

FLORIDA INTERNATIONAL UNIVERSITY

Miami, Florida

UNDERSTANDING BARRIERS TO HEALTHCARE ACCESS FOR CONSUMERS:  
A MULTIDIMENSIONAL ANALYSIS ACROSS INCOME, INSURANCE, AND  
GENDER

A dissertation submitted in partial fulfillment of  
the requirements for the degree of

DOCTOR OF BUSINESS ADMINISTRATION

by

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To: Dean William G. Hardin  
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This dissertation, written by Bianca Caridad Houston, and entitled “Understanding Barriers to Healthcare Access for Consumers: A Multidimensional Analysis Across Income, Insurance, and Gender”, having been approved in respect to style and intellectual content, is referred to you for judgment.

We have read this dissertation and recommend that it be approved.

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## DEDICATION

To my three beautiful angels — Amare Dominic, Avery Jae, and Aria Jade Houston — thank you for choosing me as your mommy and walking with me through this journey. Your laughter, dance parties, questions about my “doctor friends,” and joyful guest appearances in class reminded me daily why I kept going. I could not have done this without your love, light, and smiling faces cheering me on.

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## ABSTRACT OF THE DISSERTATION

# UNDERSTANDING BARRIERS TO HEALTHCARE ACCESS FOR CONSUMERS: A MULTIDIMENSIONAL ANALYSIS ACROSS INCOME, INSURANCE, AND GENDER

by

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Florida International University, 2025

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Access to healthcare remains a persistent challenge in the United States, particularly for socially and economically marginalized populations. Guided by the Social Determinants of Health (SDOH) framework and Penchansky and Thomas's (1981) Access to Care model, this dissertation investigates how entry, cultural, and financial barriers influence perceived access to healthcare services. The study also explores how these relationships vary by income level, insurance type, and gender identity.

The research tested three hypotheses using cross-sectional survey data and examined nine research questions through regression analyses. Results revealed that each barrier independently and significantly reduced perceived access to care. Entry and cost-related barriers had the most substantial impact among low-income participants and those with public insurance or uninsured. In contrast, cultural barriers were more pronounced for middle- and high-income individuals. Gender-based analyses indicated that men were

more affected by cost barriers, while both men and women experienced significant impacts from entry and cultural barriers. Effects were not statistically significant among non-binary participants, likely due to sample size limitations.

These findings contribute to the literature by underscoring healthcare access's multidimensional and intersectional nature. They emphasize that insurance coverage alone does not ensure equitable access and highlights persistent affordability, cultural responsiveness, and system navigability gaps. The study offers important implications for health policy, practice, and leadership—advocating for structural reforms, culturally competent care models, and targeted interventions for underserved populations. Future research should employ longitudinal and mixed-method approaches to explore the lived experiences behind these access barriers further.



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## **CHAPTER I - INTRODUCTION**

Equitable access to healthcare has long been a concern in the United States. Through research, scholars have found many barriers related to healthcare access including transportation issues (Wolfe & McDonald, 2020), language barriers (Yeo, 2004), limited appointment availability (Flores et al., 1998), provider shortages (Escarce & Kapur, 2006), cultural mistrust and differences (Flores & Vega, 1998), healthcare costs (Lazar & Davenport, 2018), systemic inefficiencies (Scheppers et al., 2006), and distrust among undocumented and marginalized groups (Doshi et al., 2020).

Among the many barriers identified in the literature, three consistently emerge as significant impediments to healthcare access: entry barriers, cultural barriers, and healthcare costs. Entry barriers refer to logistical and systemic obstacles such as transportation challenges, clinic hours, provider availability, and appointment wait times, which can discourage or delay individuals from seeking care (Escarce & Kapur, 2006; Syed et al., 2013). Cultural barriers, including language differences, health beliefs, distrust of the medical system, and lack of culturally competent care, can further deter individuals—especially from marginalized communities—from utilizing available healthcare resources (Flores & Vega, 1998; Timmins, 2002). Finally, healthcare costs—including out-of-pocket expenses, co-pays, and the high price of medical services for the uninsured—remain among the most persistent barriers to equitable access (Lazar & Davenport, 2018).

### **Gender**

Gender plays a complex role in shaping healthcare access and experiences. For instance, women may face barriers related to reproductive care, caregiving

responsibilities, and income disparities that influence their ability to access services (Damaske, 2022; Roudsari et al., 2023). Men, on the other hand, are often less likely to seek preventive care due to social norms around masculinity and health behaviors (Narasimhan et al., 2021; Hiller et al., 2017). Understanding how gender influences healthcare access in the presence of entry, cultural, and cost barriers is essential to developing equitable policy interventions (Dudgeon & Inhorn, 2004; Heise et al., 2019;).

### **Income**

Income is a critical determinant of healthcare access, influencing everything from the ability to afford insurance to transportation and time off work for medical appointments. Low-income individuals are disproportionately affected by high healthcare costs and often encounter more severe entry barriers due to a lack of flexible employment, childcare access, or proximity to providers (Lazar & Davenport, 2018; Kominski & Nonzee, 2017). These barriers are further heightened by insurance instability and affordability issues, which contribute to unmet medical needs and financial strain (Aggarwal et al., 2022; Yabroff et al., 2021). Conversely, higher-income individuals may have greater choice in providers and insurance plans, potentially mitigating some of these barriers through expanded coverage and flexible access (Crowley et al., 2020; Schoen et al., 2010).

### **Insurance Type**

The type of health insurance coverage significantly shapes the healthcare access landscape in the United States. Individuals with private insurance often have broader provider networks and shorter wait times, while those with government-funded insurance such as Medicaid or Medicare may face provider shortages, service limitations, or stigma

in care delivery (Allen et al., 2014; Martinez-Hume et al., 2017). Those who are uninsured typically face the most significant barriers, including financial inaccessibility, fear of incurring medical debt, and reduced availability of preventive services (Berk & Schur, 1998; Walker et al., 2015). Examining how insurance types interact with other access barriers provides insight into the structural inequities present in the healthcare system (Weissman et al., 2018; Zuvekas & Taliaferro, 2003).

While much research focuses on individual barriers alone, limited research explores how these barriers interact with key demographic factors such as gender, income, and insurance type. Accordingly, this study investigates the impact of entry barriers, cultural barriers, and healthcare costs on access to healthcare services while examining how these effects vary across demographic groups.

A range of systemic and individual-level factors shape access to healthcare. Entry barriers, cultural barriers, and healthcare costs are among the most significant obstacles individuals face when obtaining care. Demographic factors such as gender, income level, and type of insurance coverage can further complicate these barriers.

This study seeks to examine how entry barriers, cultural barriers, and healthcare costs affect access to healthcare services and how these relationships may differ across key demographic factors such as gender, income level, and insurance type. Based on prior research and theoretical considerations, the following research questions and hypotheses have been developed to guide this investigation.

### **Research Questions and Hypotheses**

This study aims to investigate how entry barriers, cultural barriers, and healthcare costs impact access to healthcare services, and how these relationships are influenced by

gender, income level, and type of insurance coverage. The following research questions guide the inquiry:

### **Research Questions**

**RQ1:** Does the relationship between entry barriers and access to healthcare services vary as a function of level of income?

**RQ2:** Does the relationship between cultural barriers and access to healthcare services vary as a function of level of income?

**RQ3:** Does the relationship between healthcare cost and access to healthcare services vary as a function of level of income?

**RQ4:** Does the relationship between cultural barriers and access to healthcare services vary as a function of insurance type?

**RQ5:** Does the relationship between cultural barriers and access to healthcare services vary as a function of insurance type?

**RQ6:** Does the relationship between healthcare cost and access to healthcare services vary as a function of insurance type?

**RQ7:** Does the relationship between entry barriers and access to healthcare services vary as a function of gender?

**RQ8:** Does the relationship between cultural barriers and access to healthcare services vary as a function of gender?

**RQ9:** Does the relationship between healthcare cost and access to healthcare services vary as a function of gender?

### **Hypotheses**

**H1:** As entry barriers increase, the likelihood of access to healthcare services decreases.

**H2:** As cultural barriers increase, the likelihood of access to healthcare services decreases.

**H3:** As healthcare costs increase, the likelihood of access to healthcare services decreases.

### **Problem Statement**

Access to healthcare remains an ongoing challenge for individuals across the United States, particularly among populations with varying types of insurance coverage—namely, those with private insurance, Medicare, Medicaid, or no insurance at all (Berk & Schur, 1998; Donohue et al., 2022). While extensive research has been conducted on individual barriers to healthcare (Douthit et al., 2015; White Hughto et al., 2016), there is limited understanding of how specific obstacles—such as entry barriers, cultural barriers, and healthcare costs—interact with key demographic factors like income, gender, and insurance type to shape perceived access to care, especially across different geographic contexts such as urban and rural areas (Cyr et al., 2019; MacDougall & Henning-Smith, 2024).

This gap in literature poses a significant challenge for healthcare policymakers, insurance providers, and public health practitioners aiming to reduce disparities and promote equitable healthcare access (Graves & Abshire, 2022). Without a comprehensive understanding of how these barriers compound or differ across populations, efforts to design targeted interventions may fall short (Gong et al., 2019; Martino et al., 2019). Therefore, this study seeks to address this gap by identifying the most salient barriers to healthcare access and examining how these barriers operate across demographic groups.



The findings will inform strategies to improve healthcare equity and support the development of more responsive, data-informed healthcare policies.

### **Significance of the Problem**

The ongoing challenge of equitable healthcare access across the United States—particularly in urban and rural areas—represents a critical public health concern. Limited access to healthcare services has far-reaching consequences for the health and well-being of millions of Americans (Douthit et al., 2015; Smits et al., 2018). Overcoming barriers to care is essential for improving individual outcomes, promoting health equity, and reducing systemic disparities (Goddard & Smith, 1998; Thomas & DiClemente, 2014).

This study contributes to this broader conversation by offering insight into how healthcare consumers perceive and experience barriers to care—specifically entry barriers, cultural barriers, and healthcare costs. It further examines how these barriers interact with key demographic factors such as income level, gender, and insurance type, offering a multidimensional understanding of the accessibility landscape (Cyr et al., 2019; Zuvekas & Taliaferro, 2003). Findings from this research can inform evidence-based strategies and policy decisions that center on the needs of underserved populations and aim to improve equity in healthcare delivery (Gulliford & Figueroa-Munoz, 2002; Puentes-Markides, 1992).

### **Key Areas of Significance**

*Enhancing Healthcare Accessibility.* Improving access to healthcare services can significantly improve health outcomes across populations. In many rural areas, individuals live hours away from the nearest healthcare facility, making geographic and logistical barriers especially burdensome (Buzza et al., 2011; Maganty et al., 2023).

These distance-related challenges are associated with delays in diagnosis and treatment, lower use of preventive services, and poorer health outcomes (Loftus et al., 2018; McDonald et al., 2017). Understanding and addressing these access gaps is vital for promoting preventive care and early intervention, especially in communities where healthcare infrastructure is sparse (Douthit et al., 2015; Syed et al., 2013).

*Reducing Healthcare Inequities.* Barriers such as language, cultural misunderstanding, and healthcare costs disproportionately affect underrepresented communities (Gilmer et al., 2017; Mullins et al., 2005). These structural challenges can hinder access to preventive care, timely diagnosis, and trust in the medical system. Implementing multilingual services and culturally competent care can help reduce disparities and foster trust among marginalized populations (Betancourt, 2006; Zambrana et al., 2004). Research has shown that such interventions improve patient-provider communication and enhance satisfaction, treatment adherence, and overall health outcomes (Betancourt et al., 2002; Harris, 2010). This study contributes to the field by identifying which demographic groups are most impacted by which barriers, thereby supporting more targeted interventions.

*Elevating the Quality of Care.* Access is a prerequisite for high-quality care. When patients can consistently attend appointments, receive timely referrals to specialists, and manage chronic illnesses effectively, the overall quality of care improves (Epping-Jordan et al., 2004; Vestal et al., 2024). Chronic disease outcomes and health system performance are directly influenced by accessibility, with structural barriers such as delayed referrals, transportation issues, and inadequate care coordination leading to poorer clinical outcomes (Fradgley et al., 2015; Schwarz et al., 2022). By identifying the

structural barriers that prevent access, this research supports efforts to enhance clinical outcomes system-wide and promotes equitable health system performance (Mullins et al., 2005; Nakamura et al., 2019).

*Lowering Healthcare Costs.* Improved access can reduce reliance on emergency services and increase uptake of preventive care, leading to decreased overall healthcare spending. Studies have shown that low-income individuals often choose emergency departments for non-urgent care due to limited access to primary services, which results in higher system-wide costs (Kennedy et al., 2004; Wilkin & Cohen, 2012). Increasing access to affordable and timely care—primarily through preventive services—has been linked to reduced emergency room utilization and better management of chronic diseases (Starbird et al., 2019; Syed et al., 2013). This is particularly beneficial for individuals with limited financial resources and those incurring significant travel or opportunity costs to obtain care (Dillahunty & Veinot, 2018; Levine et al., 2007).

*Promoting Socioeconomic Equity.* By addressing cultural, economic, and logistical barriers to care, healthcare systems can begin to close the gap in access across socioeconomic groups. Interventions that promote cultural competence reduce financial barriers and improve logistical access (such as transportation or appointment scheduling) are essential for dismantling structural inequalities and ensuring equitable care for all populations (Betancourt et al., 2014; Nwokedi et al., n.d.). This is crucial for promoting public health, especially in underserved communities where disparities in access and outcomes are often rooted in systemic factors (Hoseini, 2024; Sharma et al., 2025).

*Advancing Adaptive and Inclusive Care Models.* In recent years, the healthcare system has made significant strides in improving access through innovations such as telehealth services, mobile clinics, flexible appointment scheduling, and community-based care models (Mattina et al., 2025; Phuong et al., 2023). These advancements are designed to accommodate the diverse needs of individuals with mobility limitations, chronic health conditions, caregiving responsibilities, or inflexible work schedules (Mulukuntla & Gaddam, 2017; Wang et al., 2025).

However, despite these improvements, persistent barriers, particularly entry barriers (e.g., transportation, appointment availability), cultural barriers (e.g., language, trust, and representation), and cost-related concerns—continue to limit access for many individuals (Chang et al., 2021; Chen et al., 2020;). This study explores why such barriers endure, especially for populations that should theoretically benefit from recent system-level innovations. By examining these issues through the lens of demographic factors such as gender, income level, and insurance type, the research aims to uncover which groups remain underserved and why, despite ongoing reform efforts.

As healthcare policy and technological capabilities continue to evolve, interventions must remain responsive to the complex access issues faced by diverse populations. This study emphasizes the importance of understanding how barriers to care intersect with income, gender, and insurance type—factors that shape the experience and outcome of healthcare access. The findings can inform practical recommendations for policymakers, insurers, and healthcare providers, particularly those serving individuals with private insurance, Medicare, Medicaid, or uninsured coverage. By strategically

addressing these access issues, the healthcare system can move closer to a framework that is equitable, inclusive, and responsive to the needs of all healthcare consumers.

## **Research Gap**

Although healthcare accessibility has long been a priority in the United States, significant barriers—particularly related to entry, culture, and cost—continue to prevent equitable access for many individuals. Numerous studies have examined these barriers in isolation, but limited research explores how they interact with key demographic factors such as gender, income level, and insurance type (Corcadden et al., 2018; Kim et al., 2017). This is particularly important given that populations with similar healthcare needs may experience different access challenges depending on their socioeconomic status or insurance status (Call et al., 2014; Constante & Bastos, 2021).

In addition, while healthcare system reforms and technological advancements (e.g., telehealth and extended service hours) have sought to improve access, it remains unclear why these barriers persist for specific groups. Current literature offers little insight into how individuals perceive these barriers and how demographic characteristics may shape these perceptions. Studies have only recently begun examining self-reported data on access issues, providing critical but limited insight into personal experiences of systemic obstacles (Hoven et al., 2023; Sandhu, 2024).

Another area of limited research involves the combined influence of multiple barriers. While existing literature may focus on single-factor issues (e.g., healthcare costs or language access), fewer studies consider how these barriers may co-occur and disproportionately affect individuals based on their demographic profile (Balcazar & Grineski, 2015; Clifford et al., 2023). This dissertation helps address that gap by

examining how entry barriers, cultural barriers, and healthcare costs collectively influence access to care.

Furthermore, practical, data-informed insights are needed to support policy and insurance reform efforts aimed at reducing disparities in care. By analyzing how perceived barriers differ across groups defined by gender, income, and insurance coverage, this research contributes to a more nuanced understanding of healthcare access inequities—one that can be used to shape more targeted and effective policy interventions.

In sum, this dissertation contributes to addressing three critical gaps in the existing literature: (1) the need to understand how multiple access barriers intersect and affect care-seeking behavior; (2) the limited research on how demographic factors shape individuals' experiences of those barriers; and (3) the lack of data to inform tailored interventions that account for differences in gender, income level, and insurance type. Addressing these gaps can support the development of more equitable and responsive healthcare delivery systems.

