1.662
	Tobacco Use	-.115	.239	.231	1	.631	.891	.601	1.321
	Suicide Attempts	.114	.598	.036	1	.849	1.120	.419	2.998
	Health Insurance	.475	.371	1.643	1	.200	1.608	.874	2.958
	Constant	-1.169	1.554	.566	1	.452	.311		

a. Variable(s) entered on step 1: Hormone Therapy, Gender Surgeries, Drug/Alcohol Misuse, Tobacco Use, Suicide Attempts, Health Insurance.

The fourth HB logistic regression tested the correlational relationship between the independent, health behavior variables (hormone therapy, gender surgeries, drug and

alcohol abuse, tobacco use, suicide attempts, and health insurance) and the dependent variable (postponement of medical care due to fear of bias). The fourth HB logistic regression showed that the model was significant at determining the existence of correlations between the health behavior variables and postponement of medical care due to fear of bias as shown by the Chi-Square value (X^2=17.956, df = 6, p < .1). The Nagelkerke pseudo R^2 indicated that the model accounted for 12.2% of the variance in the dependent variables and the Cox and Snell R^2 further indicated that the model accounted for 8.8% of the variance in the dependent variable. The Hosmer and Lemeshow Test was not significant (p = .639) indicating that the model was a good fit for the data. The results from the 2X2 classification table indicated that the model correctly classified 66% of all cases. The results from this logistic regression showed that 2 independent health behavior variables had significant correlational relationships with the postponement of medical care due to fear of bias variable. Hormone therapy, gender surgeries, tobacco use, and suicide attempts showed no significant correlational relationships with postponement of medical care due to fear of bias with p values of .257, .998, 861, and .293, respectively. However, drug and alcohol abuse had significant correlational relationships with postponement of medical care due to fear of bias with a p value of .008. The strength of the correlation was an odds ratio of .540; indicating that when compared to those who abuse drugs and alcohol, transgender African Americans who were former abusers and nonabusers were less likely to experience postponement of medical care due to fear of bias by a factor of .540. Access to health insurance also had a significant correlational relationship with postponement of medical care due to fear of

bias with a p value of .051. The strength of the correlation was an odds ratio of 1.475; indicating that when compared to those privately insured, transgender African Americans who were publicly insured or uninsured were more likely to experience postponement of medical care due to fear of bias by a factor of 1.475.

Table 69

HB Logistic Regression 4: Postponement of Medical Care Due to Fear of Bias

							90% C.I.for EXP(B)	
		B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
Step 1[a]	Hormone Therapy	.278	.245	1.284	1	.257	1.320	.882	1.975
	Gender Surgeries	-.001	.340	.000	1	.998	.999	.571	1.749
	Drug/Alcohol Misuse	-.617	.233	7.018	1	.008	.540	.368	.791
	Tobacco Use	.024	.135	.031	1	.861	1.024	.820	1.279
	Suicide Attempts	.344	.327	1.108	1	.293	1.411	.824	2.417
	Health Insurance	.388	.199	3.796	1	.051	1.475	1.062	2.047
	Constant	-.870	.983	.784	1	.376	.419		

a. Variable(s) entered on step 1: Hormone Therapy, Gender Surgeries, Drug/Alcohol Misuse, Tobacco Use, Suicide Attempts, Health Insurance.

The fifth HB logistic regression tested the correlational relationship between the independent, health behavior variables (hormone therapy, gender surgeries, drug and alcohol abuse, tobacco use, suicide attempts, and health insurance) and the dependent variable (discrimination by medical providers). The fifth HB logistic regression showed that the model was insignificant when compared to baseline model without the independent variables at determining the existence of correlations between the health behavior variables and discrimination by medical providers as shown by the Chi-Square value (X^2=7.065, df = 6, p >.1). The Nagelkerke pseudo R^2 indicated that the model accounted for 5.6% of the variance in the dependent variables and the Cox and Snell R^2

further indicated that the model accounted for 3.6% of the variance in the dependent variable. The Hosmer and Lemeshow Test was not significant (p = .760) indicating that the model was a good fit for the data. The results from the 2X2 classification table indicated that the model correctly classified 79.5% of all cases. The results from this logistic regression showed that 1 independent health behavior variable had significant correlational relationship with the discrimination by medical providers' variable. Hormone therapy, gender surgeries, drug and alcohol abuse, tobacco use, and suicide attempts showed no significant correlational relationships with discrimination by medical providers with p values of .779, .178, .264, .958, and .994, respectively. However, access to health insurance had a significant correlational relationship with discrimination by medical providers with a p value of .066. The strength of the correlation was an odds ratio of 1.525; indicating that when compared to those privately insured, transgender African Americans who were publicly insured or uninsured were more likely to experience discrimination by medical providers by a factor of 1.525.

Table 70

HB Logistic Regression 5: Discrimination by Medical Providers

								90% C.I.for EXP(B)	
		B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
Step 1[a]	Hormone Therapy	-.075	.268	.079	1	.779	.928	.597	1.441
	Gender Surgeries	.512	.380	1.817	1	.178	1.669	.893	3.116
	Drug/Alcohol Misuse	-.287	.257	1.246	1	.264	.751	.492	1.146
	Tobacco Use	.008	.153	.003	1	.958	1.008	.784	1.296
	Suicide Attempts	-.003	.377	.000	1	.994	.997	.536	1.855
	Health Insurance	.422	.229	3.383	1	.066	1.525	1.046	2.223
	Constant	-1.507	1.087	1.922	1	.166	.222		

a. Variable(s) entered on step 1: Hormone Therapy, Gender Surgeries, Drug/Alcohol Misuse, Tobacco Use, Suicide Attempts, Health Insurance.

The sixth HB logistic regression tested the correlational relationship between the independent, health behavior variables (hormone therapy, gender surgeries, drug and alcohol abuse, tobacco use, suicide attempts, and health insurance) and the dependent variable (medical providers' lack of knowledge). The sixth HB logistic regression showed that the model was significant at determining the existence of correlations between the health behavior variables and medical providers' lack of knowledge as shown by the Chi-Square value (X^2=11.118, df = 6, p < .1). The Nagelkerke pseudo R^2 indicated that the model accounted for 9.3% of the variance in the dependent variables and the Cox and Snell R^2 further indicated that the model accounted for 7.0% of the variance in the dependent variable. The Hosmer and Lemeshow Test was not significant (p = .240) indicating that the model was a good fit for the data. The results from the 2X2 classification table indicated that the model correctly classified 61% of all cases. The

results from this logistic regression showed that 2 independent health behavior variables had significant correlational relationships with the medical providers' lack of knowledge variable. Hormone therapy, gender surgeries, tobacco use, and access to health insurance showed no significant correlational relationships with medical providers' lack of knowledge with p values of .522, .656, .533, and .376, respectively. However, drug and alcohol abuse had a significant correlational relationship with medical providers' lack of knowledge with a p value of .039. The strength of the correlation was an odds ratio of .600; indicating that when compared to those who abuse drugs and alcohol, transgender African Americans who were former abuser and nonabusers were less likely to experience medical providers' lack of knowledge by a factor of .600. Suicide attempts also had a significant correlational relationship with medical providers' lack of knowledge with a p value of .094. The strength of the correlation was an odds ratio of 1.780; indicating that when compared to those who had not attempted suicide, transgender African Americans who had attempted suicide were more likely to experience medical providers' lack of knowledge by a factor of 1.780.

Table 71

HB Logistic Regression 6: Medical Providers' Lack of Knowledge

								90% C.I.for EXP(B)	
		B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
Step 1[a]	Hormone Therapy	-.177	.277	.410	1	.522	.837	.531	1.321
	Gender Surgeries	.160	.359	.199	1	.656	1.174	.650	2.119
	Drug/Alcohol Misuse	-.510	.247	4.267	1	.039	.600	.400	.901
	Tobacco Use	-.090	.144	.389	1	.533	.914	.721	1.158
	Suicide Attempts	.576	.344	2.805	1	.094	1.780	1.010	3.135
	Health Insurance	-.194	.219	.782	1	.376	.824	.575	1.181
	Constant	1.994	1.107	3.244	1	.072	7.342		

a. Variable(s) entered on step 1: Hormone Therapy, Gender Surgeries, Drug/Alcohol Misuse, Tobacco Use, Suicide Attempts, Health Insurance.

Results from Logistic Regression Analyses: Sociocultural: (SC)

The first SC logistic regression tested the correlational relationship between the independent, sociocultural variables (visual nonconformity, outness in medical settings, sexual orientation, relationship status, family support, living arrangement, age, location, and preferred health setting) and the dependent variable (denial of medical treatment). The first SC logistic regression showed that the model was insignificant when compared to baseline model without the independent variables at determining the existence of correlations between the sociocultural variables and denial of medical treatment as shown by the Chi-Square value (X^2=17.050, df = 11, p >.1). The Nagelkerke pseudo R^2 indicated that the model accounted for 21.9% of the variance in the dependent variables and the Cox and Snell R^2 further indicated that the model accounted for 14.9% of the variance in the dependent variable. The Hosmer and Lemeshow Test was not significant (p = .750)

indicating that the model was a good fit for the data. The results from the 2X2 classification table indicated that the model correctly classified 76.4% of all cases. The results from this logistic regression showed that 3 sociocultural variables had a significant correlational relationship with the denial of medical treatment dependent variable. Visual nonconformity, outness in medical settings, relationship status, family support, living arrangements, current age, age of first transgender related treatment, and preferred health setting showed no significant correlational relationships with denial of medical treatment with p values of .920, .383, .976, .748, .285, .964, .742, and .189, respectively. However, sexual orientation had a significant correlational relationship with denial of medical treatment with a p value of .069. The strength of the correlation was an odds ratio of .681; indicating that when compared to homosexuals, transgender African Americans who are bisexual, queer, heterosexual, asexual, and true other were less likely to experience denial of medical treatment by a factor of .681. Age of self-identification as transgender also had a significant correlational relationship with denial of medical treatment with a p value of .049. The strength of the correlation was an odds ratio of .454; indicating that when compared to those who self-identified as transgender before the age of 18, those transgender African Americans who self-identified as transgender after the age of 17 were less likely to experience denial of medical treatment by a factor of .454. Location also had a significant correlational relationship with denial of medical treatment with a p value of .034. The strength of the correlation was an odds ratio of 1.456; indicating that when compared to those who lived in the New England region, those transgender African

Americans who lived in other regions of the United States were more likely to experience denial of medical treatment by a factor of 1.456.

Table 72

SC Logistic Regression 1: Denial of Medical Treatment

								90% C.I.for EXP(B)	
		B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
Step 1[a]	Visual Nonconformity	-.050	.495	.010	1	.920	.952	.422	2.147
	out medical	.483	.554	.760	1	.383	1.621	.651	4.034
	Sexual Orientation	-.384	.211	3.309	1	.069	.681	.481	.964
	Relationship Status	.007	.221	.001	1	.976	1.007	.700	1.447
	Family Support	-.135	.419	.103	1	.748	.874	.439	1.740
	Living Arrangements	.193	.181	1.144	1	.285	1.213	.901	1.633
	Current Age	.024	.523	.002	1	.964	1.024	.433	2.422
	Age of Self Identification	-.790	.400	3.892	1	.049	.454	.235	.877
	Age of firstTransMedical	.177	.538	.108	1	.742	1.194	.493	2.891
	Location	.375	.177	4.513	1	.034	1.456	1.088	1.947
	Preferred Health Setting	.251	.191	1.725	1	.189	1.286	.939	1.761
	Constant	-3.657	2.547	2.062	1	.151	.026		

a. Variable(s) entered on step 1: Visual Nonconformity, out medical, Sexual Orientation, Relationship Status, Family Support, Living Arrangements, Current Age, AgeSelfIdentification, AgeTransMedical, Location, PreferredHealthSetting.

The second SC logistic regression tested the correlational relationship between the independent, sociocultural variables (visual nonconformity, outness in medical settings, sexual orientation, relationship status, family support, living arrangement, age, location, and preferred health setting) and the dependent variable (verbal harassment/disrespect). The second SC logistic regression showed that the model was significant at determining the existence of correlations between the sociocultural variables verbal

harassment/disrespect as shown by the Chi-Square value (X^2=18.765, df = 11, p < .1). The Nagelkerke pseudo R^2 indicated that the model accounted for 22.1% of the variance in the dependent variables and the Cox and Snell R^2 further indicated that the model accounted for 16.2% of the variance in the dependent variable. The Hosmer and Lemeshow Test was not significant (p = .899) indicating that the model was a good fit for the data. The results from the 2X2 classification table indicated that the model correctly classified 70.8% of all cases. The results from this logistic regression showed that 3 sociocultural variables had significant correlational relationships with the verbal harassment/disrespect dependent variable. Visual nonconformity, sexual orientation, relationship status, family support, living arrangements, current age, age of first transgender related treatment, and preferred health setting showed no significant correlational relationships with denial of medical treatment with p values of .165, .991, .877, .541, .447, .999, .794, and .209, respectively. However, outness in a medical setting had a significant correlational relationship with verbal harassment/disrespect with a p value of .091. The strength of the correlation was an odds ratio of 2.324; indicating that when compared to those not out or partly out, transgender African Americans who were out or mostly out in medical settings were more likely to experience verbal harassment/disrespect by a factor of 2.324. Age of self-identification as transgender also had a significant correlational relationship with verbal harassment/disrespect with a p value of .095. The strength of the correlation was an odds ratio of .580; indicating that when compared to those who self-identified as transgender before the age of 18, those transgender African Americans who self-identified as transgender after the age of 17

were less likely to experience verbal harassment/disrespect by a factor of .580. Location also had a significant correlational relationship with verbal harassment/disrespect with a p value of .052. The strength of the correlation was an odds ratio of 1.372; indicating that when compared to those who lived in the New England region, those transgender African Americans who lived in other regions of the United States were more likely to experience verbal harassment/disrespect in a medical setting by a factor of 1.372.

Table 73

SC Logistic Regression 2: Verbal Harassment/Disrespect in a Medical Setting

								90% C.I.for EXP(B)	
		B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
Step 1[a]	Visual Nonconformity	-.591	.426	1.925	1	.165	.554	.275	1.116
	Out medical	.843	.499	2.860	1	.091	2.324	1.023	5.280
	Sexual Orientation	.002	.188	.000	1	.991	1.002	.735	1.365
	Relationship Status	-.029	.189	.024	1	.877	.971	.711	1.326
	Family Support	-.220	.359	.374	1	.541	.803	.445	1.449
	Living Arrangements	-.104	.137	.578	1	.447	.901	.719	1.129
	Current Age	.000	.480	.000	1	.999	1.000	.454	2.202
	Age of Self Identification	-.544	.327	2.780	1	.095	.580	.339	.993
	Age of first TransMedical	.116	.445	.068	1	.794	1.123	.540	2.333
	Location	.316	.163	3.777	1	.052	1.372	1.050	1.792
	Preferred Health Setting	.238	.189	1.578	1	.209	1.268	.929	1.732
	Constant	-.210	2.130	.010	1	.922	.811		

a. Variable(s) entered on step 1: Visual Nonconformity, out medical, Sexual Orientation, Relationship Status, Family Support, Living Arrangements, Current Age, AgeSelfIdentification, AgeTransMedical, Location, PreferredHealthSetting.

The third SC logistic regression tested the correlational relationship between the independent, sociocultural variables (visual nonconformity, outness, sexual orientation, relationship status, family support, living arrangement, age, location, and preferred health

setting) and the dependent variable (physical attack/assault). The third SC logistic regression showed that the model was significant at determining the existence of correlations between the sociocultural variables and physical attack/assault as shown by the Chi-Square value (X^2=38.036, df = 11, p < .1). The Nagelkerke pseudo R^2 indicated that the model accounted for 65.1% of the variance in the dependent variables and the Cox and Snell R^2 further indicated that the model accounted for 26.4% of the variance in the dependent variable. The Hosmer and Lemeshow Test was not significant (p = .999) indicating that the model was a good fit for the data. The results from the 2X2 classification table indicated that the model correctly classified 95.2% of all cases. The results from this logistic regression showed that 3 sociocultural variables had significant correlational relationships with the physical attack/attack dependent variable. Visual nonconformity, outness in medical settings, sexual orientation, relationship status, age of self-identification as transgender, age of first transgender related treatment, location, and preferred health setting showed no significant correlational relationships with denial of medical treatment with p values of .937, .304, .870, .585, .910, .433, .145, and .904, respectively. However, family support had a significant correlational relationship with physical attack/assault with a p value of .079. The strength of the correlation was an odds ratio of .109; indicating that when compared to those whose family support was as strong as before transgender status, transgender African Americans who did not have or had minimal family support were less likely to experience physical attack/assault in a medical setting by a factor of .109. Living arrangements also had a significant correlational relationship with physical attack/assault with a p value of .002. The strength of the

correlation was an odds ratio of .236; indicating that when compared to those who reported as homeless, those transgender African Americans who lived in a shelter, group home, nursing home, campus, with parents, friends, or partners, or own their own were less likely to experience physical attack/assault by a factor of .236. Current age also had a significant correlational relationship with physical attack/assault with a p value of .043. The strength of the correlation was an odds ratio of 16.658; indicating that when compared to those in the 18-24 years old range, transgender African Americans of older age were more likely to experience physical attack/assault in a medical setting by a factor of 16.658.