### **Research Contributions**

This study contributes to the growing body of research on healthcare access by examining how perceived barriers—specifically entry barriers, cultural barriers, and healthcare costs—affect individuals' access to care. It further explores how these relationships vary based on key demographic characteristics: gender, income level, and type of health insurance coverage. By centering the experiences of healthcare consumers, this research provides new insight into persistent disparities in access, even in the context of recent healthcare advancements. The anticipated contributions of this research include:

*Enhanced Understanding of Barrier Interactions.* This study will offer a more nuanced view of how multiple barriers to care interact and how these interactions differ across population subgroups. Prior research has shown that individuals—particularly those with public insurance—often experience overlapping challenges such as administrative complexity, limited provider networks, and stigma, which collectively diminish care utilization (Allen et al., 2017).

*Demographic-Specific Insights.* This research will inform more targeted approaches to addressing healthcare inequities by analyzing differences in perceived barriers across gender, income level, and insurance type. Demographic factors, including race, insurance status, and socioeconomic background, are deeply intertwined with pathways to care and help explain persistent access disparities (Zuvekas & Taliaferro, 2003).

*Consumer-Centered Data for Policy and Practice.* The study’s findings may help healthcare organizations, insurers, and policymakers better understand the lived experiences of those navigating the healthcare system—particularly individuals with Medicaid, Medicare, private insurance, or no insurance. Previous studies highlight Medicaid’s positive impact on care access (Berk & Schur, 1998) and recent reforms that aim to improve equity, even though key challenges remain (Donohue et al., 2022).

*Support for Equity-Focused Interventions.* Although this study does not evaluate specific interventions, its results may guide the development of future policies and practices to reduce access disparities and improve healthcare inclusivity. Scholars have called for policies that address disparities holistically by focusing on upstream drivers

such as insurance gaps, language barriers, and social exclusion (Arefin, 2024; Derosé et al., 2011).

Through these contributions, this dissertation aims to strengthen the foundation for equitable healthcare policy and service delivery by identifying where and for whom barriers to access remain most persistent. The findings will support ongoing efforts to design more inclusive, responsive healthcare systems that serve the needs of all individuals, regardless of socioeconomic or insurance status.



## **CHAPTER II- THEORETICAL FRAMEWORK AND LITERATURE REVIEW**

### **Theoretical Framework**

This study is guided by two complementary theories that help structure the analysis of barriers to healthcare access. At the macro level, the Social Determinants of Health (SDOH) framework provides a lens to examine the broader social, economic, and environmental factors that influence access to care. At the micro level, Penchansky and Thomas's Access to Care Framework (1981) offers a focused model for understanding service-related factors that shape individuals' ability to utilize healthcare services. Integrating these frameworks allows for a comprehensive analysis of how structural and service-level factors influence perceived healthcare access—particularly in relation to income, gender, and insurance coverage. Each framework contributes uniquely to the study design, data interpretation, and development of recommendations grounded in both individual experience and systemic realities.

### **Social Determinants of Health (SDOH) Framework**

The Social Determinants of Health (SDOH) framework provides a comprehensive, macro-level approach to understanding how non-medical factors—such as income, education, and environment—influence individuals' health outcomes and access to care. First advanced by the World Health Organization (WHO) and widely adopted in U.S. health policy through the Healthy People 2030 initiative, the framework identifies five core domains that shape health equity: (1) economic stability, (2) education access and quality, (3) social and community context, (4) health care access and quality, and (5) neighborhood and built environment (U.S. Department of Health and Human Services [HHS], 2020; WHO, 2008;).

These domains emphasize that health is not solely determined by biology or individual behavior but is heavily shaped by the broader conditions in which people live, work, and interact. The SDOH framework is especially useful for understanding health disparities across different population groups and guiding systemic changes to improve equity in care.

### **Application to This Study**

In this study, the SDOH framework will be used to contextualize participants perceived barriers to healthcare access, particularly in relation to income level, gender, and type of insurance coverage. While not all SDOH domains are directly measured, the framework informs the interpretation of how structural and social inequities may underlie reported access barriers. Each domain relates to specific elements of the research in the following ways:

**Economic Stability:** This domain aligns with the moderate variable of income level. It supports analysis of how financial strain—including cost of care, transportation, or lost wages—contributes to perceived access barriers such as affordability and service utilization. Financial hardship is a primary determinant of poor healthcare engagement and outcomes, especially among populations facing unstable housing, food insecurity, and transportation limitations (Garcini et al., 2022; Hill-Briggs et al., 2020).

**Education Access and Quality:** While not directly measured, this domain informs the study's interpretation of how health literacy and educational attainment may affect participants' understanding of healthcare systems, navigation of services, and sensitivity to cultural or entry barriers. Lower levels of education have been associated

with increased difficulty accessing preventive services and comprehending medical recommendations, reinforcing disparities in care quality (Aidoo, 2023).

**Social and Community Context:** This domain provides a lens through which cultural barriers can be understood, including trust in providers, language access, and cultural competency. These factors shape how individuals perceive and respond to healthcare services, particularly in communities with histories of marginalization or discrimination (Betancourt et al., 2003; Smith et al., 2023).

**Health Care Access and Quality:** This directly informs the dependent variable of perceived access to care and aligns with barriers related to insurance coverage, provider availability, and system navigation—central to the study's hypotheses. This domain encapsulates access to healthcare's structural and experiential aspects, including discrimination, delayed referrals, and fragmented systems (Butkus et al., 2020; Tzenios, 2019).

**Neighborhood and Built Environment:** Although not a primary focus of this study, this domain helps frame entry barriers such as transportation access and distance to care—particularly relevant for uninsured individuals or those with limited mobility or geographic isolation. Social risk factors related to housing and public infrastructure directly impact healthcare utilization in underserved neighborhoods (Jilani et al., 2021; Kolak et al., 2020).

Through this framework, the study does not only seek to quantify associations between demographic variables and access barriers but also aims to interpret the findings in light of the broader systemic conditions that affect healthcare equity. This layered

approach ensures that the analysis captures both individual-level perceptions and the structural realities influencing them.

### **Penchansky and Thomas' Access to Care Framework**

The Access to Care Framework, developed by Penchansky and Thomas (1981), offers a structured, micro-level approach to understanding how well healthcare services align with patients' needs and expectations. Unlike broader social models, this framework focuses on the fit between the patient and the healthcare system, defining access through five key dimensions: Availability, Accessibility, Affordability, Acceptability, and Accommodation. Each dimension represents a different aspect of the healthcare experience that can enhance or inhibit service utilization.

This model is widely cited in health services research and has been used to analyze gaps between the healthcare system's design and the practical realities patients face when seeking care. It is especially useful for examining disparities among underserved populations who experience system-level barriers.

This framework supports the study's analysis of perceived barriers to healthcare access, serving as a guide for interpreting participants' experiences and identifying patterns across different demographic groups (i.e., gender, income, insurance type). While the study does not directly test all five dimensions individually, it draws on their definitions to categorize and contextualize the types of barriers assessed. The relevance of each dimension to the study is as follows:

*Availability.* Refers to the adequacy of healthcare resources, including the presence of providers, services, and appointment options. This dimension informs the

understanding of entry barriers, particularly where participants report difficulty finding or reaching appropriate care providers (Guagliardo, 2004).

*Accessibility.* Focuses on the geographic and logistical ability to reach healthcare services, including transportation, travel distance, or internet access for telehealth. This is relevant when interpreting access issues influenced by insurance type or income level, particularly among respondents with limited resources (Syed et al., 2013).

*Affordability.* Examines the financial capacity to pay for services, insurance, co-pays, or prescriptions. This dimension directly informs the study's exploration of healthcare cost barriers and how affordability concerns differ across insurance categories (e.g., private insurance vs. Medicaid or uninsured) (Artiga et al., 2016).

*Acceptability.* Addresses cultural, linguistic, and interpersonal factors that influence a patient's willingness to seek care. This is central to the study's focus on cultural barriers, helping to frame findings related to provider-patient trust, perceived bias, and language challenges (Betancourt et al., 2003).

*Accommodation.* Refers to how well healthcare services are organized to meet patient needs, such as hours of operation, appointment flexibility, and the availability of after-hours care or digital tools. This helps interpret participant experiences with entry barriers that may be related to scheduling or service design (Luo et al., 2003).

The Access to Care Framework ensures that this study's analysis remains grounded in the real-world factors that influence care-seeking behavior. By using this model to interpret responses, the study can identify which dimensions of access are most problematic for some populations and propose targeted areas for improvement.

## **Summary**

The integration of the Social Determinants of Health (SDOH) framework and Penchansky and Thomas's Access to Care Framework provides a multi-layered lens through which to examine disparities in perceived healthcare access. The SDOH framework informs the study's understanding of the larger social and economic forces—such as income level and education—that shape individuals' interactions with the healthcare system. In contrast, the Access to Care Framework allows for analysis of more immediate, service-level factors such as affordability, accessibility, and cultural acceptability.

Together, these frameworks support a more robust interpretation of how perceived barriers to care are experienced differently across demographic groups. This theoretical foundation ensures that the study's findings will not only describe access challenges but also contextualize them within both systemic structures and real-world service delivery constraints.

## **Literature Review**

This chapter examines the existing literature on perceived access to healthcare, the barriers that affect access, and the role of demographic factors in shaping individuals' experiences with the healthcare system. Framed by the Social Determinants of Health (SDOH) and Access to Care frameworks (CDC, 2022; Healthy People, 2030; Marmot et al., 2008; Penchansky & Thomas, 1981;), this review provides a foundation for understanding how structural and service-level factors influence healthcare accessibility.

## **Perceived Access to Healthcare**

Perceived access refers to how individuals evaluate their ability to obtain healthcare when needed, distinct from utilization, satisfaction, or health outcomes (Aday & Andersen, 1974; Levesque et al., 2013). It reflects structural capacity and patients' confidence in navigating healthcare systems, which is especially important among vulnerable populations (Fortney et al., 2011; Phillips et al., 2017). Perceived access has been found to influence care-seeking behavior, treatment adherence, and outcomes (Allen-Duck et al., 2017; Cunningham et al., 2007). Despite its importance, most studies rely on objective indicators of access and underutilize perceived access as a measurable outcome (Fortin et al., 2005; Allen et al., 2017). Moreover, limited research incorporates how multiple barriers simultaneously impact perceived access or how these effects differ across populations (Althubaiti, 2016; Abutabenjeh & Jaradat, 2018).

## **Entry Barriers**

Entry barriers encompass logistical and operational constraints such as provider shortages, transportation difficulties, long wait times, and limited appointment availability (DeVoe et al., 2007; Syed et al., 2013). These barriers are prevalent in rural areas and among Medicaid populations, where fewer providers accept public insurance (Douthit et al., 2015; Probst et al., 2007). Digital access has emerged as a modern entry barrier, particularly as telemedicine grows prominence (Barbosa et al., 2021; Haque, 2021). While these issues are well-documented, research often isolates structural barriers and fails to explore how they intersect with socioeconomic or gender differences (Freed et al., 2013; Henning-Smith et al., 2019). Provider network gaps and inter-provider

connectedness can also shape access outcomes (Geva et al., 2019; Ohki et al., 2022), yet they are under examined about perceived access.

### **Cultural Barriers**

Cultural barriers refer to disconnects between patient identity and healthcare provider attitudes or practices. These include language barriers, discrimination, stereotyping, and poor provider-patient communication (Betancourt et al., 2003; Flores, 2006; Saha et al., 2008). For racially, ethnically, and gender-diverse populations, these barriers are linked to care avoidance and poorer outcomes (Cuevas et al., 2016; Purnell et al., 2016). Transgender and nonbinary individuals report significant erasure, stigma, and inadequate provider knowledge (Bauer et al., 2009; Reisner et al., 2016), while cultural mismatch is also a barrier for ethnic minorities (Nair & Adetayo, 2019; Polster, 2018). Despite awareness, few studies explore how cultural barriers interact with insurance, income, or gender—an omission that limits intersectional understanding (Bowleg, 2012; Chin et al., 2012).

### **Healthcare Costs Barriers**

Healthcare costs barriers include insurance gaps, underinsurance, co-pays, high deductibles, and confusion about covered services (Collins et al., 2020; Doty et al., 2005; Milosavljevic et al., 2023). Insured individuals may delay or avoid care due to affordability concerns (Artiga et al., 2020; Woolhandler & Himmelstein, 2017). Studies show that financial strain disproportionately affects publicly insured or uninsured populations (Allen et al., 2017; Bailey et al., 2017) and that insurance type influences how individuals perceive the affordability of services (Call et al., 2015). However, few studies explore how financial costs barriers interact with other dimensions of access, such



as cultural mismatch or physical entry issues (Galbraith et al., 2017; Martin et al., 2021). Furthermore, transparency in healthcare pricing remains elusive, compounding cost-related confusion and avoidance (Milosavljevic et al., 2023).

### **Income Level**

Income is one of the most consistent predictors of healthcare access. Lower-income individuals face higher rates of delayed care, limited-service availability, and underinsurance (Arcaya et al., 2015; Braveman & Gottlieb, 2014). The social gradient in health highlights that socioeconomic disadvantage correlates strongly with unmet healthcare needs (Marmot, 2005; Williams et al., 2019). While some studies examine the direct relationship between income and care-seeking, few explore how income moderates the effects of specific barriers like cost, culture, or logistics (Carlson et al., 2018; Sommers et al., 2017). Low-wage workers also experience access disruptions due to inflexible job schedules and limited paid leave (Baidwan et al., 2020).

### **Gender**

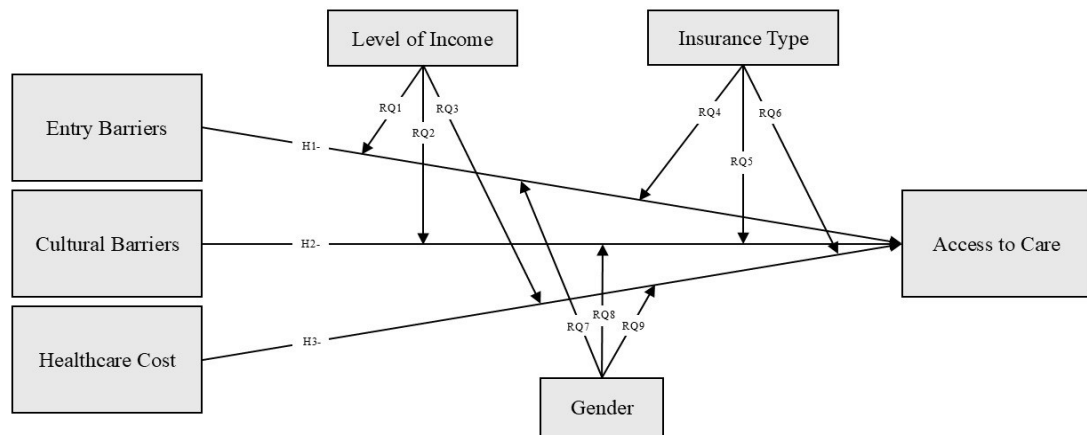
Gender influences access through both structural systems and social roles. Women are more likely to seek healthcare, but face barriers tied to reproductive care, caretaking responsibilities, and being dismissed or misdiagnosed (Bertakis et al., 2000; Read & Gorman, 2010). Men often underutilize care due to masculinity norms and stigma around help-seeking (Courtenay, 2000; Mahalik et al., 2006). Nonbinary and transgender individuals report systemic bias, misgendering, and refusal of care (Bauer et al., 2009; Reisner et al., 2016). However, most large-scale studies do not disaggregate gender identity beyond binary categories, limiting our understanding of how gender intersects with specific access barriers (Amezcuca et al., 2021; Bowleg, 2012).

## **Insurance Type**

Insurance coverage is a well-established determinant of access, but its complexity is often oversimplified. People with Medicaid or Medicare may face provider discrimination or administrative hurdles, while the uninsured face catastrophic costs (Bailey et al., 2017; Keisler-Starkey et al., 2023). Private insurance does not guarantee affordability, as high deductibles still deter care (Collins et al., 2020; Doty et al., 2005). However, most research treats insurance as a static variable rather than exploring how it moderates barrier experiences—for example, whether individuals with public insurance are more affected by provider shortages or stigma (Call et al., 2015; Kcomt & Gorey, 2020). Claims data studies show variability in service use patterns across coverage types, reinforcing the need for nuanced exploration (Park et al., 2025; Trogon et al., 2019; Wennberg et al., 2004).

## **Summary**

The literature confirms that entry, cultural, and financial barriers can enable healthcare access, particularly for marginalized populations. However, few studies take an integrated, intersectional approach to examine how these barriers interact or vary by income, insurance type, or gender identity. Most access research remains siloed focusing on single barriers or demographic predictors. This study aims to fill that gap using a theory-driven model grounded in SDOH and the Access to Care Framework to evaluate how perceived access is shaped by entry, cultural, and cost barriers and how these relationships vary across demographic subgroups.



**Figure I. Conceptual Framework.**

The conceptual framework illustrates the hypothesized relationships among the study variables. Drawing from the Social Determinants of Health and Access to Care frameworks, this model shows how entry barriers, cultural barriers, and healthcare costs are expected to influence perceived access to care, with gender, income, and type of insurance moderating these relationships.

## **CHAPTER III- RESEARCH METHODOLOGY AND CONSTRUCT DEFINITIONS**

### **Introduction**

This chapter outlines the research methodology used to examine how entry barriers, cultural barriers, and healthcare costs influence perceived access to healthcare, and how these relationships vary by income, gender, and insurance type. The chapter provides an overview of the research design, participant recruitment, instrumentation, data collection procedures, and analytical strategy used to test the study's hypotheses.