Table 74

SC Logistic Regression 3: Physical Attack/Assault in a Medical Setting

							90% C.I.for EXP(B)	
		B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
Step 1[a]	Visual Nonconformity	.090	1.133	.006	1	.937	1.094	.170	7.054
	out medical	-1.245	1.211	1.057	1	.304	.288	.039	2.110
	Sexual Orientation	.086	.526	.027	1	.870	1.090	.459	2.588
	Relationship Status	.340	.622	.299	1	.585	1.405	.505	3.907
	Family Support	-2.213	1.261	3.079	1	.079	.109	.014	.871
	Living Arrangements	-1.446	.477	9.190	1	.002	.236	.108	.516
	Current Age	2.813	1.390	4.094	1	.043	16.658	1.693	163.938
	Age of Self Identification	-.103	.911	.013	1	.910	.902	.202	4.041
	Age first TransMedical	-.863	1.099	.616	1	.433	.422	.069	2.574
	Location	.766	.525	2.128	1	.145	2.152	.907	5.106
	Preferred Health Setting	-.047	.390	.014	1	.904	.954	.502	1.813
	Constant	3.941	5.036	.612	1	.434	51.464		

a. Variable(s) entered on step 1: Visual Nonconformity, out medical, Sexual Orientation, Relationship Status, Family Support, Living Arrangements, Current Age, AgeSelfIdentification, AgeTransMedical, Location, PreferredHealthSetting.

The fourth SC logistic regression tested the correlational relationship between the independent, sociocultural variables (visual nonconformity, outness in medical settings, sexual orientation, relationship status, family support, living arrangement, age, location, and preferred health setting) and the dependent variable (postponement of medical care due to fear of bias). The fourth SC logistic regression showed that the model was insignificant when compared to baseline model without the independent variables at determining the existence of correlations between the sociocultural variables and postponement of medical care as shown by the Chi-Square value (X^2=11.236, df = 11, p

>.1). The Nagelkerke pseudo R^2 indicated that the model accounted for 11.9% of the variance in the dependent variables and the Cox and Snell R^2 further indicated that the model accounted for 8.7% of the variance in the dependent variable. The Hosmer and Lemeshow Test was not significant (p = .905) indicating that the model was a good fit for the data. The results from the 2X2 classification table indicated that the model correctly classified 69.4% of all cases. The results from this logistic regression showed that 1 sociocultural variable had a significant correlational relationship with the postponement of medical care dependent variable. Visual nonconformity, outness in medical settings, sexual orientation, relationship status, family support, living arrangements, current age, age of self-identification as transgender, age of first transgender related treatment, and location showed no significant correlational relationships with postponement of medical care due to fear of bias with p values of .302, .391, .623, .689, .845, .609, .805, .704, .693, and .253, respectively. However, preferred health setting had a significant correlational relationship with postponement of medical care with a p value of .012. The strength of the correlation was an odds ratio of 1.533; indicating that when compared to those who preferred using emergency rooms, transgender African Americans who preferred using doctors' offices, health clinics, free health clinics, the VA hospital, alternative medical providers, and those who did not use health care providers previously mentioned were more likely to postpone medical care due to fear of bias by a factor of 1.533.

Table 75

SC Logistic Regression 4: Postponement of Medical Treatment Due to Fear of Bias

								90% C.I.for EXP(B)	
		B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
Step 1[a]	Visual Nonconformity	.364	.353	1.066	1	.302	1.440	.806	2.572
	out medical	.369	.430	.736	1	.391	1.446	.713	2.931
	Sexual Orientation	-.083	.169	.241	1	.623	.920	.697	1.215
	Relationship Status	.070	.175	.160	1	.689	1.072	.804	1.430
	Family Support	.065	.331	.038	1	.845	1.067	.619	1.837
	Living Arrangements	.070	.136	.262	1	.609	1.072	.857	1.341
	Current Age	-.105	.425	.061	1	.805	.900	.447	1.812
	Age of Self Identification	.108	.284	.144	1	.704	1.114	.699	1.776
	Age of firstTrans Medical	-.167	.423	.155	1	.693	.846	.422	1.697
	Location	.159	.139	1.304	1	.253	1.172	.932	1.474
	Preferred Health Setting	.428	.171	6.257	1	.012	1.533	1.158	2.031
	Constant	-3.419	1.958	3.049	1	.081	.033		

a. Variable(s) entered on step 1: Visual Nonconformity, out medical, Sexual Orientation, Relationship Status, Family Support, Living Arrangements, Current Age, AgeSelfIdentification, AgeTransMedical, Location, PreferredHealthSetting.

The fifth SC logistic regression tested the correlational relationship between the independent, sociocultural variables (visual nonconformity, outness in medical settings, sexual orientation, relationship status, family support, living arrangement, age, location, and preferred health setting) and the dependent variable (discrimination by medical providers). The fifth SC logistic regression showed that the model was insignificant when compared to baseline model without the independent variables at determining the existence of correlations between the sociocultural variables and discrimination by medical providers as shown by the Chi-Square value (X^2=16.449, df = 11, p >.1). The

Nagelkerke pseudo R^2 indicated that the model accounted for 18.7% of the variance in the dependent variables and the Cox and Snell R^2 further indicated that the model accounted for 12.4% of the variance in the dependent variable. The Hosmer and Lemeshow Test was not significant (p = .546) indicating that the model was a good fit for the data. The results from the 2X2 classification table indicated that the model correctly classified 75.8% of all cases. The results from this logistic regression showed that 1 sociocultural variable had a significant correlational relationship with the discrimination by medical providers' dependent variable. Visual nonconformity, outness in medical settings, sexual orientation, relationship status, family support, living arrangements, location, and preferred health setting showed no significant correlational relationships with discrimination by medical providers with p values of .996, .127, .434, .136, .410, .847, 1.00, and .384, respectively. However, age had a significant correlational relationship with discrimination by medical providers. The p values and odds ratio for current age was .052 and .345, the p value and odds ratio for age of self-identification as transgender was .051 and .503, and the p value and odds ratio for age of first transgender related medical treatment was .014 and 4.211. These values indicated that when compared to those aged 18-24 years old, older transgender African Americans were less likely to experience discrimination by medical providers by a factor of .345. When compared to those self-identifying as transgender under the age of 18 years old, transgender African Americans self-identifying art older ages were less likely to experience discrimination by medical providers by a factor of .503. Lastly, when compared to those having their first transgender related medical treatment under the age

of 18 years old, transgender African Americans who received their first transgender related treatment after the age of 17 were more than 4 times more likely to experience discrimination by medical providers.

Table 76

SC Logistic Regression 5: Discrimination by Medical Providers

								90% C.I.for EXP(B)	
		B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
Step 1[a]	Visual Nonconformity	.002	.421	.000	1	.996	1.002	.501	2.004
	out medical	.792	.520	2.325	1	.127	2.208	.939	5.191
	Sexual Orientation	.155	.198	.612	1	.434	1.168	.843	1.618
	Relationship Status	-.373	.250	2.226	1	.136	.689	.457	1.039
	Family Support	.305	.370	.678	1	.410	1.356	.738	2.493
	Living Arrangements	-.027	.142	.037	1	.847	.973	.771	1.228
	Current Age	-1.064	.548	3.771	1	.052	.345	.140	.850
	Age of Self Identification	-.688	.353	3.809	1	.051	.503	.281	.897
	Age first Trans Medical	1.438	.584	6.059	1	.014	4.211	1.611	11.004
	Location	.000	.165	.000	1	1.000	1.000	.762	1.312
	Preferred Health Setting	.159	.182	.758	1	.384	1.172	.868	1.582
	Constant	-2.119	2.154	.968	1	.325	.120		

a. Variable(s) entered on step 1: Visual Nonconformity, out medical, Sexual Orientation, Relationship Status, Family Support, Living Arrangements, Current Age, AgeSelfIdentification, AgeTransMedical, Location, PreferredHealthSetting.