### **Research Design and Rationale**

This study employed a quantitative, non-experimental, cross-sectional survey design. This approach was appropriate given the study's goal to examine relationships among variables at a single point in time without manipulating conditions or assigning participants to groups (Creswell, 2018). A cross-sectional survey design enabled the researcher to collect data efficiently from a diverse sample and to test hypothesized associations using statistical modeling. This design is particularly useful for identifying patterns and predictors of perceived healthcare access across demographic groups.

### **Research Questions and Hypotheses**

This study was guided by two overarching research questions and nine hypotheses. The first research question addresses the direct relationships between perceived barriers and

access to care. The second research question explores whether these relationships are moderated by key demographic variables, including income, gender, and insurance type.

**Research Questions:**

**RQ1:** Does the relationship between entry barriers and access to healthcare services vary as a function of level of income?

**RQ2:** Does the relationship between cultural barriers and access to healthcare services vary as a function of level of income?

**RQ3:** Does the relationship between healthcare cost and access to healthcare services vary as a function of level of income?

**RQ4:** Does the relationship between cultural barriers and access to healthcare services vary as a function of insurance type?

**RQ5:** Does the relationship between cultural barriers and access to healthcare services vary as a function of insurance type?

**RQ6:** Does the relationship between healthcare cost and access to healthcare services vary as a function of insurance type?

**RQ7:** Does the relationship between entry barriers and access to healthcare services vary as a function of gender?

**RQ8:** Does the relationship between cultural barriers and access to healthcare services vary as a function of gender?

**RQ9:** Does the relationship between healthcare cost and access to healthcare services vary as a function of gender?

## **Hypotheses**

**H1:** As entry barriers increase, perceived access to healthcare services decreases.

**H2:** As cultural barriers increase, perceived access to healthcare services decreases.

**H3:** As healthcare costs increase, perceived access to healthcare services decreases.

## **Hypotheses Development**

Access to healthcare is widely recognized as a multidimensional construct shaped by individual, systemic, and structural factors. The Access to Care Framework proposed by Penchansky and Thomas (1981) identifies five key dimensions—availability, accessibility, accommodation, affordability, and acceptability—influencing whether individuals can obtain and effectively use healthcare services. These dimensions continue to inform equity-based healthcare models globally (Russell et al., 2013; Saurman, 2016). They also align closely with the Social Determinants of Health (SDOH), emphasizing that health outcomes are deeply rooted in socioeconomic conditions, structural inequities, and social environments (Braveman & Gottlieb, 2014; WHO, 2008).

One prominent barrier to access is entry-related difficulty, which refers to logistical and structural challenges such as long wait times, limited provider availability, difficulty securing appointments, and complex administrative processes. These factors disproportionately affect low-income and marginalized individuals, often resulting in delayed care or forgone treatment (Adigun, 2024; Gulzar, 1999). Entry barriers correspond closely to the availability and accommodation dimensions of the Access to Care framework, as they reflect systemic limitations in healthcare capacity and

responsiveness (Aleshire & Adegboyega, 2021). Based on this, the following hypothesis is proposed:

**Hypothesis 1:** As entry barriers increase, perceived access to healthcare services decreases.

Another key determinant is cultural barriers, including perceived discrimination, language discordance, mistrust, and a lack of culturally competent care. These issues are particularly salient for racial and gender minorities and have been shown to reduce trust, discourage service use, and result in unmet health needs—even among individuals with adequate insurance (Betancourt et al., 2003; Kerfeld et al., 2018; Saha et al., 2008). These barriers align with the acceptability dimension of access, focusing on the relational and identity-based fit between the healthcare system and patient populations.

**Hypothesis 2:** As cultural barriers increase, perceived access to healthcare services decreases.

Lastly, financial barriers remain one of the most consistent and consequential impediments to care. Insured patients may avoid care due to high deductibles, co-pays, and other out-of-pocket costs, leading to care delays and worsening outcomes (Collins et al., 2020; Woolhandler & Himmelstein, 2017). These concerns are particularly acute among the uninsured and those with public insurance (Dagher et al., 2015). The affordability dimension of Penchansky and Thomas' model directly maps onto these cost-related barriers.

**Hypothesis 3:** As healthcare costs increase, perceived access to healthcare services decreases.

Together, these hypotheses are grounded in well-established conceptual frameworks and empirical literature highlighting how entry, cultural, and financial barriers intersect with demographic disparities to shape perceived access across diverse populations (Nguyen, 2022; Saurman, 2016).

### **Participants and Sampling**

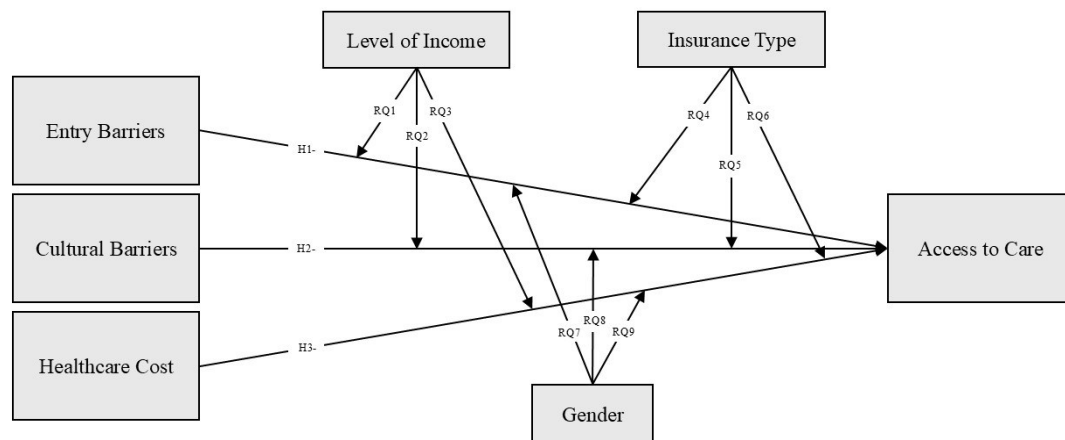
The informed pilot was reviewed by a panel of peers and industry experts representing diverse healthcare backgrounds. This included pharmacists, executive directors, and medical doctors, each providing valuable feedback on the study's design, relevance, and clarity. Their insights helped ensure the pilot's content was clinically meaningful and aligned with real-world healthcare challenges.

Participants for the main study were recruited using Prolific, an online platform that facilitates participant recruitment for academic research. Prolific was selected due to its ability to provide a diverse, high-quality participant pool and built-in screening tools that allow for targeted sampling based on demographic criteria, thus allowing for efficient and demographically balanced sampling while maintaining anonymity and data integrity. This approach enabled the researcher to recruit a sample reflective of the U.S. adult population in terms of income level, gender, and insurance type, key demographic variables in the present study.



A total of 400 participants were recruited. Inclusion criteria required participants to be 18 years or older, to reside in the United States, and to be able to provide informed consent.

Participants were compensated \$2.00 following Prolific's fair pay policy, ensuring ethical treatment without coercion. Prior to participation, all individuals completed an electronic informed consent form. It is important to note that while the sample was not nationally representative, efforts were made to ensure sufficient variation in gender, income, and insurance coverage to support the study's moderation analyses.



## Variables

This study included one dependent variable, three independent variables, and three moderating variables. All variables were measured using Likert-scale items

developed from existing research or publicly available survey instruments, as detailed below.

**Table 1**

*Variable Definitions*

<b>Variable</b>	<b>Type</b>	<b>Conceptual Definition</b>	<b>Operational Definition</b>	<b>Measurement</b>
Entry Barriers	Independent	Entry barriers refer to obstacles that prevent individuals from accessing healthcare services in the first place. <b>Source:</b> Agency for Healthcare Research and Quality. (1996). <i>Access to health care: Sources and barriers</i> . Medical Expenditure Panel Survey Research Findings No. 3.	Perceptions of logistical or systemic barriers to initiating care	12 Likert-scale items
Cultural Barriers	Independent	Cultural barriers are defined as cultural differences related to language, health beliefs and practices. <b>Source:</b> Agency for Healthcare Research and Quality. (n.d.). <i>Culturally and linguistically appropriate services</i> .	Perceptions of cultural mismatch, language challenges, and mistrust	5 Likert-scale items

Healthcare Costs	Independent	Cost for Healthcare. <b>Source:</b> Agency for Healthcare Research and Quality. (n.d.). <i>Healthcare costs.</i>	Perceived financial burden, including insurance gaps	6 Likert-scale items
Access to Healthcare	Dependent	Access to care in healthcare refers to the ease with which individuals can obtain timely and appropriate medical services and healthcare resources when needed. <b>Source:</b> Agency for Healthcare Research and Quality. (n.d.). <i>Access to care.</i>	Self-reported ability to obtain timely and adequate care	2 Likert-scale items
Income Level	Moderator	Low-, middle- and high-income level. <b>Source:</b> Agency for Healthcare Research and Quality. (n.d.). <i>Access to health care: Sources and barriers.</i> Medical Expenditure Panel Survey Research Findings No. 3.	Self-reported household income range	Categorical ranges (e.g., low, medium, high)
Gender	Moderator	Man, Woman, and Non-binary. <b>Source:</b> Agency for Healthcare Research and Quality. (n.d.). <i>Chartbook #8: Disparities and gender gaps in</i>	Self-identified gender	Categorical (e.g., man, woman, non-binary)

		<i>women's health, 1996.</i>		
Insurance Type	Moderator	Private, Medicare, Medicaid and Uninsured. <b>Source:</b> Agency for Healthcare Research and Quality. (n.d.). <i>Access to health care: Sources and barriers.</i> Medical Expenditure Panel Survey Research Findings No. 3.	Type of health coverage	Categorical (Private, Government, Uninsured)

## Variables and Operational Definitions

Entry barriers were defined as logistical or structural challenges that impede an individual's ability to initiate care, such as provider availability, long wait times, or transportation issues (Syed et al., 2013). Cultural barriers were operationalized based on prior literature addressing trust, communication, and cultural mismatch between patients and providers (Betancourt et al., 2003). Finally, healthcare cost was defined in line with the National Healthcare Quality and Disparities Report (2022) as the perceived financial burden related to insurance coverage, out-of-pocket expenses, and affordability of care (AHRQ, 2022).

## Instrumentation

The data were collected using a 31-item online survey developed by the researcher, drawing from publicly available government surveys, such as those from the Agency for Healthcare Research and Quality, as well as previously validated instruments. The survey

measured four primary constructs: Entry Barriers (12 items), Cultural Barriers (5 items), Healthcare Costs (6 items), and Perceived Access to Care (2 items).

Items used a 5-point Likert scale ranging from “Never” to “Always.” The instrument underwent expert review for face and content validity. Items with low internal consistency were removed based on reliability analyses. Additionally, six control questions—assessing gender, age, income, employment status, race, and health insurance type—were included to account for sociodemographic differences influencing healthcare access. These variables were also used to detect inattentive or inconsistent responses and contributed to cleaning the final dataset before analysis.

### **Data Collection Procedures**

The final survey was hosted on Prolific and distributed electronically. Participants were first presented with a consent form, followed by screening questions to ensure eligibility. The full survey took approximately 10–15 minutes to complete. All responses were anonymous. Upon completion, data were exported and analyzed using SPSS.

### **Data Analysis Plan**

Data were analyzed using SPSS Version 30.0. Descriptive statistics were calculated for all study variables to characterize the sample and distribution of key constructs. Internal consistency of the survey subscales was assessed using Cronbach’s alpha. To test the study hypotheses, multiple regression analyses were conducted to examine the relationships between entry barriers, cultural barriers, cost barriers, and perceived access to care. Moderation analyses, incorporating interaction terms and subgroup analyses, were performed to evaluate whether income, gender, and insurance type moderated these

relationships. Finally, analysis of variance (ANOVA) tests were employed to assess differences in perceived access across categorical demographic variables, such as insurance type.

### **Ethical Considerations**

The study was approved by the IRB at Florida International University. Informed consent was obtained electronically from each participant. Participation was voluntary, anonymous, and could be discontinued at any time. Data was stored securely and only accessible to the research team. Participants were compensated fairly according to Prolific guidelines. All data was stored on the primary researcher's password-protected Windows accessible only to the primary researcher. Files were saved in encrypted formats and were not shared with any third parties. Data will be retained for 1 year and then permanently deleted in accordance with IRB guidelines.

## CHAPTER IV- ANALYSIS AND RESULTS

This chapter presents the results of the data analysis conducted for the study. Data collection was initiated on November 27, 2024, and concluded on December 2, 2024. All data were collected using the Prolific online survey platform. A total of 400 participants completed the survey; however, two responses were excluded due to incompleteness, resulting in a final sample of N=398.

Participants represented a range of racial backgrounds, income levels, and employment statuses, and all resided within the United States. No industry-specific recruitment criteria were applied. Survey responses were collected using Qualtrics, initially exported to Microsoft Excel for data cleaning and completeness review and subsequently imported into SPSS (Version 30.0) for statistical analysis.

Descriptive statistics, including frequencies and distributions, were calculated to summarize demographic characteristics and responses to the primary study variables. The sections that follow present the analysis in the following order: (1) participant demographics, (2) descriptive statistics, (3) scale reliability, (4) hypothesis testing results, and (5) moderation analyses.

### **Demographic Information**

Table 2 presents the demographic characteristics of the participants (N = 398) who completed the study. The sample was diverse across several key dimensions, including gender, age, race/ethnicity, employment status, income, and insurance coverage. Approximately 54.3% of participants identified as women, 42.7% as men, and 3.0% as non-binary. Participants reported a wide range of income levels: 44.0% reported earning under \$25,000 to \$49,000 annually, 34.7% reported earning \$50,000–\$99,000,

and 21.4% reported incomes of \$100,000 or more. In terms of health insurance coverage, 41.7% of participants reported being covered by Medicaid, Medicare, or were uninsured, while 58.3% reported having private insurance through an employer or purchased independently.

In terms of race and ethnicity, the majority of respondents identified as White/Caucasian (60.8%), followed by Black or African American (16.8%), Asian (9.8%), Hispanic/Latino (7.3%), Other (3.3%), Native Hawaiian or Other Pacific Islander (0.5%), and Native American or Alaska Native (0.5%). An additional 1.0% of respondents preferred not to disclose their race or ethnicity. Regarding employment status, 46.2% were employed full time, 15.6% part time, 9.8% self-employed, 13.6% unemployed, 5.3% students, 3.8% retired, and 3.5% unable to work. Another 2.3% preferred not to disclose their employment status.

While employment status, age, and race/ethnicity were not variables analyzed in this study, they are reported here to provide a comprehensive overview of the sample's composition.



**Table 2***Demographic Information*

	Characteristics	Frequency	Percent
<b>Gender</b>	Male	170	42.7
	Female	216	54.3
	Non-binary	12	3.0
<b>Age</b>	18-24	55	13.8
	25-34	139	34.9
	35-44	82	20.6
	45-54	78	19.6
	55-64	29	7.3
	65 and over	15	3.8
<b>Employment</b>	Employed Full Time	184	46.2
	Employed Part Time	62	15.6
	Self Employed	39	9.8
	Unemployed	54	13.6
	Retired	15	3.8
	Student	21	5.3
	Unable to work	14	3.5
	Prefer not to say	9	2.3
<b>Income</b>	Under \$25,000-\$49,000	175	44.0
	\$50,000-\$99,000	138	34.7
	\$100,000-Over	85	21.4
<b>Health Insurance</b>	Medicaid, Medicare & Uninsured	166	41.7
	Private Insurance	232	58.3
<b>Race</b>	Native Hawaiian	2	.5
	Asian	39	9.8
	Black/African American	67	16.8
	Hispanic/Latino	29	7.3
	Native American	2	.5
	White	242	60.8
	Other	13	3.3
	Prefer not to say	4	1.0

## **Total Statistics and Cronbach's Alpha**

As a preliminary step in the data analysis process, descriptive statistics were calculated for each of the study's primary variables: entry barriers, cultural barriers, healthcare costs, and perceived access to care. Using SPSS (Version 30), mean scores and standard deviations were generated to summarize overall trends and response variability across each scale prior to hypothesis testing.

To assess the internal consistency reliability of the survey instrument, Cronbach's alpha ( $\alpha$ ) coefficients were calculated for each multi-item scale. The Entry Barriers scale, consisting of 12 items, demonstrated excellent internal consistency ( $\alpha = .89$ ). The Cultural Barriers scale, composed of 5 items, showed good reliability ( $\alpha = .81$ ). The Healthcare Costs scale, consisting of 6 items, exhibited acceptable internal consistency for exploratory research purposes ( $\alpha = .64$ ). The Access to Care scale, comprising 2 items, demonstrated lower internal consistency ( $\alpha = .61$ ); however, it was retained due to its exploratory nature and alignment with prior research practices. According to Nunnally and Bernstein (1994), alpha values above .70 are generally considered acceptable indicators of internal reliability. Accordingly, the Entry Barriers and Cultural Barriers scales demonstrated strong reliability, supporting the consistency of items within these constructs.