The sixth SC logistic regression tested the correlational relationship between the independent, sociocultural variables (visual nonconformity, outness in medical settings, sexual orientation, relationship status, family support, living arrangement, age, location, and preferred health setting) and the dependent variable (medical providers' lack of knowledge). The sixth SC logistic regression showed that the model was insignificant

when compared to baseline model without the independent variables at determining the existence of correlations between the sociocultural variables and medical providers' lack of knowledge as shown by the Chi-Square value (X^2=11.558, df = 11, p >.1). The Nagelkerke pseudo R^2 indicated that the model accounted for 14% of the variance in the dependent variables and the Cox and Snell R^2 further indicated that the model accounted for 10.5% of the variance in the dependent variable. The Hosmer and Lemeshow Test was not significant (p = .767) indicating that the model was good fit for the data. The results from the 2X2 classification table indicated that the model correctly classified 62.5% of all cases. The results from this logistic regression showed that 1 sociocultural variable had a significant correlational relationship with medical providers' lack of knowledge dependent variable. Visual nonconformity, outness in medical settings, sexual orientation, relationship status, family support, living arrangements, current age, age of self-identification as transgender, age of first transgender related treatment, and preferred health setting showed no significant correlational relationships with medical providers' lack of knowledge with p values of .210, .829, .694, .148, .817, .392, .605, .431, .814, and .145, respectively. However, location had a significant correlational relationship with medical providers' lack of knowledge with a p value of .053. The strength of the correlation was an odds ratio of 1.352; indicating that when compared to those who lived in the New England region, those transgender African Americans who lived in other regions of the United States were more likely to experience medical providers' lack of knowledge by a factor of 1.352.

Table 77

SC Logistic Regression 6: Medical Providers' Lack of Knowledge

							90% C.I.for EXP(B)	
		B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
Step 1[a]	Visual Nonconformity	.505	.403	1.570	1	.210	1.657	.854	3.216
	Out medical	-.099	.457	.047	1	.829	.906	.427	1.921
	Sexual Orientation	-.069	.176	.155	1	.694	.933	.699	1.246
	Relationship Status	.258	.179	2.090	1	.148	1.294	.965	1.736
	Family Support	-.083	.359	.053	1	.817	.920	.510	1.660
	Living Arrangements	.127	.149	.731	1	.392	1.136	.889	1.451
	Current Age	-.227	.439	.268	1	.605	.797	.387	1.640
	Age of Self Identification	.228	.290	.620	1	.431	1.256	.780	2.023
	Age of first Trans Medical	.106	.451	.056	1	.814	1.112	.530	2.336
	Location	.302	.156	3.750	1	.053	1.352	1.046	1.747
	Preferred Health Setting	.319	.219	2.125	1	.145	1.376	.960	1.971
	Constant	-3.967	2.150	3.404	1	.065	.019		

a. Variable(s) entered on step 1: Visual Nonconformity, out medical, Sexual Orientation, Relationship Status, Family Support, Living Arrangements, Current Age, AgeSelfIdentification, AgeTransMedical, Location, PreferredHealthSetting.

Summary

Research question 1 asked was there a correlation between socioeconomic variables and measures of health seeking experiences among transgender African Americans+? All of the socioeconomic variables had at least one statistically significant correlation with a negative health seeking experience. Therefore, in response to this question the alternate hypothesis of, there will be a correlation between the socioeconomics of transgender African Americans and negative health seeking experiences, is accepted. Since some of the negative health seeking experiences showed no correlation with any of the socioeconomic variables, the null hypothesis of there will

not be a correlation between the socioeconomics of transgender African Americans and negative health seeking experiences is partially rejected.

Table 78

Summary of SE Results

SE	Denial of treatment	Verbally harassed	Physically attacked	Postponement due to fear of bias	Discrimination by medical providers	Medical Provider's Lack of Knowledge
Education (Compared to those with no high school diploma)	**Not Significant**	**Significant P value = 0.039 OR = 1.449**	**Not significant**	**Significant P value = 0.098 OR = 1.317**	**Significant P value = 0.021 OR = 1.576**	**Not significant**
Income (Compared to those making <$10K)	**Not Significant**	**Not significant**	**Not significant**	**Not significant**	**Significant P value = 0.055 OR = 1.123**	**Not significant**
Employment (Compared to those out of workforce and not looking)	**Not Significant**	**Significant P value = 0.03 OR = 1.651**	**Significant P value = 0.051 OR = 1.945**	**Significant P value = 0.083 OR = 1.437**	**Not significant**	**Not significant**

Research question 2 asked is there a correlation between health behavior variables and measures of health seeking experiences among transgender African Americans? Some of the health behavior variables showed no statistically significant correlation with any of the negative health seeking experiences. Therefore, in response to this question the alternate hypothesis of, there will be a correlation between the health behaviors of transgender African Americans and negative health seeking experiences, is partially accepted and the null hypothesis of there will not be a correlation between the health behaviors of transgender African Americans and negative health seeking experiences is partially rejected.

Table 79

Summary of HB Results

Health Behaviors	Denial of treatment	Verbally harassed	Physically attacked	Postponement due to fear of bias	Discrimination by medical providers	Medical Provider's Lack of Knowledge
Hormone Therapy (Compared to those who did not want hormone therapy)	**Not Significant**	**Significant P value = 0.093 OR = .660**	**Significant P value = 0.041 OR = 0.456**	**Not Significant**	**Not Significant**	**Not Significant**
Gender Surgeries	**Not Significant**	**Not Significant**	**Not Significant**	**Not Significant**	**Not Significant**	**Not Significant**
Drug / Alcohol Abuse (Compared to those who were current abusers)	**Not Significant**	**Significant P value = 0.002 OR = 0.45**	**Not Significant**	**Significant P value = 0.008 OR = 0.54**	**Not Significant**	**Significant P value = 0.039 OR = .6**
Tobacco Use	**Not Significant**	**Not Significant**	**Not Significant**	**Not Significant**	**Not Significant**	**Not Significant**
Suicide Attempts (Compared to those who had not attempted suicide)	**Significant P value = 0.048 OR = 2.24**	**Not Significant**	**Not Significant**	**Not Significant**	**Not Significant**	**Significant P value = 0.094 OR = 1.78**
Access to Health Insurance (Compared to those privately insured)	**Not Significant**	**Not Significant**	**Not Significant**	**Significant P value = 0.051 OR = 1.475**	**Significant P value = 0.066 OR = 1.525**	**Not Significant**

Research question 3 asked is there a correlation between sociocultural variables and measures of health seeking experiences among transgender African Americans? Some of the sociocultural variables showed no statistically significant correlation with

any negative health seeking experiences. Therefore, in response to this question the alternate hypothesis of, there will be a correlation between the sociocultural variables of transgender African Americans and negative health seeking experiences, is partially accepted. However the null hypothesis of there will not be a correlation between the sociocultural variables of transgender African Americans and negative health seeking experiences is partially rejected.

Table 80

Summary of SC Results

Sociocultural Variables	Denial of treatment	Verbally harassed	Physically attacked	Postponement due to fear of bias	Discrimination by medical providers	Medical Provider's Lack of Knowledge
Visual nonconformity	**Not Significant**	**Not Significant**	**Not Significant**	**Not Significant**	**Not Significant**	**Not Significant**
Outness in medical settings (Compared to those not out/ partly out)	**Not Significant**	**Significant P value = 0.091 OR = 2.324**	**Not Significant**	**Not Significant**	**Not Significant**	**Not Significant**
Sexual Orientation (Compared to homosexuals)	**Significant P value = 0.069 OR = 0.681**	**Not Significant**	**Not Significant**	**Not Significant**	**Not Significant**	**Not Significant**
Relationship Status	**Not Significant**	**Not Significant**	**Not Significant**	**Not Significant**	**Not Significant**	**Not Significant**
Family Support (Compared to those with strong family support)	**Not Significant**	**Not Significant**	**Significant P value = 0.079 OR = 0.109**	**Not Significant**	**Not Significant**	**Not Significant**
Living Arrangements (Compared to those who reported as homeless)	**Not Significant**	**Not Significant**	**Significant P value = 0.002 OR = 0.236**	**Not Significant**	**Not Significant**	**Not Significant**
Current Age (Compared to those in the 18-24 age range)	**Not Significant**	**Not Significant**	**Significant P value = 0.043 OR = 16.658**	**Not Significant**	**Significant P vale = 0.052 OR = .345**	**Not Significant**
Age Self-Identification (Compared to those who self-identified before age 18)	**Significant P value = 0.049 OR = 0.454**	**Significant P value = 0.095 OR = 0.58**	**Not Significant**	**Not Significant**	**Significant P value = 0.051 OR = 0.503**	**Not Significant**
Age first Trans medical treatment (Compared to those who received trans-related medical treatment before age 18)	**Not Significant**	**Not Significant**	**Not Significant**	**Not Significant**	**Significant P value = 0.014 OR = 4.211**	**Not Significant**

(table continues)

Sociocultural Variables	Denial of treatment	Verbally harassed	Physically attacked	Postponement due to fear of bias	Discrimination by medical providers	Medical Provider's Lack of Knowledge
Location (Compared to those who lived in New England region)	**Significant P value = 0.034 OR = 1.456**	**Significant P value = 0.052 OR = 1.372**	**Not Significant**	**Not Significant**	**Not Significant**	**Significant P value = 0.053 OR = 1.352**
Preferred Health Setting (Compared to those who prefer emergency rooms)	**Not Significant**	**Not Significant**	**Not Significant**	**Significant P value = 0.012 OR = 1.533**	**Not Significant**	**Not Significant**

This chapter provided answers to the 3 research questioned proposed in this study. Chapter 5 will provide an interpretation on these findings; address the limitation of this study, recommendations for future research, and the positive social change implications of this research.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The purpose of this quantitative, correlational study was to determine if correlations existed between three divisions of 18 sociodemographic variables and negative health seeking experiences among transgender African Americans. Results from the logistic regression analyses showed that correlations did exist between the socioeconomics, health behaviors, and sociocultural variables of transgender African Americans and negative health seeking experiences. In this chapter, the interpretations of findings, the limitations of the study, recommendations for further research, and implications of the study are discussed.

Interpretation of Findings: SE

Education showed significant correlations to verbal harassment, postponement of health care due to fear of bias, and discrimination by medical providers. In general, the reviewed literature indicated that higher education levels correlated to positive health outcomes and better quality of life (CDC, 2011; Krueger et al., 2015; Motmans, Meier, Ponnet, & T'Sojen, 2012; Picker, 2015). However, the authors of the NTDS found that, at each educational attainment, transgender individuals had lower incomes than the general population (Grant et al., 2010). This indicated that for transgender individuals higher education levels did not shield them from discrimination and the results of this study supported those findings. I found that for transgender African Americans, higher education levels increased their likelihood of having negative health seeking experiences. This meant that for transgender African Americans, education could be used as a

predictor for negative health seeking experiences but higher educational attainment did not shield them from negative health seeking experiences.

Even though research showed income disparities when transgender individuals were compared to the general population (Feldman & Bockting, 2003; Grant et al., 2010; Xavier, 2006), and when transgender minorities were compared to White transgender individuals (Erich et al., 2010); no research was found that correlated income levels to health seeking experiences among transgenders, much less transgender African Americans. However, I found that of the six negative health seeking behaviors assessed, income showed a significant correlation to discrimination by medical providers and also that as income increased the likelihood of this negative health seeking experience also increased. Because income only showed a significant correlation to one of six measures of negative health seeking experiences, it was the weakest socioeconomic predictor of negative health seeking experiences. However, the one statistically significant correlation meant that for transgender African Americans, income could be used as a predictor for negative health seeking experiences but higher income levels did not shield them from negative health seeking experiences.

Even though the review of literature showed employment disparities when transgender individuals were compared to the general population and when transgender minorities were compared to White transgender individuals (Grant et al., 2010), no research was found that sought correlations between employment and health seeking experiences. However, I found that employment had significant correlations for verbal assault/harassment, physical attack/assault, and postponement of medical care due to fear

of bias. Furthermore, compared to transgender African Americans who were not looking for work, those looking for work or currently working had an increased likelihood for all three of the aforementioned negative health seeking experiences. Because employment showed significant correlations to three of six negative health seeking experiences, this meant that for transgender African Americans, employment could be used as a predictor for negative health seeking experiences, but having a job or looking for work did not shield them from negative health seeking experiences.

In terms of socioeconomics, all of the variables (education, income, and employment) showed significant correlations with at least one of the negative health seeking experiences. The health behavior and sociocultural divisions had some variables that did not show any statistically significant correlations to any of the negative health seeking experiences. Therefore, within the scope of this study, of the three divisions, socioeconomic variables had the strongest predictive relationship to negative health seeking experiences. I found that for transgender African Americans, socioeconomic variables could be used as a predictor for negative health seeking experiences; however, attainment of higher socioeconomics increased the likelihood of negative health seeking experiences for transgender African Americans. The findings of this study were complex, counterintuitive, and in some cases novel as no related research studies were found during the review of existing literature. Higher educational attainment could have made transgender African Americans more aware and sensitive discrimination. Increased income could have pointed the finger toward discrimination because affording the health seeking experience might not have been the reason for the negative health seeking

experience. Finally, having a job or looking for a job increased the likelihood of having health insurance or a more temporary lapse in health insurance when compared to those out of work and not looking; therefore, discrimination could have been credited with the negative health seeking experience versus inability to pay.

The social ecological model promoted the understanding of the range of factors that influenced the risk of negative health seeking experiences. Based on the results of this study, a range of factors did predict the likelihood for negative health seeking experiences among transgender African Americans; education and income represented individual level factors, while employment represented a community level factor. In terms of socioeconomics, transgender African Americans who have earned high school diplomas and beyond, were in the workforce or looking to be, and earned an annual salary exceeding $10,000 were most at risk for negative health seeking experiences.

Interpretation of Findings: HB

Hormone therapy was found to increase the health related quality of life among transgenders (Colizzi, Costa, Pace, & Todarello, 2013; Gorin-Lazard, 2012; Meier, Fitzgerald, Pardo, & Babcock, 2011; Motsman, Meier, Ponnet, T'Sjoen, 2012; Newfield, Hart, Dibble, & Kohler, 2006). However, no research was found that focused on relationships between hormone therapy and health seeking experiences explicitly. One researcher found a correlation between hormone therapy and physical abuse among transgender women but this was not confined to the medical setting. The results of this research were consistent with the majority of existing literature. First, I found that hormone therapy had significant correlations with verbal harassment/disrespect and

physical attack/assault. The results indicated that transgender African Americans who wanted or had already received hormone therapy were less likely than those who did not want hormone therapy to experience verbal assault/harassment and physical attack/assault in medical settings. This meant that for transgender African Americans, hormone therapy could be used as a predictor for negative health seeking experiences and gender congruency promoted by hormone therapy might have shielded transgender African Americans from negative health seeking experiences. However, I found no significant correlations between visual nonconformity and negative health seeking experience but the measure on visual nonconformity was based on the survey question "People can tell I'm transgender/gender non-conforming even if I don't tell them" (Grant et al., 2010). The response to this question is very subjective and based on the transgender individuals' perception of gender congruency; whereas, hormone therapy is an actual influencer of gender congruency.

Researchers have shown that receipt of facial feminization and other gender surgeries has improved the health-related quality of life of transgender individuals (Ainsworth, & Spiegel, 2010). However, no research was found that correlated receipt of gender surgeries to any of the 6 dependent health seeking experiences variables. I also found no correlations between gender surgeries and negative health seeking experiences.

No research was found during the literature review that attempted to find correlations between abuse of drugs and alcohol and any of the 6 dependent health seeking experiences variables. However, I found significant correlations with 3 of

the 6 negative health seeking experiences. When compared to those who currently abuse drugs and alcohol, transgender African Americans who were former abusers or nonabusers were less likely to experience verbal harassment/disrespect, postponement of health care due to fear of bias and medical providers' lack of knowledge. Since abuse of drugs and alcohol showed significant correlations to 3 of 6 negative health seeking experiences, this meant that for transgender African Americans, abuse of alcohol and drugs could be used as a predictor for negative health seeking experiences and not abusing drugs and alcohol could shield them from negative health seeking experiences.

Even though transgender individuals reported smoking 10% more than the general U.S. population; and transgender men and cisgender men smoked more than transgender women and cisgender women (American Lung Association, 2010; American Lung Association, 2010; Grant, et al., 2010). No research was found that sought correlations between smoking and negative health seeking experiences and I also found no correlations between tobacco use and negative health seeking experiences.

Researchers have shown that disparities exist for suicide attempts among transgender individuals (Grant, et al., 2010; Nuttbrock, et al., 2009). Furthermore, suicide attempts have been associated with victimization (Clements-Noelle, Marx, & Katz, 2006; Maguen and Shipherd, 2010). I also found a correlation between suicide attempts and victimization by way of denial of medical treatment. Transgender African Americans who attempted suicide were more than twice as likely to

experience denial of medical treatment. Furthermore, those who had attempted suicide were almost twice as likely to experience medical provider lack of knowledge. These findings meant that for transgender African Americans, suicide attempts could be used as a predictor for negative health seeking experiences and not attempting suicide shielded them from negative health seeking experiences.