The Healthcare Costs and Access to Care scales, however, yielded lower alpha values. These results suggest moderate internal consistency and warrant caution when interpreting findings related to these variables. In particular, the Access to Care scale's lower alpha may be partly attributable to the fact that it consisted of only two items, which limits the capacity of Cronbach's alpha to accurately assess reliability (Cortina,

1993). Despite these limitations, all scales were retained for analysis, and potential measurement issues are acknowledged in the interpretation of results and study limitations.

## **Descriptive Statistics and Test of Normality**

### *Descriptive Statistics*

Descriptive statistics were calculated for all key continuous study variables, including Entry Barriers, Cultural Barriers, Healthcare Costs, and Access to Care. The mean, standard deviation, and skewness values for each construct are presented in Table 3. Entry Barriers demonstrated a moderate mean score ( $M = 2.55$ ,  $SD = 0.89$ ) and an approximately normal distribution. Healthcare Costs similarly exhibited a moderate mean ( $M = 2.64$ ,  $SD = 0.89$ ) with a distribution close to normal. Cultural Barriers yielded a slightly higher mean ( $M = 3.15$ ,  $SD = 0.96$ ) and demonstrated a modest negative skew ( $-0.95$ ), indicating a slight tendency toward higher reported experiences of cultural barriers. Access to Care had the highest mean among the variables ( $M = 3.57$ ,  $SD = 1.13$ ) and exhibited a slight negative skew ( $-0.52$ ), suggesting generally positive perceptions of healthcare access among respondents.

Although Income, Insurance Type, and Gender were included in the analysis as moderating demographic variables, they were coded categorically. Therefore, they were not interpreted in the same manner as continuous variables. For reference, Income ( $M = 1.77$ ,  $SD = 0.78$ ) showed a mild positive skew ( $0.42$ ), while Insurance Type ( $M = 1.58$ ,  $SD = 0.49$ ) and Gender ( $M = 1.60$ ,  $SD = 0.55$ ) exhibited limited variability, consistent with their categorical coding.

**Table 3***Variable Description Statistics*

Variable Description Statistics									
Variable	N	Mean	Std. Deviation	Skewness Statistic	Skewness Std. Error	Kurtosis Statistic	Kurtosis Std. Error	Alpha	# of Items
Entry Barriers	398	2.5530	0.89190	0.037	0.122	-0.582	0.244	0.890	12
Cultural Barriers	398	3.1528	0.96078	-0.954	0.122	-0.010	0.244	0.811	5
Healthcare Costs	398	2.6441	0.89447	0.071	0.122	-0.833	0.244	0.638	6
Access to Care(R)	398	3.5666	1.12839	-0.518	0.122	-0.534	0.244	0.609	2
Income	398	1.7739	0.77695	0.417	0.122	-1.232	0.244		
Gender	398	1.60	0.548	0.138	0.122	-0.939	0.244		
Health Insurance	398	1.5829	0.49370	-0.338	0.122	-1.896	0.244		

These results offer initial insight into how participants perceive barriers to healthcare and their overall access to care. On average, participants reported moderate levels of entry and financial barriers, while cultural barriers were slightly more prominent. Notably, most participants perceived relatively good access to healthcare, as indicated by the highest mean score among the constructs. The skewness values suggest that, while distributions were generally normal, there was a slight tendency for participants to report more frequent cultural challenges and more favorable access experiences.

Regarding demographic variables, the distribution of income responses leaned toward lower income levels, and there was limited variability in insurance type and gender, which may impact the interpretation of any moderation effects involving these variables.

*Test of Normality*

Normality was assessed using the Kolmogorov–Smirnov and Shapiro–Wilk tests for all continuous study variables. This test was conducted to assess whether the data met the assumption of normality, which is important for ensuring the validity of parametric statistical tests such as multiple regression and ANOVA. While some deviation from normality was observed, particularly according to the Shapiro–Wilk test, the robustness of these methods—combined with the study’s large sample size—supports proceeding with the planned analyses. The Kolmogorov–Smirnov test for Entry Barriers was marginally non-significant ( $p = .052$ ), suggesting that this variable may approximate a normal distribution. However, the Shapiro–Wilk test indicated statistically significant deviations from normality for all variables ( $p < .001$ ), including Entry Barriers. These findings suggest that, according to the tests, the data are not perfectly normally distributed. However, it is important to interpret these results with caution. Both the K–S and S–W tests are known to be highly sensitive to sample size; in large samples (e.g.,  $N = 398$ ), even minor deviations from a normal distribution can result in statistically significant findings (Razali & Wah, 2011).

To further evaluate distribution shape, skewness values and histograms were examined. These indicated approximate normality, with only mild skew present in some variables (e.g., Cultural Barriers and Access to Care showed slight negative skew). Therefore, while the assumption of normality was not fully met, the violations were not severe, and the underlying distributions appeared reasonably symmetrical.

**Table 4***Test of Normality*

Variable	Tests of Normality					
	Kolmogorov- Smirnova <sup>a</sup>	df	Sig.	Shapiro-Wilk Stat.	df	Sig.
Entry Barriers	0.045	398	0.052	0.981	398	<.001
Cultural Barriers	0.169	398	<.001	0.884	398	<.001
Healthcare Costs	0.081	398	<.001	0.976	398	<.001
Access to Care (R)	0.130	398	<.001	0.926	398	<.001
Income	0.280	398	<.001	0.780	398	<.001
Healthcare Ins.	0.384	398	<.001	0.626	398	<.001
Gender	0.338	398	<.001	0.708	398	<.001

<sup>a</sup>. Lilliefors Significance Correction

**Construct Validity and Correlation Analysis**

To assess construct validity and explore the relationships among key study variables, a Pearson correlation matrix was conducted (see Table 5). Entry Barriers were significantly and positively correlated with Cultural Barriers ( $r = .634$ ,  $p < .001$ ) and Healthcare Costs ( $r = .363$ ,  $p < .001$ ), indicating shared variance among these psychosocial burdens. The positive correlations among Entry Barriers, Cultural Barriers, and Healthcare Costs indicate shared variance, meaning that individuals who report experiencing one type of barrier are statistically more likely to experience the others as well. This overlap suggests that these barriers may not function in isolation but rather cluster together to shape individuals' healthcare experiences.

Entry Barriers were also significantly and negatively correlated with Access to Care ( $r = -.419$ ,  $p < .001$ ), suggesting that participants reporting more entry barriers also reported lower access to healthcare services.

Similarly, Cultural Barriers showed a strong negative correlation with Access to Care ( $r = -.432, p < .001$ ) and a moderate positive correlation with Healthcare Costs ( $r = .291, p < .001$ ). Healthcare Costs were also negatively associated with Access to Care ( $r = -.265, p < .001$ ), though the strength of this relationship was comparatively weaker.

These findings suggest that all three psychosocial barriers are meaningfully related to each other and to Access to Care. In contrast, demographic variables—including Race ( $r = .002, p = .966$ ), Employment Status ( $r = .063, p = .211$ ), and Age ( $r = -.031, p = .541$ )—were not significantly associated with Access to Care. This underscores the greater predictive relevance of psychosocial burdens over demographic factors in shaping perceived access to healthcare.

### **Multiple Regression: Predicting Access to Care**

A multiple regression analysis was conducted to examine whether Entry Barriers, Cultural Barriers, Healthcare Costs, and demographic control variables (Race, Employment Status, and Age) significantly predicted perceived Access to Care (ACC2R). The overall model was statistically significant,  $F(6, 391) = 20.05, p < .001$ , indicating that the set of predictors collectively explained a meaningful proportion of the variance in perceived access to care ( $R^2 = .235$ , Adjusted  $R^2 = .224$ ). The standard error of the estimate was 0.994, suggesting a moderate level of unexplained variance.

Among the predictors, Cultural Barriers ( $\beta = -.266, p < .001$ ), Entry Barriers ( $\beta = -.216, p < .001$ ), and Healthcare Costs ( $\beta = -.112, p = .020$ ) were statistically significant. These results suggest that higher reported barriers are associated with lower levels of perceived access to care.

In contrast, demographic variables—including Race ( $\beta = .032$ ,  $p = .469$ ), Employment Status ( $\beta = .015$ ,  $p = .736$ ), and Age ( $\beta = .036$ ,  $p = .425$ ) were not statistically significant.

Multicollinearity diagnostics showed no concern with all variance inflation factors (VIFs) ranging from 1.023 to 1.800, well below the commonly accepted threshold of 10. An accompanying ANOVA confirmed the model's overall significance, further supporting the validity of these findings.

These findings provide support for the study's first three hypotheses, which predicted that higher levels of entry barriers, cultural barriers, and healthcare costs would be associated with lower perceived access to care. The results confirm that all three psychosocial factors significantly contribute to reduced access, even when controlling for race, employment status, and age. The lack of significant effects for demographic variables underscores the central role of perceived barriers—rather than background characteristics, shaping individuals' access to healthcare. This highlights the importance of addressing these barriers directly through policy, practice, and service design.



**Table 5***Correlations for the Variables*

<i>Correlations</i>								
		Access to Care_R	Age	Entry Barriers	Cultural Barriers	Healthcare Costs	Race	Employment Status
Access to Care_R	Pearson Correlation	1	-.031	-.419**	-.432**	-.265**	.002	.063
	Sig. (2-tailed)		.541	<.001	<.001	<.001	.966	.211
	N	398	398	398	398	398	398	398
Age	Pearson Correlation	-.031	1	.152**	.107*	.084	.123*	-.001
	Sig. (2-tailed)	.541		.002	.033	.095	.014	.983
	N	398	398	398	398	398	398	398
Entry Barriers	Pearson Correlation	-.419**	.152**	1	.634**	.363**	.051	-.037
	Sig. (2-tailed)	<.001	.002		<.001	<.001	.312	.462
	N	398	398	398	398	398	398	398
Cultural Barriers	Pearson Correlation	-.432**	.107*	.634**	1	.291**	.055	-.094
	Sig. (2-tailed)	<.001	.033	<.001		<.001	.274	.062
	N	398	398	398	398	398	398	398
Healthcare Costs	Pearson Correlation	-.265**	.084	.363**	.291**	1	.084	-.125*
	Sig. (2-tailed)	<.001	.095	<.001	<.001		.093	.012
	N	398	398	398	398	398	398	398
Race	Pearson Correlation	.002	.123*	.051	.055	.084	1	.026
	Sig. (2-tailed)	.966	.014	.312	.274	.093		.608
	N	398	398	398	398	398	398	398
Employment Status	Pearson Correlation	.063	-.001	-.037	-.094	-.125*	.026	1
	Sig. (2-tailed)	.211	.983	.462	.062	.012	.608	
	N	398	398	398	398	398	398	398

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

The regression sum of squares was 118.93, with a mean square of 19.82, compared to a residual mean square of 0.99. These values, alongside the significant F-test, indicate that the model explained a statistically meaningful portion of the variance in perceived access to care, though a substantial proportion of variance remains unexplained.

**Table 6***Coefficients for the Variables**Coefficients<sup>a</sup>*

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error				Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	5.401	.269	20.072	<.001					
	Entry Barriers	-.274	.075	-3.647	<.001	-.419	-.181	-.161	.556	1.800
	Cultural Barriers	-.312	.068	-4.614	<.001	-.432	-.227	-.204	.589	1.698
	Healthcare Costs	-.142	.061	-2.339	.020	-.265	-.117	-.103	.846	1.182
	Race	.023	.032	.725	.469	.002	.037	.032	.977	1.023
	Employment Status	.009	.026	.015	.736	.063	.017	.015	.976	1.024
	Age	.031	.039	.798	.425	-.031	.040	.035	.963	1.038

a. Dependent Variable: Access to Care\_R

**Section 2: Results For Moderator 1: Income**

This section examines whether the relationships between psychosocial barriers (entry barriers, cultural barriers, and healthcare costs) and perceived access to care differ across income groups, serving as a test of moderation for Hypotheses 1 through 3.

Participants were categorized into three income levels: low income (under \$50,000), middle income (\$50,000–\$99,000), and high income (\$100,000 and above). Descriptive statistics are presented in Table 7.

**Descriptive Statistics by Income Group**

Descriptive analyses revealed meaningful differences in perceptions of access to care and reported barriers across income groups. Low-income participants ( $n = 175$ ) reported the highest perceived access to care ( $M = 3.67$ ,  $SD = 1.07$ ) and the lowest levels of entry barriers ( $M = 2.48$ ,  $SD = 0.90$ ), cultural barriers ( $M = 3.02$ ,  $SD = 1.00$ ), and healthcare cost burdens ( $M = 2.47$ ,  $SD = 0.92$ ). This group also demonstrated the highest average employment score ( $M = 3.17$ ,  $SD = 1.99$ ) and a slightly lower average age ( $M = 2.76$ ,  $SD = 1.28$ ). In contrast, middle-income participants ( $n = 138$ ) reported slightly lower perceived access to care ( $M = 3.61$ ,  $SD = 1.13$ ) and marginally higher levels of

barriers across all three domains: entry ( $M = 2.52$ ), cultural ( $M = 3.17$ ), and cost-related ( $M = 2.73$ ). Their average employment and age scores were comparable to those of the low-income group. High-income participants ( $n = 85$ ) exhibited the lowest levels of perceived access to care ( $M = 3.30$ ,  $SD = 1.21$ ) and the highest levels of barriers, including entry barriers ( $M = 2.76$ ,  $SD = 0.85$ ), cultural barriers ( $M = 3.39$ ,  $SD = 0.86$ ), and healthcare costs ( $M = 2.87$ ,  $SD = 0.81$ ). Additionally, high-income participants had the lowest employment score ( $M = 1.88$ ) and the highest average age ( $M = 3.01$ ). These findings suggest a nonlinear relationship between income and perceived healthcare access: individuals with lower incomes reported fewer barriers and greater access, while higher-income individuals perceived more barriers and lower access. This pattern may reflect complex interactions among financial resources, expectations of care, and the challenges associated with navigating healthcare systems across different socioeconomic strata.

**Table 7***Descriptive Statistics for Income**Descriptive Statistics*

Income		N	Mean	Std. Deviation
1.00	Access to Care_R	175	3.6657	1.07397
	Entry Barriers	175	2.4790	.89999
	Cultural Barriers	175	3.0217	1.00057
	Healthcare Costs	175	2.4657	.91781
	Employment Status	175	3.17	1.993
	Race	175	4.90	1.576
	Age	175	2.76	1.282
	Valid N (listwise)	175		
2.00	Access to Care_R	138	3.6051	1.12933
	Entry Barriers	138	2.5193	.89091
	Cultural Barriers	138	3.1725	.94342
	Healthcare Costs	138	2.7331	.87373
	Employment Status	138	2.15	1.738
	Race	138	5.00	1.603
	Age	138	2.80	1.382
	Valid N (listwise)	138		
3.00	Access to Care_R	85	3.3000	1.20564
	Entry Barriers	85	2.7598	.85482
	Cultural Barriers	85	3.3906	.86239
	Healthcare Costs	85	2.8667	.81358
	Employment Status	85	1.88	1.672
	Race	85	5.12	1.629
	Age	85	3.01	1.220
	Valid N (listwise)	85		

**Multiple Regression for Income**

To determine whether the predictors of perceived access to care differed across income groups, separate standard multiple regression analyses were conducted for participants in the low-, middle-, and high-income categories. Each model included six predictors: Entry Barriers, Cultural Barriers, Healthcare Costs, Race, Employment Status, and Age.

### **Low-Income Group (Income = 1: <\$50,000)**

A multiple regression analysis was conducted to examine whether entry barriers, cultural barriers, healthcare costs, race, employment status, and age predicted access to care within the low-income group ( $n = 175$ ). The model was statistically significant,  $F(6, 168) = 10.48$ ,  $p < .001$ , accounting for 27.2% of the variance in perceived access to care ( $R^2 = .272$ , Adjusted  $R^2 = .246$ ).

Among the predictors, entry barriers emerged as a significant negative predictor ( $\beta = -.301$ ,  $t = -3.49$ ,  $p < .001$ ), and healthcare costs were also significantly and negatively associated with perceived access ( $\beta = -.198$ ,  $t = -2.73$ ,  $p = .007$ ). Although not reaching conventional levels of statistical significance, cultural barriers approached significance ( $\beta = -.150$ ,  $t = -1.76$ ,  $p = .080$ ), suggesting a potential trend that warrants further exploration.

These findings indicate that, among individuals in the lowest income bracket, both entry-related and financial barriers were significantly associated with lower perceived access to care. While cultural barriers did not achieve statistical significance, the near-significant result suggests they may still play a meaningful role and should be further investigated in larger samples.

### **Middle-Income Group (Income = 2: \$50,000–\$99,999)**

A multiple regression analysis was conducted to examine predictors of access to care among participants in the middle-income group ( $n = 138$ ). The model was statistically significant,  $F(6, 131) = 6.44$ ,  $p < .001$ , accounting for 22.8% of the variance in perceived access to care ( $R^2 = .228$ , Adjusted  $R^2 = .192$ ).

Among the predictors, only cultural barriers emerged as a significant negative predictor ( $\beta = -.358$ ,  $t = -3.45$ ,  $p < .001$ ). Entry barriers ( $\beta = -.159$ ,  $t = -1.46$ ,  $p = .146$ ) and healthcare costs ( $\beta = -.022$ ,  $t = -0.267$ ,  $p = .790$ ) were not statistically significant in this group.