Research has shown that transgender individuals are less likely than the general population to have health insurance or be insured by an employer and more likely to utilize Medicare and Medicaid (Grant et al., 2010). Transgender African Americans had the worst health insurance coverage compared to all other racial groups (Erich et al., 2010; Grant, et al, 2010). The authors of the NTDS found that 37% of NTDS respondents with private insurance postponed medical care when sick or injured, 46% with public insurance and 86% with no insurance (Grant et al., 2010). They also found that 39% of NTDS respondents with private insurance postponed preventive care, 44% with public insurance and 88% with no insurance (Grant et al., 2010). I found an association between access to health insurance and postponement of medical care. Transgender African Americans who were uninsured or publicly insured were more likely than those privately insured to postpone health care due to fear of bias. No research was found that correlated health insurance to health seeking experiences. However, I also found that African American transgender individuals who were uninsured or publicly insured were more likely than those privately insured to experience discrimination by medical providers. These findings meant that for transgender African Americans, access to health

insurance could be used as a predictor for negative health seeking experiences and being publicly insured or uninsured did not shield them from negative health seeking experiences.

In terms of health behaviors, all of the measures did not show significant correlations to all of the negative health seeking experiences; gender surgeries and tobacco use showed no significant correlations to any of the negative health seeking experiences. However, hormone therapy, drug and alcohol abuse, suicide attempts, and access to health insurance each showed significant correlations to two negative health seeking behaviors. These findings revealed that for transgender African Americans, health behaviors could be used as a predictor for negative health seeking experiences. The social ecological model promoted the understanding of the range of factors that influenced the risk of negative health seeking experiences. Based on the results of this study a range of factors did predict the likelihood for negative health seeking experiences among transgender African Americans. Hormone therapy, alcohol and drug abuse, and suicide attempts represented individual level factors, while access to health insurance represented a society level factor. In terms of health behaviors, transgender African Americans who: did not want hormone therapy, abused alcohol and drugs, attempted suicide; and were uninsured or had public insurance were most at risk for negative health seeking experiences.

Interpretation of Findings: SC

The report on the NTDS continually highlighted visual nonconformity as a risk factor for transgender bias, smoking and suicide attempts (Grant et al., 2010); though an

explicit link between visual nonconformity and health seeking experiences could not be found during the review of existing literature. This study also found no significant correlations between visual nonconformity and health seeking behaviors.

Conflicting research was found on the impact of outness among transgenders. Some researchers agreed that outness had positive impacts (Maguen et al., 2007; Riggle, et al., 2011; Schrock et al., 2005; Strain, & Shuff, 2010). Some researchers agreed that outness has negative impacts (Alegria, 2008; Grant et al., 2010; Walls et al., 2010). The authors of the NTDS found that due to outness, there was an 8% increase of denial of medical service, a 3% increase in harassment in an ambulance, and a 1% increase in being attacked in a hospital (Grant et al., 2010). However, the authors of the aforementioned study only found one statistically significant negative impact of outness in a medical setting. When compared to those not out in medical settings, transgender African Americans who were out in medical settings were more than twice as likely to experience verbal harassment or disrespect. These findings meant that for transgender African Americans, outness in medical settings could be used as a predictor for negative health seeking experiences and being out in medical settings did not shield them from negative health seeking experiences.

No research was found that attempted to determine associations between the sexual orientation of transgender individuals and their health seeking experiences. However, the results of this research showed that of all sexual orientations, homosexual African American transgender individuals were more likely to experience denial of medical treatment. Thus, I contended that for transgender African Americans, sexual

orientation was one of the sociodemographic characteristics that could possibly predict negative health seeking experiences and homosexuality did not shield them from negative health seeking experiences.

Researchers have shown that transgender individuals in a relationship experienced higher health related quality of life when compared to their single counterparts (Motsman, Meier, Ponnet, T'Sjoen, 2012; Weyers, et al., 2009; Wierckx, et al., 2011). However, no research was found during the review of existing literature that explored relationship status in terms of risk of negative health seeking experiences. This research also found no correlations between relationship status and health seeking behavior.

In terms of health, family acceptance has been associated with better health outcomes (Ryan, et al., 2010). However, in terms of negative health seeking experiences, I found that those with no family or those who had minimal family support were less likely to experience physical attack/assault in a medical setting. In this instance, the findings of this research are incongruent with the current research found on the relationship between family support and health. These findings meant that for transgender African Americans, family support could be used as a predictor for negative health seeking experiences but family support did not shield them from negative health seeking experiences. This finding was also counterintuitive—a possible explanation is that family support may lead to more confidence and outness in a medical setting which has been previously shown to increase negative health seeking experiences.

Transgender African Americans had the highest rate of homelessness among all racial groups, the highest rate of living in group homes or foster care, the lowest rate of residence ownership, the highest rate of being evicted, the highest rate of sleeping on friends' couches, the highest rate of sex with others for temporary room and board, and the highest rate of harassment in a shelter, (Grant et al., 2010). Transgender students have reported lack of trans-affirming environments of on-campus health care facilities; namely lack of provider knowledge (Singh, Meng, & Hansen, 2013). The authors of the NTDS report also found that transgender individuals who experienced homelessness were more vulnerable to mistreatment in public settings (Grant et al., 2010). The results of this study are consistent with previous results because I found that homeless African American transgender individuals were more likely to experience physical attack or assault in a medical setting when compared to those with other living arrangements. These findings meant that for transgender African Americans, living arrangements could be used as a predictor for negative health seeking experiences and homelessness did not shield them from negative health seeking experiences.

Older transgender individuals also have lower health related quality of life when compared to their younger counterparts (Motsman, Meier, Ponnet, T'Sjoen, 2012). The problem lies in the challenges older transgender adults face when accessing health care; namely, "a health care system and national aging network that are ill-prepared to provide culturally competent care" (SAGE, & NCTE, 2012). The findings of this research indicated that transgender African Americans of older age

were more likely to experience physical attack/assault in a medical setting by a factor of 16.658. These findings meant that for transgender African Americans, current age could be used as a predictor for negative health seeking experiences and aging did not shield them from negative health seeking experiences. During the review of literature, there were no studies found where African Americans transgender adolescents received gender surgeries and no studies were found that examined age of self-identifying nor age of first transgender related treatment in relation to health seeking experiences. However, both age of self-identifying as transgender and age of first transgender related treatment showed at least one statistically significant correlation to negative health seeking experiences. I found that those who self-identified as transgender after the age of 17 were less likely to be denied medical treatment and experience verbal/harassment and disrespect and discrimination by health care providers. However, transgender African Americans who received their first transgender related treatment after the age of 17 were more than 4 times more likely to experience discrimination by medical providers. These findings meant that for African American transgenders, age of self-identification as transgender and age of first transgender related treatment could be used as a predictors for negative health seeking experiences and self-identification as transgender before the age of 18 years old and receiving first transgender related treatment medical treatment after the age of 17 years old did not shield them from negative health seeking experiences.

Of all the regions analyzed in the NTDS, New England had the lowest rate of refusal of medical care (Grant et al., 2010). According to this study, when compared

to transgender African American residing in states in the New England region, transgender African Americans in other regions were more likely to be denied medical treatment, experience verbal harassment and disrespect in a medical setting, and report a medical providers' lack of knowledge. These findings are consistent with current literature (Bradford et al., 2013; Grant et al., 2010; Kenagy, 2005; Kenagy and Bostwick, 2005). These findings meant that for transgender African Americans location may be a predictor for negative heath seeking experiences and that residing in the states in the New England Region: CT, MA, ME, NH, RI, VT shielded them from negative health seeking experiences.

Among transgender African Americans in this study, the doctor's office was reported to be the most favored health setting but also the health setting where they were most denied medical treatment and most attacked (Grant et al., 2010). The findings of this research indicate that preferred health setting showed no significant correlations to any of the negative health seeking measures analyzed except for postponement of health care due to fear of bias. The results showed that compared to those going to emergency rooms, transgender African Americans who preferred other health settings were more likely to postpone medical care due to fear of bias. These findings meant that for transgender African Americans, preferred health setting could be used as a predictor for negative health seeking experiences and utilizing emergency rooms shielded them from negative health seeking experiences This finding is intuitive because people do not plan emergency room visits to begin with as this setting is normally reserved for emergencies.