These findings suggest that, for middle-income participants, cultural barriers were the most influential factor associated with reduced access to care, whereas financial and logistical barriers did not significantly predict access within this income group.

### **High-Income Group (Income = 3: \$100,000+)**

A multiple regression analysis was conducted to examine predictors of access to care among participants in the high-income group ( $n = 85$ ). The model was statistically significant,  $F(6, 78) = 3.73$ ,  $p = .003$ , accounting for 22.3% of the variance in perceived access to care ( $R^2 = .223$ , Adjusted  $R^2 = .163$ ).

Consistent with findings from the middle-income group, cultural barriers emerged as the only significant negative predictor ( $\beta = -.367$ ,  $t = -2.87$ ,  $p = .005$ ). Entry barriers ( $\beta = -.102$ ,  $t = -0.759$ ,  $p = .450$ ) and healthcare costs ( $\beta = -.081$ ,  $t = -0.732$ ,  $p = .466$ ) were not statistically significant predictors in this group.

These results suggest that, even among higher-income individuals, perceived cultural mismatches remain a salient barrier to healthcare access, whereas structural and financial obstacles appear to have a diminished impact.

### **Summary of Results Across Income Groups**

Across all three income groups, Cultural Barriers (M\_CB) were the most consistent and significant predictors of lower perceived access to care, suggesting the persistent impact of cultural mismatch regardless of income. However, Entry Barriers

(EB) and Healthcare Costs (HCC) were only statistically significant among low-income participants. This suggests that financial and logistical barriers to access may disproportionately affect individuals with limited economic resources, while middle- and high-income individuals may experience healthcare challenges more strongly through cultural disconnects than material constraints.

Demographic controls (Race, Employment Status, and Age) were not significant predictors in any of the income-specific models, reinforcing the stronger influence of psychosocial barriers in shaping access to care.

**Table 8**

*Correlations for Income*

*Correlations*

Income			Access to Care_R	Age	Entry Barriers	Cultural Barriers	Healthcare Costs	Race	Employment Status
1.00	Access to Care_R	Pearson Correlation	1	-.002	-.462**	-.389**	-.366**	.019	.052
		Sig. (2-tailed)		.976	<.001	<.001	<.001	.807	.491
		N	175	175	175	175	175	175	175
	Age	Pearson Correlation	-.002	1	.060	.101	.034	.133	.043
		Sig. (2-tailed)	.976		.427	.184	.650	.080	.570
		N	175	175	175	175	175	175	175
	Entry Barriers	Pearson Correlation	-.462**	.060	1	.606**	.388**	.062	.045
		Sig. (2-tailed)	<.001	.427		<.001	<.001	.415	.552
		N	175	175	175	175	175	175	175
	Cultural Barriers	Pearson Correlation	-.389**	.101	.606**	1	.331**	.152*	-.061
		Sig. (2-tailed)	<.001	.184	<.001		<.001	.045	.421
		N	175	175	175	175	175	175	175
	Healthcare Costs	Pearson Correlation	-.366**	.034	.388**	.331**	1	-.011	-.081
		Sig. (2-tailed)	<.001	.650	<.001	<.001		.884	.286
		N	175	175	175	175	175	175	175
	Race	Pearson Correlation	.019	.133	.062	.152*	-.011	1	.088
		Sig. (2-tailed)	.807	.080	.415	.045	.884		.247
		N	175	175	175	175	175	175	175
	Employment Status	Pearson Correlation	.052	.043	.045	-.061	-.081	.088	1
		Sig. (2-tailed)	.491	.570	.552	.421	.286	.247	
		N	175	175	175	175	175	175	175
2.00	Access to Care_R	Pearson Correlation	1	.002	-.381**	-.458**	-.132	.016	-.004
		Sig. (2-tailed)		.985	<.001	<.001	.122	.851	.958
		N	138	138	138	138	138	138	138
	Age	Pearson Correlation	.002	1	.238**	.104	.033	.135	.088
		Sig. (2-tailed)	.985		.005	.223	.701	.114	.302
		N	138	138	138	138	138	138	138
	Entry Barriers	Pearson Correlation	-.381**	.238**	1	.667**	.292**	.094	-.043
		Sig. (2-tailed)	<.001	.005		<.001	<.001	.274	.615
		N	138	138	138	138	138	138	138
	Cultural Barriers	Pearson Correlation	-.458**	.104	.667**	1	.211*	.007	-.054
		Sig. (2-tailed)	<.001	.223	<.001		.013	.937	.533
		N	138	138	138	138	138	138	138
	Healthcare Costs	Pearson Correlation	-.132	.033	.292**	.211*	1	.246**	-.053
		Sig. (2-tailed)	.122	.701	<.001	.013		.004	.536
		N	138	138	138	138	138	138	138
	Race	Pearson Correlation	.016	.135	.094	.007	.246**	1	-.008
		Sig. (2-tailed)	.851	.114	.274	.937	.004		.927
		N	138	138	138	138	138	138	138
	Employment Status	Pearson Correlation	-.004	.088	-.043	-.054	-.053	-.008	1
		Sig. (2-tailed)	.958	.302	.615	.533	.536	.927	
		N	138	138	138	138	138	138	138
3.00	Access to Care_R	Pearson Correlation	1	-.100	-.361**	-.444**	-.215*	-.021	.071
		Sig. (2-tailed)		.365	<.001	<.001	.049	.847	.519
		N	85	85	85	85	85	85	85
	Age	Pearson Correlation	-.100	1	.156	.077	.252*	.065	-.192
		Sig. (2-tailed)	.365		.154	.483	.020	.553	.078
		N	85	85	85	85	85	85	85
	Entry Barriers	Pearson Correlation	-.361**	.156	1	.619**	.382**	-.071	-.102
		Sig. (2-tailed)	<.001	.154		<.001	<.001	.516	.353
		N	85	85	85	85	85	85	85
	Cultural Barriers	Pearson Correlation	-.444**	.077	.619**	1	.237*	-.121	-.054
		Sig. (2-tailed)	<.001	.483	<.001		.029	.269	.626
		N	85	85	85	85	85	85	85
	Healthcare Costs	Pearson Correlation	-.215*	.252*	.382**	.237*	1	-.018	-.102
		Sig. (2-tailed)	.049	.020	<.001	.029		.870	.352
		N	85	85	85	85	85	85	85
	Race	Pearson Correlation	-.021	.065	-.071	-.121	-.018	1	.018
		Sig. (2-tailed)	.847	.553	.516	.269	.870		.868
		N	85	85	85	85	85	85	85
	Employment Status	Pearson Correlation	.071	-.192	-.102	-.054	-.102	.018	1
		Sig. (2-tailed)	.519	.078	.353	.626	.352	.868	
		N	85	85	85	85	85	85	85

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).



**Table 9***Coefficients for Income**Coefficients<sup>a</sup>*

Income	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1.00	1	(Constant)	5.314	.363	14.635	<.001					
		Entry Barriers	-.359	.103	-.301	<.001	-.462	-.260	-.230	.583	1.714
		Cultural Barriers	-.161	.091	-.150	.176	-.389	-.135	-.116	.598	1.673
		Healthcare Costs	-.231	.085	-.198	.270	-.366	-.206	-.180	.826	1.211
		Race	.035	.046	.051	.752	.453	.019	.058	.950	1.053
		Employment Status	.019	.036	.035	.524	.601	.052	.040	.966	1.035
		Age	.025	.056	.030	.444	.658	-.002	.034	.974	1.027
2.00	1	(Constant)	5.325	.465	11.462	<.001					
		Entry Barriers	-.201	.137	-.159	.146	-.381	-.127	-.112	.502	1.991
		Cultural Barriers	-.428	.124	-.358	<.001	-.458	-.289	-.265	.549	1.822
		Healthcare Costs	-.029	.107	-.022	.267	-.132	-.023	-.020	.860	1.162
		Race	.020	.056	.028	.351	.726	.016	.031	.918	1.089
		Employment Status	-.025	.050	-.038	.494	.622	-.004	-.043	.986	1.015
		Age	.063	.066	.077	.958	.340	.002	.083	.913	1.095
3.00	1	(Constant)	6.092	.776	7.847	<.001					
		Entry Barriers	-.144	.189	-.102	.759	.450	-.086	-.076	.554	1.804
		Cultural Barriers	-.513	.179	-.367	<.001	-.444	-.309	-.287	.611	1.637
		Healthcare Costs	-.120	.164	-.081	.732	.466	-.215	-.083	.816	1.226
		Race	-.054	.075	-.073	.727	.469	-.021	-.082	.979	1.021
		Employment Status	.021	.074	.029	.286	.776	.071	.032	.956	1.046
		Age	-.024	.104	-.025	.234	.815	-.100	-.027	.900	1.111

<sup>a</sup> Dependent Variable: Access to Care\_R**Section 3: Results For Moderator 2: Health Insurance (HIN)****Descriptive Statistics by Health Insurance (HIN)**

Descriptive statistics were calculated for perceived access to care (ACC2R), psychosocial burden measures, and demographic variables across two groups based on Health Insurance (HIN), coded as 1 = Medicare, Medicaid, and Uninsured, and 2 = Private Insurance. The findings reveal meaningful differences between these groups.

Participants who reported as having Medicare, Medicaid and Uninsured ( $HIN = 1$ ,  $n = 166$ ) reported the highest perceived access to care ( $M = 3.76$ ,  $SD = 1.11$ ), along with the lowest Entry Barriers ( $EB = 2.39$ ,  $SD = 0.90$ ), Lower Cultural Barriers ( $M_{CB} = 3.03$ ,  $SD = 1.01$ ), and the lowest Healthcare Costs scores ( $HCC = 2.24$ ,  $SD = 0.84$ ).

This group also showed higher employment levels ( $C\text{-EMP} = 3.21$ ,  $SD = 1.89$ ) than the other group and had a slightly lower mean for racial identification ( $C\text{-Race} = 4.86$ ,  $SD = 1.59$ ).

In contrast, participants who reported having Private Insurance ( $HIN = 2$ ,  $n = 232$ ) showed lower perceived access to care ( $M = 3.43$ ,  $SD = 1.13$ ) and higher levels of psychosocial burden, including Entry Barriers ( $EB = 2.67$ ,  $SD = 0.87$ ), Cultural Barriers ( $M_{CB} = 3.24$ ,  $SD = 0.92$ ), and Healthcare Costs ( $HCC = 2.93$ ,  $SD = 0.82$ ).

Additionally, this group reported lower employment ( $C\text{-EMP} = 2.06$ ,  $SD = 1.80$ ) but slightly higher racial identification scores ( $C\text{-Race} = 5.06$ ,  $SD = 1.60$ ). Age was consistent across both groups ( $M = 2.80\text{--}2.85$ ).

### **Summary**

Participants with Medicare, Medicaid, or no insurance ( $HIN = 1$ ) reported higher perceived access to care and lower levels of psychosocial burden—including entry barriers, cultural barriers, and healthcare costs—compared to those with private insurance ( $HIN = 2$ ). These findings suggest that insurance type alone may not fully explain access disparities, and that structural and experiential factors may influence perceptions of healthcare access in more complex ways.

**Table 10***Descriptive Statistics for Health Insurance*

*Descriptive Statistics*

HIN		N	Mean	Std. Deviation
1.00	Access to Care_R	166	3.7560	1.10610
	Entry Barriers	166	2.3891	.89933
	Cultural Barriers	166	3.0337	1.01112
	Healthcare Costs	166	2.2410	.84338
	Employment Status	166	3.21	1.890
	Race	166	4.86	1.587
	Age	166	2.80	1.369
	Valid N (listwise)	166		
2.00	Access to Care_R	232	3.4310	1.12699
	Entry Barriers	232	2.6703	.86966
	Cultural Barriers	232	3.2379	.91582
	Healthcare Costs	232	2.9325	.81649
	Employment Status	232	2.06	1.802
	Race	232	5.06	1.598
	Age	232	2.85	1.260
	Valid N (listwise)	232		

**Correlation Analysis by Insurance Type**

Pearson correlation analyses examined if relationships between perceived access to care and psychosocial or demographic variables differed by insurance type for participants with Medicare, Medicaid, or Uninsured ( $n = 166$ ) versus those with private insurance ( $n = 232$ ).

**Medicare, Medicaid, or Uninsured**

Among participants with government-provided insurance or Uninsured, perceived access to care (M\_ACC2R) was negatively correlated with Entry Barriers (EB) ( $r = -.44$ ,  $p < .001$ ), Cultural Barriers (CB) ( $r = -.43$ ,  $p < .001$ ), and Healthcare costs ( $r = -.34$ ,  $p < .001$ ). These results suggest that higher levels of psychosocial burden were associated

with lower perceived access to care. Demographic variables, including race, employment status, and age, were not significantly associated with access to care in this group.

Entry Barriers (EB) were strongly correlated with Cultural Barriers (CB) ( $r = .60$ ,  $p < .001$ ) and moderately correlated with Healthcare Costs (HCC) ( $r = .37$ ,  $p < .001$ ), showing significant overlap among these constructs.

### **Private Insurance**

Among privately insured participants, perceived access to care was negatively correlated with Entry Barriers ( $r = -.39$ ,  $p < .001$ ), Cultural Barriers ( $r = -.42$ ,  $p < .001$ ), and Healthcare Costs ( $r = -.15$ ,  $p = .012$ ). The correlation with healthcare costs was less significant in magnitude. Demographic variables did not significantly relate to access to care. Strong correlations were also found between Entry Barriers (EB) and Cultural Barriers (CB) ( $r = .66$ ,  $p < .001$ ), further supporting the consistency of relationships among psychosocial variables across insurance types.

### **Summary**

Across both insurance groups, higher levels of Entry Barriers (EB), Cultural Barriers (CB), and Healthcare Costs (HCC) were significantly associated with lower perceived access to care. These associations were slightly stronger among individuals with Medicare, Medicaid, or Uninsured but remained statistically significant among those with private insurance. These findings suggest that psychosocial factors influence perceptions of access to care regardless of insurance type.

**Table 11***Correlations for Health Insurance*

HIN			Access to Care_R	Entry Barriers	Cultural Barriers	Race	Employment Status	Age	Healthcare Costs
1.00	Access to Care_R	Pearson Correlation	1	-.436**	-.428**	-.087	-.049	-.127	-.342**
		Sig. (2-tailed)		< .001	< .001	.267	.529	.102	< .001
		N	166	166	166	166	166	166	166
	Entry Barriers	Pearson Correlation	-.436**	1	.597**	.053	.032	.149	.424**
		Sig. (2-tailed)	< .001		< .001	.499	.680	.056	< .001
		N	166	166	166	166	166	166	166
	Cultural Barriers	Pearson Correlation	-.428**	.597**	1	.168*	.013	.191*	.370**
		Sig. (2-tailed)	< .001	< .001		.031	.871	.014	< .001
		N	166	166	166	166	166	166	166
	Race	Pearson Correlation	-.087	.053	.168*	1	.056	.238**	-.017
		Sig. (2-tailed)	.267	.499	.031		.472	.002	.826
		N	166	166	166	166	166	166	166
	Employment Status	Pearson Correlation	-.049	.032	.013	.056	1	.162*	.052
		Sig. (2-tailed)	.529	.680	.871	.472		.037	.509
		N	166	166	166	166	166	166	166
	Age	Pearson Correlation	-.127	.149	.191*	.238**	.162*	1	.096
		Sig. (2-tailed)	.102	.056	.014	.002	.037		.217
		N	166	166	166	166	166	166	166
	Healthcare Costs	Pearson Correlation	-.342**	.424**	.370**	-.017	.052	.096	1
		Sig. (2-tailed)	< .001	< .001	< .001	.826	.509	.217	
		N	166	166	166	166	166	166	166
2.00	Access to Care_R	Pearson Correlation	1	-.385**	-.421**	.079	.075	.048	-.149*
		Sig. (2-tailed)		< .001	< .001	.228	.257	.470	.023
		N	232	232	232	232	232	232	232
	Entry Barriers	Pearson Correlation	-.385**	1	.656**	.033	-.008	.152*	.263**
		Sig. (2-tailed)	< .001		< .001	.614	.898	.021	< .001
		N	232	232	232	232	232	232	232
	Cultural Barriers	Pearson Correlation	-.421**	.656**	1	-.044	-.131*	.032	.195**
		Sig. (2-tailed)	< .001	< .001		.502	.046	.630	.003
		N	232	232	232	232	232	232	232
	Race	Pearson Correlation	.079	.033	-.044	1	.039	.033	.126
		Sig. (2-tailed)	.228	.614	.502		.553	.621	.055
		N	232	232	232	232	232	232	232
	Employment Status	Pearson Correlation	.075	-.008	-.131*	.039	1	-.122	-.066
		Sig. (2-tailed)	.257	.898	.046	.553		.064	.319
		N	232	232	232	232	232	232	232
	Age	Pearson Correlation	.048	.152*	.032	.033	-.122	1	.070
		Sig. (2-tailed)	.470	.021	.630	.621	.064		.291
		N	232	232	232	232	232	232	232
	Healthcare Costs	Pearson Correlation	-.149*	.263**	.195**	.126	-.066	.070	1
		Sig. (2-tailed)	.023	< .001	.003	.055	.319	.291	
		N	232	232	232	232	232	232	232

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

**Regression Analysis by Insurance Type**

Multiple regression analyses were conducted to determine the variation in perceived access to care (ACC2R) according to insurance type. The analyses differentiated between participants with Medicare, Medicaid, or Uninsured (HIN = 1) and those with private insurance (HIN = 2). Both models included the following predictors:

Entry Barriers (EB), cultural barriers (CB), Healthcare Costs (HCC), Race (Race), Employment (EMP), and Age (Age).