In terms of sociocultural factors, all of the measures did not show significant correlations to all of the negative health seeking experiences; visual nonconformity and relationship status showed no significant correlations to any of the negative health seeking experiences. However, outness, sexual orientation, family support, living arrangements, age, location and preferred health setting each showed significant correlations with at least one negative health seeking experience. These findings revealed that for transgender African Americans, sociocultural factors could be used as a predictor for type of health seeking experience they could have. The social ecological model promoted the understanding of the range of factors that influenced the risk of negative health seeking experiences. Based on the results of this study a range of factors did predict the likelihood for negative health seeking experiences among transgender African Americans. Outness in a medical setting, sexual orientation, living arrangements, and age represented individual level factors; while location and preferred health setting represented community level factors; and family support represented a relationship level factor. In terms of sociocultural factors, transgender African Americans who: were out in a medical setting, homosexual, had family support, homeless, older in age, selfidentified as transgender before 18, received first transgender related medical treatment after 17 years old, lived outside of the New England region, and preferred other health settings than emergency rooms were most at risk for negative health seeking experiences.

The theoretical framework for this study is Bronfenbrenner's Social Ecological Model, which was first introduced in his 1979 book "The Ecology of Human Development: Experiments by Nature and Design" (Bronfenbrenner, 1979). This model

considers the interchange among four levels: individual, relationship, community, and societal factors to some outcome (CDC, 2015). In this case, the outcome is negative health seeking experiences among transgender African Americans, and the findings indicated that correlations were found on all 4 levels of the model that could aid in the understanding of this outcome.

Limitations

The primary limitation of this study was that secondary data was used and I had no control over data collection methods. Another major limitation of this study that the data came from a cross sectional study (NTDS) which provided a snap shot of the current state of transgenderism in America back in 2009-2010. A lot has happened in America as it related to transgenderism since then. Since 2010, the LGBT community has been granted the right to marry and Caitlyn Jenner, a transgender woman, has become the first transgender to be honored with Woman of the Year by Glamour magazine and honored with the ESPN Arthur Ashe Courage Award. Therefore, the data collected at the time of the NTDS may not reflect the state of transgenderism in America in 2016. Furthermore, another limitation is the generalizability of the findings as nonrandom sampling techniques were used and bias was introduced on account of the like-mindedness of survey participants as they all volunteered to participate in NTDS. It is unsure whether findings can be applied to those not active or involved in transgender causes, organizations, or use transgender related resources as these were the major vehicles of survey administration. The final limitation was using a p value of 0.1 versus 0.05 which allowed for a 10% chance of false positives in the data analysis versus a 5% chance.

Recommendations for Future Studies

This study provided evidence that some sociodemographics were related to negative health seeking experiences. Results from the logistic regressions indicated that all of the socioeconomic factors were significantly statistically correlated to at least one negative health seeking experience, and the majority of the health behavior and sociocultural factors were also correlated to negative health seeking experiences.

This study should be repeated and separated into African American transgender men and African American transgender women to determine if any differences exist. Another recommendation would be to repeat the study with different racial minorities as most studies found during the review of existing literature were either inclusive of all races or exclusive to White transgenders only. This recommendation is made because of the additional disparities compounded by race that are associated with the worsened health outcomes for minority transgenders when compared to White transgender individuals. The major recommendation I would make is for the repeat of the NTDS to compare data to the baseline collected in 2009-2010 to facilitate the measuring of status changes among transgender people in America. This would allow for the duplication of this and all of the aforementioned recommended studies to provide comparisons to the baseline as well to measure differences.

Implications

This study addressed a deep gap in the existing literature as it relates to the health of minority transgenders in America by providing some insight on the factors that may lead to negative health seeking experiences among transgender African Americans. In

prior research, a linear relationship between socioeconomics and health was reported; except this study found that an increase in education, employment status, and income correlated to increased likelihoods of negative health seeking experiences. Improvements in these factors within the transgender African Americans' control did not protect them from negative health seeking experiences; furthermore, factors out of their control like aging were also associated with increased risk of negative health seeking experiences. The results of this study support national positive social change aimed at combating transphobia among health care providers and promoting culturally competent health care in regards to transgender health. Specifically, this study demonstrated that there is a significant inverse relationship between socioeconomics and health seeking experiences. The findings suggest that some of what determines the risk of negative health seeking experiences comes from the provider side of the provider - patient interaction because characteristics that lead to positive health outcomes for the general population do not hold for transgender African Americans.

Verbal harassment and discrimination by health care providers had the most correlations to the sociodemographics analyzed. Researchers have found that: most nursing curricula fail to address transgender concepts and health care needs (Brennan et al., 2012); and that inadequate time was dedicated to LGBT related topics among medical schools across the United States (Obedin-Maliver, et al., 2011). Furthermore, only 10% of participating nurses in a 2009 study had a basic level of knowledge regarding the transgender population (Rondahl, 2009). Ultimately, it is this lack of knowledge and

transphobia that makes transgender health care sometime suboptimal and creates negative health experiences for transgender inidividuals (Alegria, 2011; Peate, 2008).

Therefore, the social change recommendation for practice is to incorporate more education on transgender health and even the health of the larger LGBT population in the curricula of health care providers. Also for health providers already practicing in the health field, health services administration should implement cultural sensitivity training for their staff on transgenders and their health. Making applicable literature in pamphlets on transgender health available in the waiting rooms and including questions that address gender identity on intake questionnaires could all foster an environment that is more welcoming to the transgender patient; thereby diminishing negative health seeking experiences.

The results of this study provided valuable information about the sociodemographics of transgender African Americans and their correlation to negative health seeking experiences. On a broader perspective, the results of this study highlight the importance of understanding what characteristics can shield them negative health seeking experiences and the characteristics that cannot.

Conclusion

The purpose of this quantitative, correlational study was to determine if correlations existed between 3 subdivisions (socioeconomic, health behavior, and sociocultural) of 18 sociodemographic characteristics and negative health seeking experiences. Of the 18 sociodemographics, only 4 showed no significant correlation to any of the 6 measures of negative health seeking experiences, indicating that

sociodemographics can be used to predict the likelihood of whether or not transgender African Americans will have negative experiences while seeking health care.

One major point of interest was in terms of socioeconomics. This research showed that attaining higher levels of socioeconomics was associated with an increased likelihood of negative health seeking experiences for transgender African Americans. This is contrary to the correlation between higher levels of socioeconomics and better health found extensively in existing literature. If higher level of income, being employed, or having higher educational attainment increased the likelihood of having a negative health seeking experience as an African American transgender; then some contributions to negative health seeking experiences come from transphobia among health care professionals and culturally incompetent health care systems.

Overall, the results revealed that sociodemographics can be used to determine who among the African American transgender population were most vulnerable for negative health seeking experiences. Those in the African American transgender community at most risk for negative health seeking experiences were those that possessed the following characteristics: earned high school diplomas and beyond, were in the workforce or looking to be in the workforce, earned an annual salary exceeding $10,000, did not want hormone therapy, abused alcohol and drugs, attempted suicide; were uninsured or had public insurance, were out in a medical setting, homosexual, had family support, homeless, older in age, selfidentified as transgender before 18, received first transgender related medical treatment after 17 years old, lived outside of the New England region, and preferred other health settings than emergency room.

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Appendix A: Data Set Permission

Sandy James <sjames@transequality.org> Apr 8

to me

Hi Alicia,

I'm sorry for not getting back to you sooner. I'm attaching the public use data set, which has the data available in Stata and SPSS formats.

I wish you all the best with your research. I'm a Ph.D. student too, so I'm certainly happy that this will help you achieve your end goals. I'd love to see what you end up doing with this data when all is said and done, if you're willing to share your research.

Let me know if you have any questions.