### **Model 1: Medicare, Medicaid, or Uninsured**

The regression model applied to participants with Medicare, Medicaid, or Uninsured was statistically significant,  $F(6, 159) = 9.14, p < .001$ . It explained 25.6% of the variance in access to care ( $R^2 = .256$ , Adjusted  $R^2 = .228$ ). Three predictors were statistically significant: Entry Barriers (EB):  $\beta = -.230, t = -2.59, p = .011$ , Cultural Barriers (M\_CB):  $\beta = -.221, t = -2.50, p = .013$  and Healthcare Costs (HCC):  $\beta = -.160, t = -2.08, p = .039$ .

These findings suggest that among individuals with government-provided or Uninsured, greater Entry Barriers (EB), cultural barriers (CB), and Healthcare Costs (HCC) were significantly associated with lower perceived access to care. Race, employment status, and age were not significant predictors.

Multicollinearity diagnostics showed that the variance inflation factor (VIF) values were below 2, indicating acceptable levels.

### **Model 2: Private Insurance**

The regression model for participants with private insurance was also statistically significant,  $F(6, 225) = 10.33, p < .001$ , explaining 21.6% of the variance in access to care ( $R^2 = .216$ , Adjusted  $R^2 = .195$ ). Two predictors were statistically significant: Entry Barriers (EB):  $\beta = -.214, t = -2.63, p = .009$ , and Cultural Barriers (M\_CB):  $\beta = -.264, t = -3.30, p = .001$ .

Healthcare Costs (HCC) ):  $\beta = -.055, t = -.883, p = .378$  and all demographic variables were not significant predictors in this model. As with the previous group,

Variance Inflation Factor (VIF) values were below 2, indicating no concerns with multicollinearity.

Across both insurance types, Entry Barriers (EB) and Cultural barriers (CB) were consistently significant predictors of lower perceived access to care. Healthcare costs also contributed significantly to the cost of health care for individuals with government-provided insurance or those who do not have insurance. Demographic factors, including race, employment, and age, were not significant in either group.

The findings emphasize the impact of psychosocial burdens on perceptions of healthcare access, regardless of insurance type. Remarkably, these effects are slightly more pronounced among individuals with Medicare, Medicaid, or Uninsured coverage.

**Table 12***Coefficients in Healthcare Insurance**Coefficients<sup>a</sup>*

HIN	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
			B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1.00	1	(Constant)	5.847	.365		16.023	<.001					
		Entry Barriers	-.283	.109	-.230	-2.588	.011	-.436	-.201	-.177	.593	1.686
		Cultural Barriers	-.242	.097	-.221	-2.504	.013	-.428	-.195	-.171	.601	1.664
		Healthcare Costs	-.210	.101	-.160	-2.081	.039	-.342	-.163	-.142	.792	1.262
		Race	-.023	.050	-.033	-.465	.642	-.087	-.037	-.032	.917	1.091
		Employment Status	-.015	.041	-.025	-.360	.719	-.049	-.029	-.025	.970	1.030
		Age	-.019	.058	-.024	-.326	.745	-.127	-.026	-.022	.895	1.118
2.00	1	(Constant)	4.873	.411		11.871	<.001					
		Entry Barriers	-.278	.106	-.214	-2.629	.009	-.385	-.173	-.155	.525	1.905
		Cultural Barriers	-.325	.099	-.264	-3.300	.001	-.421	-.215	-.195	.543	1.841
		Healthcare Costs	-.075	.085	-.055	-.883	.378	-.149	-.059	-.052	.911	1.098
		Race	.054	.042	.077	1.286	.200	.079	.085	.076	.974	1.026
		Employment Status	.027	.038	.043	.713	.477	.075	.047	.042	.949	1.054
		Age	.085	.054	.095	1.570	.118	.048	.104	.093	.949	1.054

<sup>a</sup> Dependent Variable: Access to Care\_R**Section 4: Results for Moderator 3: Gender****Descriptive Statistics by Gender**

Descriptive statistics were calculated for perceived access to care (ACC2R), psychosocial burden variables, and demographic characteristics across three gender groups: men (coded as 1), women (coded as 2), and non-binary participants (coded as 3).

**Men (*n* = 170)**

Men reported the lowest perceived access to care ( $M = 3.47$ ,  $SD = 1.23$ ) among the three groups. This group also reported the following: Lower employment scores ( $EMP = 2.42$ ,  $SD = 1.82$ ), A lower mean age ( $Age = 2.69$ ,  $SD = 1.28$ ), Moderate entry barriers ( $EB = 2.52$ ,  $SD = 0.95$ ), Moderate cultural barriers ( $CB = 3.08$ ,  $SD = 1.07$ ), and Moderate healthcare costs ( $HCC = 2.56$ ,  $SD = 0.94$ ).

**Women (*n* = 216)**

Women reported the highest perceived access to care ( $M = 3.64$ ,  $SD = 1.04$ ). On average, they also reported a slightly higher age ( $Age = 2.98$ ,  $SD = 1.32$ ), higher cultural barriers ( $CB = 3.23$ ,  $SD = 0.86$ ), the highest healthcare costs scores ( $HCC = 2.72$ ,  $SD =$



0.85), slightly higher entry barriers (EB = 2.58, SD = 0.84), and slightly higher employment scores (EMP = 2.59, SD = 2.00) compared to men.

### **Non-Binary Participants ( $n = 12$ )**

While the non-binary group had a small sample size, they reported relatively high perceived access to care (M = 3.63, SD = 1.09), similar to women. This group also reported the highest employment score (EMP = 3.42, SD = 1.73), the lowest mean age score (Age = 2.00, SD = 0.74), which may reflect younger respondents, Comparable entry barriers (EB = 2.56, SD = 0.94), slightly lower cultural barriers (CB = 2.93, SD = 1.11), and the lowest healthcare costs score (HCC = 2.43, SD = 1.00).

Overall, women reported the highest access to care and the highest levels of cultural barriers and healthcare costs, indicating a complex dynamic between perceived burden and accessibility. Men reported the lowest perceived access to care and slightly lower psychosocial burdens. Non-binary participants, though few in number, reported relatively high access to care and the lowest healthcare costs burden.

These findings highlight nuanced gender differences in access perceptions and psychosocial burdens. Despite capturing a small sample size ( $n = 12$ ) for non-binary participants, inclusion is important for visibility and future research as these individuals also face the same challenges as the other reported groups.

**Table 13***Descriptive Statistics for Gender*

<i>Descriptive Statistics</i>				
Gender		N	Mean	Std. Deviation
1	Access to Care_R	170	3.4676	1.22974
	Entry Barriers	170	2.5167	.95194
	Cultural Barriers	170	3.0753	1.06720
	Healthcare Costs	170	2.5588	.93991
	Employment Status	170	2.42	1.819
	Race	170	4.81	1.689
	Age	170	2.69	1.283
	Valid N (listwise)	170		
2	Access to Care_R	216	3.6412	1.04312
	Entry Barriers	216	2.5810	.84227
	Cultural Barriers	216	3.2259	.85643
	Healthcare Costs	216	2.7230	.84697
	Employment Status	216	2.59	2.002
	Race	216	5.10	1.503
	Age	216	2.98	1.322
	Valid N (listwise)	216		
3	Access to Care_R	12	3.6250	1.08972
	Entry Barriers	12	2.5625	.94088
	Cultural Barriers	12	2.9333	1.10974
	Healthcare Costs	12	2.4306	.99863
	Employment Status	12	3.42	1.730
	Race	12	5.17	1.749
	Age	12	2.00	.739
	Valid N (listwise)	12		

**Correlation Analysis by Gender****Men (n = 170)**

In the male group, perceived access to care (ACC2R) demonstrated moderate to strong negative correlations with psychosocial burden measures. Specifically, higher entry barriers (EB), cultural barriers (CB), and healthcare costs (HCC) were associated with lower perceived access to care. These correlations ranged approximately from  $-0.35$  to  $-0.46$  and were statistically significant (typically  $p < .001$ ). In contrast, demographic variables such as race, employment, and age showed small, non-significant associations

with access to care (ACC2R). Additionally, strong positive intercorrelations were observed among the psychosocial measures; for example, entry barriers were strongly correlated with cultural barriers (e.g.,  $r \approx 0.64$ ) and moderately correlated with healthcare costs (e.g.,  $r \approx 0.36$ )—indicating that these stressors tend to coincide in this group.

### **Women (n = 216)**

Among women, the pattern of associations was similar to that observed in men. Perceived access to care (ACC2R) was negatively correlated with entry barriers (EB), cultural barriers (CB), and, to a somewhat lesser extent, healthcare costs (HCC). For instance, correlations for entry and cultural burden were around  $-0.40$  to  $-0.42$  (all  $p < .001$ ), while the association with healthcare costs (HCC) was slightly weaker (approximately  $-0.15$ ,  $p < .05$ ). Demographic characteristics such as age, gender, or income had little influence on how participants perceived their access to care. In contrast, psychological and social factors were much stronger predictors. These factors were also highly related to one another, particularly among men, suggesting they function together as a group.

### **Non-Binary Participants (n = 12)**

Although the non-binary group had a minimal sample size, preliminary analyses revealed that the direction of the relationships was consistent with those found in the other gender groups. Perceived access to care was negatively correlated with entry barriers, cultural barriers, and healthcare costs. However, these correlations may not have reached significance due to limited statistical capability. The intercorrelations among the psychosocial measures were moderate (with correlation coefficients in the range of approximately  $0.31$ – $0.43$ ), suggesting that even within this group, higher levels of one

form of psychosocial burden (EB, CB, and HCC) tend to be associated with increases in the others.

Across all gender groups, higher levels of psychosocial burdens —specifically entry barriers (EB), cultural barriers (CB), and healthcare costs (HCC)—were consistently associated with lower perceived access to care. Demographic factors (race, employment, and age) did not predict access. While the non-binary group had a small sample size ( $n = 12$ ), their patterns were consistent with those seen in men and women. These results highlight the importance of psychosocial factors (EB, CB, and HCC) in shaping perceptions of access to care, regardless of gender.

**Table 14**

*Correlations by Gender*

*Correlations*

Gender		Access to Care_R	Entry Barriers	Cultural Barriers	Race	Employment Status	Age	Healthcare Costs
1	Access to Care_R	Pearson Correlation	1	-.457**	-.463**	-.066	.035	-.016
		Sig. (2-tailed)		<.001	<.001	.395	.649	.839
		N	170	170	170	170	170	170
	Entry Barriers	Pearson Correlation	-.457**	1	.616**	.125	-.029	.159*
		Sig. (2-tailed)	<.001		<.001	.105	.704	.039
		N	170	170	170	170	170	170
	Cultural Barriers	Pearson Correlation	-.463**	.616**	1	.066	-.130	.108
		Sig. (2-tailed)	<.001	<.001		.390	.090	.162
		N	170	170	170	170	170	170
	Race	Pearson Correlation	-.066	.125	.066	1	-.019	.225**
		Sig. (2-tailed)	.395	.105	.390		.810	.003
		N	170	170	170	170	170	170
	Employment Status	Pearson Correlation	.035	-.029	-.130	-.019	1	-.097
		Sig. (2-tailed)	.649	.704	.090	.810		.208
		N	170	170	170	170	170	170
	Age	Pearson Correlation	-.016	.159*	.108	.225**	-.097	1
		Sig. (2-tailed)	.839	.039	.162	.003	.308	
		N	170	170	170	170	170	170
	Healthcare Costs	Pearson Correlation	-.347**	.362**	.308**	.144	-.230**	.130
		Sig. (2-tailed)	<.001	<.001	<.001	.060	.003	.090
		N	170	170	170	170	170	170
2	Access to Care_R	Pearson Correlation	1	-.384**	-.402**	.034	.077	-.059
		Sig. (2-tailed)		<.001	<.001	.621	.262	.390
		N	216	216	216	216	216	216
	Entry Barriers	Pearson Correlation	-.384**	1	.659**	-.001	-.024	.144*
		Sig. (2-tailed)	<.001		<.001	.984	.723	.034
		N	216	216	216	216	216	216
	Cultural Barriers	Pearson Correlation	-.402**	.659**	1	.059	-.040	.079
		Sig. (2-tailed)	<.001	<.001		.391	.560	.246
		N	216	216	216	216	216	216
	Race	Pearson Correlation	.034	-.001	.059	1	.051	.043
		Sig. (2-tailed)	.621	.984	.391		.456	.529
		N	216	216	216	216	216	216
	Employment Status	Pearson Correlation	.077	-.024	-.040	.051	1	.062
		Sig. (2-tailed)	.262	.723	.560	.456		.364
		N	216	216	216	216	216	216
	Age	Pearson Correlation	-.059	.144*	.079	.043	.062	1
		Sig. (2-tailed)	.390	.034	.246	.529	.364	
		N	216	216	216	216	216	216
	Healthcare Costs	Pearson Correlation	-.226**	.352**	.273**	.037	-.017	.031
		Sig. (2-tailed)	<.001	<.001	<.001	.590	.803	.646
		N	216	216	216	216	216	216
3	Access to Care_R	Pearson Correlation	1	-.496	-.616*	.393	.139	-.056
		Sig. (2-tailed)		.101	.033	.206	.667	.862
		N	12	12	12	12	12	12
	Entry Barriers	Pearson Correlation	-.496	1	.612*	-.366	-.502	.153
		Sig. (2-tailed)	.101		.034	.242	.097	.636
		N	12	12	12	12	12	12
	Cultural Barriers	Pearson Correlation	-.616*	.612*	1	-.312	-.534	.288
		Sig. (2-tailed)	.033	.034		.323	.074	.363
		N	12	12	12	12	12	12
	Race	Pearson Correlation	.393	-.366	-.312	1	.035	-.352
		Sig. (2-tailed)	.206	.242	.323		.914	.262
		N	12	12	12	12	12	12
	Employment Status	Pearson Correlation	.139	-.502	-.534	.035	1	.427
		Sig. (2-tailed)	.667	.097	.074	.914		.166
		N	12	12	12	12	12	12
	Age	Pearson Correlation	-.056	.153	.288	-.352	.427	1
		Sig. (2-tailed)	.862	.636	.363	.262	.166	
		N	12	12	12	12	12	12
	Healthcare Costs	Pearson Correlation	.176	.516	.143	-.262	-.692*	-.247
		Sig. (2-tailed)	.585	.086	.657	.411	.013	.440
		N	12	12	12	12	12	12

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

## **Regression Analysis by Gender**

Regression analyses revealed that entry barriers (EB) and cultural barriers (CB) were significant predictors of reduced perceived access to healthcare for both men and women. For men, all three barriers—entry barriers, cultural barriers, and healthcare costs (HCC)—were statistically significant, indicating that increases in these factors are associated with decreased access to care. The model explained approximately 30% of the variance in access.

Entry and cultural barriers for women also significantly predicted lower access, but healthcare costs were not statistically significant. The model accounted for 20% of the variance.

The regression model was not statistically significant among non-binary participants, likely due to the small sample size ( $n = 12$ ). However, the direction of effects for EB, CB, and HCC was consistent with those found in the male and female groups, suggesting similar patterns that warrant further exploration with a larger sample. Employment status was the only significant predictor in this group.

Across all groups, demographic variables (race, employment, and age) were not significant predictors of access. These findings underscore the consistent and influential role of psychosocial barriers, particularly entry and cultural barriers, in shaping perceptions of healthcare access across gender identities.

**Table 15**

*Coefficients by Gender*

*Coefficients<sup>a</sup>*

Gender	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	1	(Constant)	5.763	.404	14.276	< .001					
		Entry Barriers	-.295	.112	-.228	.009	-.457	-.202	-.172	.571	1.750
		Cultural Barriers	-.317	.097	-.275	.001	-.463	-.247	-.214	.603	1.658
		Healthcare Costs	-.261	.096	-.199	.007	-.347	-.209	-.179	.804	1.243
		Race	-.005	.049	-.008	.912	-.066	-.009	-.007	.932	1.073
		Employment Status	-.031	.046	-.046	.499	.035	-.053	-.044	.924	1.082
		Age	.070	.065	.073	.1074	-.016	.084	.070	.923	1.084
2	1	(Constant)	5.318	.381	13.952	< .001					
		Entry Barriers	-.219	.106	-.177	.040	-.384	-.142	-.128	.524	1.909
		Cultural Barriers	-.316	.101	-.259	.002	-.402	-.212	-.194	.560	1.785
		Healthcare Costs	-.115	.082	-.093	.162	-.226	-.097	-.087	.871	1.147
		Race	.035	.043	.050	.801	.034	.055	.050	.988	1.012
		Employment Status	.031	.032	.059	.947	.077	.065	.059	.991	1.009
		Age	-.012	.049	-.016	.804	-.059	-.017	-.015	.972	1.028
3	1	(Constant)	3.441	3.113	1.105	.319					
		Entry Barriers	-.613	.353	-.529	.1734	-.496	-.613	-.339	.410	2.437
		Cultural Barriers	-.636	.458	-.648	.1388	-.616	-.528	-.271	.176	5.693
		Healthcare Costs	.569	.462	.522	.1231	.176	.482	.241	.213	4.698
		Race	.233	.153	.374	1.523	.393	.563	.298	.636	1.573
		Employment Status	-.251	.363	-.398	.520	.139	-.295	-.135	.115	8.672
		Age	.946	.491	.641	1.925	-.056	.652	.376	.345	2.902

a. Dependent Variable: Access to Care\_R

## **Section 5: Results of Hypotheses and Research Questions**

### **Hypothesis 1**

Consistent with expectations, higher entry barriers were significantly associated with lower perceived access to healthcare services. The regression coefficient for entry barriers was negative and statistically significant ( $B = -0.216, p < .001$ ), indicating that increases in entry barriers corresponded with decreased likelihood of accessing healthcare services. These findings provide observed support for Hypothesis 1.

### **Hypothesis 2**

Consistent with expectations, cultural barriers were significantly associated with lower perceived access to healthcare services. The regression coefficient for cultural barriers was negative and statistically significant ( $B = -0.222, p < .001$ ), indicating that increases in cultural barriers corresponded with decreased likelihood of accessing healthcare services. These findings provide observed support for Hypothesis 2.

### **Hypothesis 3**

Consistent with expectations, healthcare costs were significantly associated with lower perceived access to healthcare services. The regression coefficient for healthcare costs was negative and statistically significant ( $B = -0.144, p = .020$ ), indicating that increases in healthcare costs corresponded with decreased likelihood of accessing healthcare services. These findings provide observed support for Hypothesis 3.



**Table 16***Hypotheses Results:*

<b>Hypotheses:</b>	<b>Description:</b>	<b>Model Coefficient</b>	<b>Model Sig</b>	<b>Supported/Not Supported</b>
<b>H1</b>	As entry barriers increase, the likelihood of access to healthcare services decreases.	-0.216	$p < .001$	Supported
<b>H2</b>	As cultural barriers increase, the likelihood of access to healthcare services decreases.	-0.222	$p < .001$	Supported
<b>H3</b>	As healthcare costs increase, the likelihood of access to healthcare services decreases.	-0.144	$p = .020$	Supported

## Research Questions

*Research Question 1: Does the relationship between Entry Barriers (EB) and access to healthcare services vary as a function of the level of income?* For the Low-Income group ( $Income = 1.00$ ), Entry Barriers was a significant negative predictor of access to care ( $B = -0.301, p < .001$ ), indicating that higher entry barriers are associated with lower perceived access among these participants. In contrast, Entry Barriers did not significantly predict access for the Middle-Income group ( $Income = 2.00$ ;  $B = -0.159, p = .146$ ) or the High-Income group ( $Income = 3.00$ ;  $B = -0.102, p = .450$ ). These results suggest that entry barriers substantially reduce access to care for low-income participants but not for those with middle and high income.

*Research Question 2: Does the relationship between Cultural Barriers (CB) and access to healthcare services vary as a function of level of income?* Among Low-Income participants ( $Income = 1.00$ ), cultural barriers did not significantly predict access ( $B = -0.15, p = .080$ ). However, in the Middle-Income group ( $Income = 2.00$ ), CB was a significant negative predictor ( $B = -0.358, p < .001$ ), as it was for the High-Income group ( $Income = 3.00$ ;  $B = -0.367, p = .005$ ). These results suggest that cultural barriers substantially reduce access to care for middle- and high-income participants but not for those with low income.

*Research Question 3: Does the relationship between Healthcare Costs (HCC) and access to healthcare services vary as a function of level of income?* In the Low-Income group ( $Income = 1.00$ ), HCC was a significant negative predictor of access ( $B = -0.198, p = .007$ ), indicating that higher healthcare costs correspond to reduced perceived access to care. In contrast, neither the middle-income group ( $income = 2.00$ ;  $B = -0.022, p =$

.790) nor the high-income group (income = 3.00;  $B = -0.081$ ,  $p = .466$ ) significantly affected healthcare costs. These results suggest that healthcare costs substantially reduce access to care for low-income participants but not for middle- and high-income participants.

Overall, these findings illustrate that the effect of entry barriers, cultural barriers, and healthcare costs on perceived access to care varies by income level. Specifically, entry barriers and healthcare costs are more influential for Low-Income participants, whereas cultural barriers strongly affect Middle- and High-Income groups.

*Research Question 4: Does the relationship between entry barriers (EB) and access to healthcare services vary as a function of insurance type?* Among participants with HIN = 1 (e.g., Medicare, Medicaid, or uninsured), Entry Barriers was a significant negative predictor of access ( $B = -0.23$ ,  $p = .011$ ), suggesting that higher entry barriers correspond to lower perceived access in this group. Similarly, for those with HIN = 2 (e.g., private insurance), Entry Barriers also showed a significant negative relationship ( $B = -0.214$ ,  $p = .009$ ). The results suggest that since the relationship was supported in both insurance categories, higher entry barriers reduce access to care regardless of insurance type.

*Research Question 5: Does the relationship between cultural barriers (CB) and access to healthcare services vary as a function of insurance type?* For participants with HIN = 1, cultural barriers significantly predicted lower access to care ( $B = -0.221$ ,  $p = .013$ ). A similar negative association was observed among those with HIN = 2 ( $B = -0.264$ ,  $p = .001$ ). These results suggest that cultural barriers increase across both

public/uninsured and private insurance and are associated with decreased access to healthcare services.

*Research Question 6: Does the relationship between healthcare costs (HCC) and access to healthcare services vary as a function of insurance type?* Within the HIN = 1 group, healthcare costs were significantly related to lower access ( $B = -0.16, p = .039$ ). However, in the HIN = 2 group, the coefficient for healthcare costs were not statistically significant ( $B = -0.055, p = .378$ ). The results suggest that the relationship between healthcare costs and perceived access to care is significant, only for those with public insurance or no insurance coverage.

Overall, these findings demonstrate that entry barriers and cultural barriers consistently negatively affect perceived access to care across both insurance types. The effect of healthcare costs is contingent on insurance coverage, with significant implications primarily for participants in the government-provided/no-insurance category.

*Research Question 7: Does the relationship between entry barriers (EB) and access to healthcare services vary as a function of gender?* For men, entry barriers were a significant negative predictor of access to care ( $B = -0.228, p = .009$ ), indicating that higher entry barriers correspond with lower perceived access. Similarly, for women, entry barriers also significantly predicted access ( $B = -0.177, p = .040$ ), suggesting a comparable negative relationship. In contrast, for non-binary participants, entry barriers did not significantly predict access ( $B = -0.529, p = .144$ ), meaning that the effect was not supported in this subgroup. Overall, these results suggest that the negative impact of

entry barriers on access to care is consistent for men and women but does not hold for non-binary individuals.

*Research Question 8: Does the relationship between cultural barriers (CB) and access to healthcare services vary as a function of gender?* Among men, cultural barriers emerged as a significant negative predictor of access to care ( $B = -0.275$ ,  $p = .001$ ), indicating that higher cultural barriers are associated with lower perceived access. Similarly, for women, cultural barriers were significantly related to decreased access ( $B = -0.259$ ,  $p = .002$ ). In contrast, for non-binary participants, the effect of cultural barriers was not statistically significant ( $B = -0.648$ ,  $p = .224$ ), suggesting no reliable relationship exists in this group. Hence, these results suggest that cultural barriers decrease access to care for men and women but not for non-binary individuals.

*Research Question 9: Does the relationship between healthcare costs (HCC) and access to healthcare services vary as a function of gender?* Among men, healthcare costs (HCC) were a significant negative predictor of perceived access to care ( $B = -0.199$ ,  $p = .007$ ), implying that higher healthcare costs are associated with lower access. In contrast, among women, HCC did not significantly predict access ( $B = -0.093$ ,  $p = .162$ ), indicating that this relationship was not supported in this subgroup. Similarly, for non-binary participants, the effect of HCC was non-significant ( $B = 0.522$ ,  $p = .273$ ), suggesting that healthcare costs do not have a reliable effect on perceived access in this group. These findings suggest that higher healthcare costs significantly reduce perceived access to care only among men, whereas the relationship is not supported for women or non-binary individuals.

In summary, entry barriers and cultural barriers consistently negatively affect perceived access to care among men and women. In contrast, healthcare costs significantly predict lower access only for men. The non-binary group did not exhibit significant effects for the three barriers, reflecting a smaller sample size and reduced statistical power.

## **CHAPTER V- DISCUSSION AND CONCLUSION**

Our research initially focused on the relationship between entry barriers, cultural barriers, and healthcare costs on perceived access to healthcare services, and it resulted in significant and interesting findings.

This study examined three primary hypotheses related to perceived barriers and access to healthcare services. Hypothesis 1 posited that as entry barriers increase, the likelihood of accessing healthcare services decreases. Hypothesis 2 proposed that higher levels of cultural barriers would be associated with reduced access to care. Finally, Hypothesis 3 suggested that increased healthcare costs would correspond to a decreased likelihood of accessing healthcare services. Each hypothesis was grounded in the expectation that greater perceived entry, cultural, or financial barriers would negatively influence individuals' ability to obtain needed care. All three hypotheses were supported, suggesting that these barriers are significantly associated with decreased perceived access to care.

To further explore these relationships, the study also investigated a series of research questions to examine whether perceived barriers' effects on access to healthcare services varied according to key demographic factors, including income level, insurance type, and gender self-identity. Specifically, the following questions were addressed: (1) Does the relationship between entry barriers and access to healthcare services vary by income level? (2) Does the relationship between cultural barriers and access to healthcare services vary by income level? (3) Does the relationship between healthcare costs and access to healthcare services vary by income level? (4) Does the relationship between entry barriers and access to healthcare services vary by insurance type? (5) Does the

relationship between cultural barriers and access to healthcare services vary by insurance type? (6) Does the relationship between healthcare costs and access to healthcare services vary by insurance type? (7) Does the relationship between entry barriers and access to healthcare services vary by gender? (8) Does the relationship between cultural barriers and access to healthcare services vary by gender? Furthermore, (9) Does the relationship between healthcare costs and access to healthcare services vary by gender? Through these research questions, the study sought to identify potential moderating effects of demographic characteristics on the associations between perceived barriers and healthcare access.

We found that these barriers, which we assessed across income levels, insurance types, and gender identities, significantly reduce perceived access to care. These results highlight the complex and inequitable nature of healthcare access in the United States. They can be meaningfully analyzed through the lens of the Social Determinants of Health (SDOH) and Penchansky and Thomas's Access to Care Framework.

The SDOH framework asserts that health outcomes are shaped more by social and economic factors—such as income, education, housing, and systemic discrimination—than by healthcare services alone (World Health Organization, 2008; Braveman & Gottlieb, 2014). In this study, income level and insurance type moderated the impact of access barriers, supporting the idea that structural imbalance directly contributes to health disparities. Entry barriers, for instance, had the most substantial effect among low-income individuals, supporting literature that suggests lower socioeconomic groups face more significant logistical and structural burdens in obtaining care (Artiga et al., 2020; Williams et al., 2019). Participants reported issues related to appointment availability,



frequency, and providers' limited familiarity with their medical history, which may hinder continuity of care and contribute to feelings of mistrust or fragmentation in the healthcare experience. These findings intersect with the Social Determinants of Health (SDOH), particularly the domain of Healthcare Access and Quality, which includes limited provider availability and restricted clinic hours—factors that can delay or prevent timely care in underserved communities. Additionally, the SDOH domain of Economic Stability may also contribute to entry barriers, as individuals with inflexible work schedules, limited paid leave, or caregiving responsibilities may struggle to attend appointments, further exacerbating access challenges. Building on these findings, healthcare costs emerge as another SDOH factor that deeply impacts access, especially among vulnerable groups.

Healthcare costs were also a significant predictor of limited access, particularly among participants with low income or public/uninsured—groups often most sensitive to high out-of-pocket costs or coverage gaps (Collins et al., 2020; Woolhandler & Himmelstein, 2017). Additionally, these patterns underscore the role of Economic Stability within the SDOH framework, as financial insecurity, lack of employer sponsored insurance, and limited disposable income often restrict individuals ability to afford needed care. These findings reflect the ongoing issue of underinsurance in the U.S., where insurance coverage alone does not guarantee affordable care (Doty et al., 2009).

Cultural barriers, including language challenges, mistrust, and a lack of culturally competent providers, appeared as a significant obstacle to access for middle- and high-income groups. While these groups may have more financial resources, the findings

suggest that sociocultural mismatches between patients and providers still present crucial challenges. Prior research has shown that perceived discrimination, implicit bias, and a lack of cultural responsiveness negatively affect care-seeking behavior and patient satisfaction (Saha et al., 2008; Betancourt et al., 2003; Flores, 2006). These results highlight the need for culturally tailored interventions beyond financial assistance to foster inclusion and trust.

The Access to Care framework developed by Penchansky and Thomas (1981) thoroughly interprets these findings. Their model conceptualizes access as a multidimensional concept defined by five elements: availability, accessibility, accommodation, affordability, and acceptability. Entry barriers in this study reflect problems in availability (e.g., provider shortages) and accommodation (e.g., difficulty scheduling or navigating systems). Cultural barriers align with acceptability, referring to the potential disconnect between a patient's cultural background and the health system's practices. Healthcare costs reflect affordability, emphasizing the economic mismatch between what individuals can pay and what healthcare services require. The differential findings by insurance type and income demonstrate how these access dimensions are not uniformly experienced but are deeply ingrained in broader social and economic hierarchies.

Gender differences also emerged in meaningful ways to showcase how men, women, and non-binary viewed the various healthcare barriers differently. Healthcare costs impact men more, while men and women experience significant impacts from entry and cultural barriers. Non-binary participants did not show significant associations, likely due to the small sample size. However, this lack of significance should not be interpreted

as a lack of effect; rather, it underscores the need for more inclusive research designs that better capture the experiences of gender-diverse populations (Bauer et al., 2009). These findings suggest that access to healthcare cannot be determined solely by insurance coverage status. Instead, access is a dynamic interplay of entry, economic, and cultural factors that shape individuals' ability to seek and receive care. To improve equity in healthcare, interventions must be grounded in SDOH-informed strategies and intentionally address all five dimensions of access as outlined by Penchansky and Thomas. To help close the ongoing gaps in healthcare, we need to make the system easier to navigate, train providers to understand different cultural approaches better and respect cultural differences. We also need to look into making healthcare more affordable and offer care that meets the unique needs of underserved consumers and communities.

### **Implications and Future Research Suggestions**

After reviewing the research findings and relevant literature, it is important to investigate some of the various implications and further research suggestions. The findings from this research carry important implications for healthcare policy, practice, and theoretical theory.

The findings from this study provide a strong foundation for future inquiry into the nuanced relationship between perceived access barriers and demographic characteristics. With all primary hypotheses supported, follow-up studies should build on these outcomes by incorporating qualitative insights, longitudinal perspectives, and broader population sampling.

### **Income-Level Considerations**

Entry barriers were reported as having the greatest impact among low-income participants, suggesting a need for future research that disaggregates the logistical and systemic constraints this population faces. Qualitative studies may offer valuable insight into the lived experiences behind these barriers—such as transportation limitations, rigid work schedules, or limited provider availability—and how these shape perceptions of access.

Interestingly, cultural barriers were reported most significantly among middle- and high-income participants. This finding warrants a deeper exploration into the socio-cultural dimensions that influence healthcare engagement among more economically advantaged groups. Future research could explore the role of perceived discrimination, provider communication styles, or lack of cultural responsiveness, which may disproportionately affect groups with greater financial means but lower trust in the healthcare system. Conversely, for low-income participants who did not report cultural barriers, it is plausible that limited access to providers altogether (due to entry or cost barriers) may prevent cultural mismatches from surfacing—an insight worth investigating further.

Healthcare costs also emerged as a critical barrier for low-income individuals, reinforcing long-standing concerns about affordability even among the insured. Future studies could examine how out-of-pocket costs, cost-sharing structures, and delayed care due to financial strain intersect with entry barriers. Mixed-methods designs could be particularly effective in capturing these layered burdens.

### **Insurance Type Considerations**

Both insurance groups—Public/Uninsured and Private—reported entry and cultural barriers as significantly reducing access. This finding indicates that insurance coverage alone does not insulate individuals from system-level access challenges. Further research could compare patient navigation experiences, administrative complexity, and provider acceptance rates across insurance types. Additionally, the role of benefit design and provider availability (e.g., narrow networks, prior authorization delays) may be central to understanding these shared perceptions.

Only the Public/Uninsured group reported healthcare cost as a significant barrier, underscoring a persistent affordability gap for those with public coverage or no coverage at all. This pattern may be amplified in areas where provider shortages disproportionately affect Medicaid and Medicare patients. Future studies might assess whether provider participation, appointment wait times, or out-of-network billing practices differ by geography and influence perceived costs—even when services are nominally covered.

### **Gender Considerations**

Both men and women reported entry and cultural barriers as significantly impacting access to care. This shared experience across genders suggests that structural and relational access challenges are pervasive and not confined to one identity group. However, only men reported healthcare cost as a significant barrier. This raises important questions about healthcare-seeking behaviors, benefit utilization, or cost sensitivity among male patients that deserve further investigation.