-Sandy

Sandy E. James
Survey Project Manager
National Center for Transgender Equality
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Washington, DC 20005
(202) 903-0112
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Pronouns: He, Him, His

Sign up and spread the word about the 2015 U.S. Trans Survey (formerly known as the NTDS or Injustice at Every Turn): www.USTransSurvey.org

From: Alicia Fritz [mailto:alicia.fritz@waldenu.edu]
Sent: Tuesday, April 7, 2015 2:16 PM
To: Sandy James
Subject: Re: National Transgender Discrimination Survey

Appendix B: IRB

Hi Susan,
The Office for Research Protections (ORP) has reviewed the above-referenced study and determined it to be exempt from IRB review. You may begin your research. This study qualifies under the following category:

Category 2: Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observations of public behavior unless: (i) information obtained is recorded in such a manner that human participants can be identified, directly or through identifiers linked to the participants; **and** (ii) any disclosure of the human participants' responses outside the research could reasonably place the participants at risk of criminal or civil liability or be damaging to the participants' financial standing, employability, or reputation. [45 CFR 46.101(b)(2]

PLEASE NOTE THE FOLLOWING:

- Include your IRB number in any correspondence to the ORP.
- The principal investigator is responsible for determining and adhering to additional requirements established by any outside sponsors/funding sources.
- **Record Keeping**
  - The principal investigator is expected to maintain the original signed informed consent forms, if applicable, along with the research records for at least three (3) years after termination of the study.
  - This will be the only correspondence you will receive from our office regarding this exemption determination.
    - **MAINTAIN A COPY OF THIS EMAIL FOR YOUR RECORDS.**
- **Consent Document(s)**
  - The exempt consent form(s) will no longer be stamped with the approval/expiration dates.
  - **The attached informed consent form(s) is the one that you are expected to use. Changes that were made to the consent form by the ORP include: (1) removal of ORP contact information as this is not required for exempt reviews (2) revision of the paper/pencil survey to remove language regarding the continue button and printing of the form (3) removal of the statement that ORP/IRB/DHHS/OHRP can review documents as this is not required for exempt reviews.**
- **Follow-Up**
  - The Office for Research Protections will contact you in three (3) years to inquire if this study will be on-going.
  - If the study is completed within the three year period, the principal investigator may complete and submit a **Project Close-Out Report**. (http://www.research.psu.edu/orp/areas/humans/applications/closeout.rtf)
- **Revisions/Modifications**
  - Any changes or modifications to the study must be submitted to the Office for Research Protections on the *Modification Request Form - Exemption* available on our website: http://www.research.psu.edu/orp/areas/humans/applications/modrequest.rtf
  - **Modifications will not be accepted unless the Modification Request Form is included with the submission.**

Please do not hesitate to contact me if you have any questions or concerns. Thank you,

Laura S. Young
The Pennsylvania State University
Office for Research Protections
201 Kern Graduate Building
University Park, PA 16802
Phone: (814) 863-1459
Fax: (814) 863-8699
www.research.psu.edu/orp

IRB <irb@waldenu.edu> Feb 18

to me, Carla

Dear Ms. Fritz,

This email is to notify you that the Institutional Review Board (IRB) confirms that your study entitled, "Social Demography of Health Seeking Experiences among African American Transgenders," meets Walden University's ethical standards. Our records indicate that you will be analyzing data provided to you by The National Center for Transgender Equality as collected under its oversight. Since this study will serve as a Walden doctoral capstone, the Walden IRB will oversee your capstone data analysis and results reporting. The IRB approval number for this study is 02-18-16-0071832.

This confirmation is contingent upon your adherence to the exact procedures described in the final version of the documents that have been submitted to IRB@waldenu.edu as of this date. This includes maintaining your current status with the university and the oversight relationship is only valid while you are an actively enrolled student at Walden University. If you need to take a leave of absence or are otherwise unable to remain actively enrolled, this is suspended.

If you need to make any changes to your research staff or procedures, you must obtain IRB approval by submitting the IRB Request for Change in Procedures Form. You will receive confirmation with a status update of the request within 1 week of submitting the change request form and are not permitted to implement changes prior to receiving approval. Please note that Walden University does not accept responsibility or liability for research activities conducted without the IRB's approval, and the University will not accept or grant credit for student work that fails to comply with the policies and procedures related to ethical standards in research.

When you submitted your IRB materials, you made a commitment to communicate both discrete adverse events and general problems to the IRB within 1 week of their occurrence/realization. Failure to do so may result in invalidation of data, loss of academic credit, and/or loss of legal protections otherwise available to the researcher.

Both the Adverse Event Reporting form and Request for Change in Procedures form can be obtained at the IRB section of the Walden website: http://academicguides.waldenu.edu/researchcenter/orec

Researchers are expected to keep detailed records of their research activities (i.e., participant log sheets, completed consent forms, etc.) for the same period of time they retain the original data. If, in the future, you require copies of the originally submitted IRB materials, you may request them from Institutional Review Board.

Both students and faculty are invited to provide feedback on this IRB experience at the link below:

http://www.surveymonkey.com/s.aspx?sm=qHBJzkJMUx43pZegKlmdiQ_3d_3d

Sincerely,
Libby Munson
Research Ethics Support Specialist
Office of Research Ethics and Compliance
Email: irb@waldenu.edu
Fax: 626-605-0472
Phone: 612-312-1283

Appendix C: Definition of Key Terms

This study will rely on the use of words related to the highly marginalized transgender population and because the jargon might not be commonly understood, the definitions of key terms are provided.

Binding. Binding is a transitional technique sometimes used by transgender men to hide their breasts (Hudson's FTM Resource Guide, 2013).

Body Dysmorphia. Body Dysmorphia is manifested in individuals who are extremely preoccupied with a perceive defect in their body because their body does not match their true gender (Alegria, 2011).

Closeted. Closeted refers to a transgender individual who has not made it known that he or she is a transgender individual (Hudson's FTM Resource Guide, 2013).

Coming Out. Coming out refers to when a transgender individual makes it known that he or she is, in fact, a transgender individual (Hudson's FTM Resource Guide, 2013).

Gender. Gender refers to psychological, social, and cultural aspects of maleness and femaleness (Alegria, 2011).

Gender Dysphoria. The pain and discomfort associated with a person feeling that his or her external appearance (e.g. reproductive organs) is not congruent with how the or she feels internally (Peate, 2008).

Gender Identity. Gender identity is one's sense of being male or female (Brennan, Barnsteiner, Siantz, Cotter, & Everett, 2012).

Gender Identity Disorder. Gender Identity Disorder is a formal psychological diagnosis to describe used persons who experience significant unhappiness with the gender assigned to them at birth and/or the gender roles associated with that sex (Schrock, Reid, & Boyd, 2005).

Gender Role. Gender role is the role considered by society to be either masculine or feminine (Brennan, Barnsteiner, Siantz, Cotter, & Everett, 2012).

Health Disparity. Health Disparity is a particular type of health difference that is closely linked with social, economic, and or environmental disadvantage (Healthy People 2020, 2015)

Hormone Therapy. Hormone therapy introduces hormones of one's true gender in order to develop the desired secondary sexual characteristics (Hudson's FTM Resource Guide, 2013).

Mastectomy. Mastectomy is the surgical removal of breasts (Hudson's FTM Resource Guide, 2013).

Natal Sex. Natal sex is the identified sex at birth based on external sexual organs (Alegria, 2011).

Orchidectomy. Orchidectomy is the surgical removal of one's testicles (Hudson's FTM Resource Guide, 2013).

Packing. Packing is a transition techniques sometimes used by transgender men to create the appearance of male genetalia (Hudson's FTM Resource Guide, 2013).

Padding. Padding is a transition technique sometimes used by transgender women to add a more curvy appearance to their body (Hudson's FTM Resource Guide, 2013).

Passing. Passing is a term used to describe a transgender individual who is seen and accepted by society as his or her true gender (Hudson's FTM Resource Guide, 2013).

Penectomy. Penectomy is the surgical removal of one's penis (Hudson's FTM Resource Guide, 2013).

Phalloplasty. Phalloplasty is the surgical construction of a penis (Hudson's FTM Resource Guide, 2013).

Social Demography. A field of study uses demographic data and methods to describe, explain, and predict social phenomena by investigating the social status composition and distribution of a population (MDH, 2015).

Sex Reassignment Surgery. Sex Reassignment Surgery is an umbrella term for surgical procedures for altering one's body to match that of his or her true gender identity (Hudson's FTM Resource Guide, 2013).

Sexual Orientation. Sexual orientation is related to the attraction for a particular gender (Brennan, Barnsteiner, Siantz, Cotter, & Everett, 2012).

Sexual Behavior. Sexual behavior refers to the practices or activities that are related to sexual stimulation (Brennan, Barnsteiner, Siantz, Cotter, & Everett, 2012).

Stand to Urinate Devices (STUDs). STUDs are devices that aid female to male transgender individuals in standing to urinate at toilets or urinals (Hudson's FTM Resource Guide, 2013).

Transgender. Transgender refers to an individual whose gender identity does not match his or her natal sex organs (Alegria, 2011).

Transitioning. Transitioning is the process of permanently changing one's outward appearance to match one's true gender (Alegria, 2011).

True Gender. True Gender is the gender that the transgender individual feels he or she belongs to ((Hudson's FTM Resource Guide, 2013).

Vaginoplasty. Vaginoplasty is the surgical construction on a vagina (Hudson's FTM Resource Guide, 2013).