Additionally, the lack of significant findings among non-binary participants—likely due to sample size constraint—signals the need for more inclusive sampling

strategies in future studies. Designing research that meaningfully captures the experiences of gender-diverse individuals remains essential for health equity.

The findings reinforce that improving access to healthcare requires more than expanding insurance coverage; it requires a multidimensional approach that addresses entry, cultural, and economic barriers—core components of both the Social Determinants of Health (SDOH) and Penchansky and Thomas's Access to Care framework.

### **Policy Implications**

The significant effects of entry barriers and healthcare costs, particularly among low-income and publicly insured individuals, point to a pressing need for healthcare policies that reduce entry and financial obstacles to care. Entry barriers such as provider shortages, long wait times, and administrative complexity have been previously identified as critical contributors to delayed or skipping care (Institute of Medicine, 2002). Policies to support primary care accommodation—particularly in underserved areas—could help mitigate these barriers (Shi et al., 2021). Additionally, policy reforms to reduce out-of-pocket costs and address the issue of underinsurance are paramount. Studies show that even insured individuals often avoid care due to high deductibles, copays, and uncovered services (Collins et al., 2020; Woolhandler & Himmelstein, 2017). Expanding Medicaid, implementing cost-sharing limits, or supporting care for low-income individuals could address these affordability gaps.

Moreover, the differential impact of cost barriers based on insurance type suggests that insurance coverage alone does not correlate to access. Policies must focus not only on expanding coverage but also improving the quality and affordability of that

coverage, particularly for those enrolled in public insurance programs or lacking coverage altogether (Bailey et al., 2017).

### **Practice Implications**

On the practice side, the findings highlight the importance of increasing cultural competence among healthcare providers. Cultural barriers such as language discordance, perceived discrimination, and a lack of culturally relevant care were found to be significant barriers to access, even among middle- and high-income individuals. Prior studies have shown that patients who feel misunderstood or marginalized by the healthcare system are less likely to seek timely care and more likely to report discontentment with their health experiences (Betancourt et al., 2003; Saha et al., 2008; Flores, 2006). Training in cultural understanding and responsiveness can improve patient-provider communication, build trust, and ultimately reduce disparities in healthcare utilization.

Additionally, healthcare organizations should implement support services and other provider/advocate educational training such as employing community health workers or patient navigators to help patients, particularly those with lower incomes, navigate complex healthcare systems (Ingram et al., 2012). These efforts can address entry barriers by helping patients schedule appointments, understand medical instructions, and access community-based resources and additional support mechanisms.

Tailoring services to the needs of underserved populations and other groups including racial/ethnic minorities, low-income communities, and gender-diverse individuals is also essential. Interventions should be designed with health equity and

diversification in mind, ensuring that the care delivery system is responsive to its patient populations' diverse backgrounds and challenges (Chin et al., 2012).

### **Theoretical Implications**

The findings further support the conceptual utility of the SDOH framework and Penchansky and Thomas's (1981) Access to Care model. The fact that different types of barriers (entry, cultural, and cost-related) affect access differently across population groups demonstrates the multidimensional nature of access. Each of Penchansky and Thomas's dimensions of availability, accessibility, accommodation, affordability, and acceptability were represented in this study's findings, supporting the framework's relevance in modern health access research.

Notably, the results highlight the need for intersectional analysis in healthcare research. Access to care is not experienced uniformly; the intersection of socioeconomic status, insurance type, gender, and other social identities shapes it. These findings contribute to a growing body of work that champions moving beyond one-size-fits-all solutions and approaches that establish adopting more nuanced, identity-aware frameworks in health services research and delivery (Bowleg, 2012; Marmot et al., 2008).

### **Study Limitations**

This study provides valuable insights into how entry, cultural, and economic barriers affect perceived access to healthcare. Several limitations must be acknowledged and taken into consideration. First, the limited number of non-binary participants reduced the statistical capability to detect significant effects for this group. As a result, findings related to gender-diverse individuals should be analyzed thoughtfully. This reflects broader challenges in health research, where gender minorities are often



underrepresented, limiting their visibility into their unique healthcare experiences (Bauer et al., 2009; Reisner et al., 2015). Second, the study's cross-sectional nature limits causal interpretation, as associations were assessed at a single point in time. Longitudinal designs are better suited for evaluating the temporal effects of healthcare barriers and policy changes over time (Caruana et al., 2015). Third, using self-reported data introduces the potential for recall bias and social desirability bias, which are common limitations in survey-based health research and may affect the reliability of responses (Althubaiti, 2016).

Additionally, although the study included a diverse sample, generalizability may be limited. Underrepresentation of certain groups, such as individuals in rural areas, specific racial and ethnic minorities, or non-English speakers, may constrain the extent to which the findings apply across broader populations. Previous studies have shown that geographic and racial disparities can significantly affect access and outcomes, particularly in underserved communities (Kirby & Kaneda, 2005; Probst et al., 2007). Another limitation is the broad categorization of insurance types. Grouping Medicare, Medicaid, and uninsured participants may have obscured important differences in coverage and out-of-pocket costs, which could influence perceived access in nuanced ways (Collins et al., 2020).

Finally, while the study focused on entry, cultural, and cost-related barriers, each supported by frameworks such as the Social Determinants of Health and the Access to Care model (Marmot et al., 2008; Penchansky & Thomas, 1981) did not explore additional influential access factors such as transportation, digital connectivity, or health literacy. These measures, increasingly relevant in a post-pandemic healthcare

environment, merit extensive inclusion in future research to create a more comprehensive picture of access disparities. Addressing these limitations in future studies will help strengthen the findings' generalizability and practical utility for informing equitable healthcare interventions.

## **Conclusion**

This study investigated how entry barriers, cultural barriers, and healthcare costs affect perceived access to healthcare services, specifically focusing on how these relationships differ across income levels, insurance types, and gender identities. Guided by the Social Determinants of Health (SDOH) framework (Braveman & Gottlieb, 2014) and Penchansky and Thomas's (1981) multidimensional Access to Care model, the study confirmed that all three types of barriers significantly reduce access to care. However, their effects are unevenly distributed across population groups.

Key findings revealed that entry barriers—such as provider shortages and complex scheduling systems—were especially detrimental for low-income individuals, regardless of insurance type. Cultural barriers, including language mismatches and lack of cultural competence, were more strongly associated with reduced access among middle- and high-income participants. This suggests that financial security does not insulate individuals from social and identity-based care obstacles (Flores, 2006; Saha et al., 2008). Healthcare costs were a significant barrier only for those with public insurance or no insurance, highlighting persistent inequities in affordability despite coverage (Collins et al., 2020; Woolhandler & Himmelstein, 2017). Furthermore, gender-based analyses showed that men were more affected by cost barriers, while both men and women experienced notable reductions in access due to entry and cultural challenges.

Non-binary participants did not show significant associations, which may reflect sample size limitations rather than a lack of impact (Bauer et al., 2009).

These findings offer important theoretical and practical contributions. The results reinforce the validity of the SDOH framework by illustrating how income and insurance coverage—key social determinants—moderate the effects of entry, structural and cultural access barriers (Arcaya et al., 2015; World Health Organization, 2008). They also align with Penchansky and Thomas’s (1981) access dimensions: availability and accommodation (entry barriers), affordability (healthcare costs), and acceptability (cultural barriers). Notably, the study expands the literature by showing that insurance status is not a uniform predictor of access but interacts with barrier types in nuanced ways (Call et al., 2015; Kcomt & Gorey, 2020). While prior research has explored the general effects of income and insurance on access, this study adds depth by examining how these factors shape experiences with specific barriers.

The implications for practice and policy are substantial. Healthcare organizations must look beyond coverage expansion and address the real-world obstacles that prevent people from using available services. Strategies should include reducing administrative complexity, improving cultural responsiveness through training and workforce diversity, and expanding affordability through targeted subsidies and cost-sharing reductions (Betancourt et al., 2003; Chin et al., 2012). Special attention should be given to developing navigation services—such as community health workers and patient advocates—to support low-income patients in maneuvering complex healthcare systems (Ingram et al., 2012). Policymakers must also recognize that insurance type often

determines whether a patient faces stigma, cost burdens, or provider refusal—challenges largely unmeasured in typical utilization statistics (Bailey et al., 2017; Doty et al., 2009).

Although the study benefited from diverse feedback during its pilot phase, including input from pharmacists, executive directors, and physicians, it has limitations. Using cross-sectional data limits causal inference, and smaller subgroup sizes (particularly for non-binary participants) may have reduced statistical power for some analyses. Future research should explore these relationships longitudinally, expand sampling to include greater gender diversity, and incorporate qualitative methods to capture the lived experiences behind the quantitative trends. Additionally, examining how other SDOH—such as housing, education, and geographic location—interact with access barriers would further enrich this inquiry (Bowleg, 2012; Marmot, 2005).

In sum, access to healthcare is not merely about whether individuals have insurance; it is about whether they can use that coverage meaningfully, timely, and respectfully. Addressing the full spectrum of access dimensions—while acknowledging how income, insurance, and identity intersect—is essential for creating a more equitable healthcare system.

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## APPENDICES

Construct	Item	Response Scale	Source
Entry Barriers	Q1: A personal doctor is the one you would see if you need a check-up, want advice about a health problem, or get sick or hurt. In the last 12 months, how often did you have a regular doctor or primary care physician?	1 = Never to 5 = Always	<a href="#">2015 Nationwide Adult Medicaid CAHPS Limited Dataset File - File Layout (cms.gov)</a>
Entry Barriers	Q2: In the last 12 months, how often did you get care from a doctor or other health provider besides your regular doctor/primary care physician?	1 = Never to 5 = Always	<a href="#">2015 Nationwide Adult Medicaid CAHPS Limited Dataset File - File Layout (cms.gov)</a>
Entry Barriers	Q3: Specialists are doctors like surgeons, heart doctors, allergy doctors, skin doctors, and other doctors who specialize in one area of health care. In the last 12 months, how often did you have a specialist doctor?	1 = Never to 5 = Always	<a href="#">2015 Nationwide Adult Medicaid CAHPS Limited Dataset File - File Layout (cms.gov)</a>
Entry Barriers	Q4: In the last 12 months, how often did you make any appointments to see your regular doctor or primary care physician?	1 = Never to 5 = Always	<a href="https://www.ahrq.gov/sites/default/files/wysiwyg/cahps/surveys-guidance/american-indian/american-indian-eng-851.pdf">https://www.ahrq.gov/sites/default/files/wysiwyg/cahps/surveys-guidance/american-indian/american-indian-eng-851.pdf</a>
Entry Barriers	Q5: In the last 12 months, how often did you make any appointments to see a specialist?	1 = Never to 5 = Always	<a href="https://www.ahrq.gov/sites/default/files/wysiwyg/cahps/surveys-guidance/american-indian/american-indian-eng-851.pdf">https://www.ahrq.gov/sites/default/files/wysiwyg/cahps/surveys-guidance/american-indian/american-indian-eng-851.pdf</a>
Entry Barriers	Q6: In the last 12 months, how often was it easy to get appointments with a doctor?	1 = Never to 5 = Always	<a href="https://www.ahrq.gov/sites/default/files/wysiwyg/cahps/surveys-guidance/american-indian/american-indian-eng-851.pdf">https://www.ahrq.gov/sites/default/files/wysiwyg/cahps/surveys-guidance/american-indian/american-indian-eng-851.pdf</a>



Construct	Item	Response Scale	Source
Entry Barriers	Q7: In the last 12 months, how often was it easy to get appointments with a specialist?	1 = Never to 5 = Always	<a href="#">CAHPS American Indian Survey</a>
Entry Barriers	Q8: In the last 12 months, how often did you get an appointment to see a doctor as soon as you needed?	1 = Never to 5 = Always	<a href="#">CAHPS Health Plan Survey 5.0 Measures   Agency for Healthcare Research and Quality</a>
Entry Barriers	Q9: In the last 12 months, how often did you get an appointment to see a specialist as soon as you needed?	1 = Never to 5 = Always	<a href="#">CAHPS Health Plan Survey 5.0 Measures   Agency for Healthcare Research and Quality</a>
Entry Barriers	Q10: In the last 12 months, how often was it easy to get the care, tests, or treatment you thought you needed?	1 = Never to 5 = Always	<a href="#">CAHPS Health Plan Survey 5.0 Measures   Agency for Healthcare Research and Quality</a>
Entry Barriers	Q11: In the last 12 months, how often did the doctor you saw seem to know the important information about your medical history?	1 = Never to 5 = Always	<a href="#">CAHPS Health Plan Survey 5.0 Measures   Agency for Healthcare Research and Quality</a>
Entry Barriers	Q12: In the last 12 months, how often did the specialist you saw seem to know the important information about your medical history?	1 = Never to 5 = Always	<a href="#">CAHPS Health Plan Survey 5.0 Measures   Agency for Healthcare Research and Quality</a>
Cultural Barriers	Q1: In the last 12 months, how often did your regular doctor/primary care physician/specialist or nurse explain things in a way that was easy to understand?	1 = Never to 5 = Always	<a href="https://www.ahrq.gov/cahps/surveys-guidance/hp/about/survey-measures.html">https://www.ahrq.gov/cahps/surveys-guidance/hp/about/survey-measures.html</a>
Cultural Barriers	Q2: In the last 12 months, how often did your regular doctor/primary care physician/specialist or nurse listen carefully to you?	1 = Never to 5 = Always	<a href="https://www.ahrq.gov/cahps/surveys-guidance/hp/about/survey-measures.html">https://www.ahrq.gov/cahps/surveys-guidance/hp/about/survey-measures.html</a>

Construct	Item	Response Scale	Source
Cultural Barriers	Q3: In the last 12 months, how often did your regular doctor/primary care physician/specialist or nurse show respect for what you had to say?	1 = Never to 5 = Always	<a href="https://www.ahrq.gov/cahps/surveys-guidance/hp/about/survey-measures.html">https://www.ahrq.gov/cahps/surveys-guidance/hp/about/survey-measures.html</a>
Cultural Barriers	Q4: In the last 12 months, how often did your regular doctor/primary care physician/specialist or nurse spend enough time with you?	1 = Never to 5 = Always	<a href="https://www.ahrq.gov/cahps/surveys-guidance/hp/about/survey-measures.html">https://www.ahrq.gov/cahps/surveys-guidance/hp/about/survey-measures.html</a>
Cultural Barriers	Q5: In the last 12 months, have you ever felt that a health professional you saw judged you unfairly or treated you with disrespect for any reason?	1 = Never to 5 = Always	<a href="https://www.ahrq.gov/cahps/surveys-guidance/hp/about/survey-measures.html">https://www.ahrq.gov/cahps/surveys-guidance/hp/about/survey-measures.html</a>
Healthcare Costs	Q1: In the last 12 months, how often did you purchase this plan directly from an insurance company, through an insurance marketplace or exchange, through your (or your [husband's/wife's/partner's]) union, through a group such as AARP, a church, or other organization?	1 = Never to 5 = Always	<a href="#">2015 Nationwide Adult Medicaid CAHPS Limited Dataset File - File Layout (cms.gov)</a>
Healthcare Costs	Q2: In the last 12 months, how often did this plan cover or provide help with paying for regular prescription drugs?	1 = Never to 5 = Always	<a href="#">2015 Nationwide Adult Medicaid CAHPS Limited Dataset File - File Layout (cms.gov)</a>
Healthcare Costs	Q3: In the last 12 months, how often did you(or someone in my family) received a written document, such as a bill, receipt, or statement, for a hospital stay/visit/services received.	1 = Never to 5 = Always	<a href="#">Patient Experience Measures from the CAHPS Health Plan Survey (ahrq.gov)</a>
Healthcare Costs	Q4: In the last 12 months, how often did you (or someone in my family)	1 = Never to 5 = Always	<a href="#">Patient Experience Measures from the CAHPS Health Plan Survey (ahrq.gov)</a>

Construct	Item	Response Scale	Source
	received a written document, such as a bill, receipt, or statement, for a doctor stay/visit/services received.		
Healthcare Costs	Q5: In the last 12 months, how often did you (or someone in my family) received a written document, such as a bill, receipt, or statement, for a prescription received.	1 = Never to 5 = Always	<a href="#">Patient Experience Measures from the CAHPS Health Plan Survey (ahrq.gov)</a>
Healthcare Costs	Q6: In the last 12 months, how often have you had to cut pills in half or skip doses to save on prescription costs?	1 = Never to 5 = Always	<a href="#">Patient Experience Measures from the CAHPS Health Plan Survey (ahrq.gov)</a>
Access to Care	Q1: In the last 12 months, how often were you unable to get the medical care, tests, or treatment that you or a doctor believed was necessary?	1 = Never to 5 = Always	<a href="#">Patient Experience Measures from the CAHPS Health Plan Survey (ahrq.gov)</a>
Access to Care	Q2: Wait time includes time spent in the waiting room and exam room. In the last 12 months, how often did your visit with the person you went to see start within 15 minutes of your appointment?	1 = Never to 5 = Always	<a href="https://www.ahrq.gov/sites/default/files/wysiwyg/cahps/surveys-guidance/american-indian/american-indian-eng-851.pdf">https://www.ahrq.gov/sites/default/files/wysiwyg/cahps/surveys-guidance/american-indian/american-indian-eng-851.pdf</a>

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