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Transnational Sexual and Reproductive Healthcare Utilization Among Asian Immigrant Women in the United States: A Mixed-Methods Study

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Transnational Sexual and Reproductive Healthcare Utilization Among Asian Immigrant Women in the United States: A Mixed-Methods Study

A dissertation submitted in partial satisfaction of the requirements for the degree Doctor of Philosophy in Community Health Sciences

by

Tenzin Khando

2026

ABSTRACT OF THE DISSERTATION

Transnational Sexual and Reproductive Healthcare Utilization

Among Asian Immigrant Women in the United States:

A Mixed-Methods Study

by

Tenzin Khando

Doctor of Philosophy in Community Health Sciences

University of California, Los Angeles, 2026

Professor Jessica D. Gipson, Chair

Background

Immigrant women in the United States experience persistent sexual and reproductive health (SRH) disparities due to barriers, including immigration-related policies, insurance exclusions, and limited access to language and cultural concordant healthcare. Women navigate these barriers through transnational healthcare, obtaining care in their countries of origin while residing in the United States. Existing research has focused on general healthcare among Latino populations. Little is known about transnational SRH care among Asian immigrant women, including healthcare decisions across borders, patterns of transnational SRH utilization, services obtained, and reasons for transnational care-seeking.

Aims

This dissertation examined transnational SRH care among Asian immigrant women in the United States by exploring: (1) decision-making processes surrounding transnational SRH care, (2) patterns and correlates of transnational SRH utilization, and (3) the types of services obtained, reasons for seeking care abroad, and contextual factors influencing transnational healthcare use.

Methods

This mixed-methods dissertation used data from the Building Communities Raising API Voices for health Equity (BRAVE) Study. Guided by the transnationalism framework and Andersen's Behavioral Model of Health Services use, three complementary studies were conducted: qualitative life-history interviews (Study 1; *n*=62), quantitative survey analyses (Study 2; *n*=1,972), and analyses among women reporting transnational SRH care (Study 3; *n*=731; reasons *n*=705).

Findings

Study 1: Women strategically navigated SRH care across the United States and their countries of origin, balancing affordability, accessibility, cultural familiarity, provider trust, and healthcare quality.

Study 2: More than one-third of participants (36.3%) reported transnational SRH care. Immigration status, years of U.S. residence, and state policy context were significantly associated with transnational healthcare utilization patterns.

Study 3: Preventive and gynecologic services were the most obtained transnational SRH services. Affordability, cultural competence, language concordance, and perceived quality of care were the leading motivations for seeking care abroad.

Significance:

This dissertation is among the first to examine transnational SRH care among Asian immigrant women in the United States. Integrating qualitative and quantitative evidence, it demonstrates that transnational healthcare is an adaptive strategy through which immigrant women navigate structural barriers across multiple healthcare systems. The findings inform equitable, culturally tailored, and accessible SRH policies and services for immigrant population.

The dissertation of Tenzin Khando is approved.

May Sudhinaraset

Hiram Beltrán Sánchez

Cecilia Menjívar

Jessica D. Gipson, Committee Chair

University of California, Los Angeles

2026

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

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BIOGRAPHICAL SKETCH

Tenzin Khando is a public health researcher and doctoral candidate in the Department of Community Health Sciences at the UCLA Fielding School of Public Health. Her research focuses on sexual and reproductive health among immigrant populations, with particular emphasis on transnational healthcare utilization, reproductive health equity, and the structural factors shaping access to care. She has experience in qualitative and quantitative research methods, mixed-methods research, and monitoring and evaluation.

Prior to pursuing her doctoral degree, Ms. Khando worked at the Tibet Fund in India, where she supported monitoring and evaluation of USAID-funded public health programs serving Tibetan refugee communities in India and Nepal. As a third-generation Tibetan refugee, her lived experiences have informed her longstanding commitment to advancing health equity for immigrant, refugee, and other historically marginalized populations.

During her doctoral training, she worked as a Graduate Student Researcher on several studies focused on immigrant and reproductive health, including the NIH-funded BRAVE Study (Building Communities, Raising All Immigrant Voices for Health Equity) and the MaPS study (Mapping Patient Stories). She earned her Master of Public Health from the George Washington University and Bachelor of Science in Nursing from Rajiv Gandhi University, India.

I. INTRODUCTION

Immigrants represent a substantial and growing share of the United States population. As of June 2025, approximately 51.9 million immigrants lived in the United States, accounting for 15.8% of the nation's population- the highest proportion of foreign-born residents in U.S. history[1]. Earlier national estimates indicate that more than one-quarter of immigrants are women of reproductive age, a population whose sexual and reproductive health (SRH) needs remain critically underserved[2–5]. Despite this demographic growth, immigrants continue to face substantial structural barriers to accessing healthcare in the United States. These disparities are reflected in insurance coverage: in 2025, 46% of likely undocumented and 21% of lawfully present immigrant adults were uninsured, compared with 7% of naturalized and 6% of U.S.-born citizens[6]. Structural factors—including insurance exclusions[7,8], healthcare affordability[9,10], language access[9,11–13], U.S. healthcare system complexity[9,12,14], discrimination[15,16], reproductive health policies[17–20], and immigration policies and legal status[11,21–25]—can limit timely access to needed healthcare services.

These structural barriers have important implications for sexual and reproductive health among immigrant women. Sexual and Reproductive health (SRH) includes a broad range of services across the reproductive life course, including contraception, fertility and infertility care, maternal and perinatal health, prevention and treatment of sexually transmitted infections, protection from sexual and gender-based violence, and sex education[26]. Despite the importance of these services, immigrant women experience persistent disparities in SRH outcomes and service utilization, including lower use of effective contraception[4,5,27], reduced uptake of preventive reproductive healthcare such as cervical and breast cancer screening[28–32], delayed prenatal care[33–36], lower postpartum care use[37], increased risk of adverse birth outcomes[18,38], and

greater overall unmet reproductive healthcare needs compared with U.S.-born women[4,24]. These disparities are rooted in and aggravated by intersecting structural barriers including immigration status[39,40], insurance exclusions[4,41], language barriers[42], cultural and religious norms [43,44], as well as restrictive immigration policies and public charge rulings[45–48] and reproductive health policies[19] that that systematically constrain immigrant women's ability to access and utilize SRH care[47,49].

Asian immigrants represent one of the fastest-growing immigrant populations in the United States. As of 2023, approximately 14.6 million Asian immigrants lived in the United States, accounting for 31% of the nation's 47.8 million foreign-born residents and making Asia the second-largest region of origin for U.S. immigrants after Latin America[50]. Chinese Americans comprise the largest Asian-origin group (5.5 million), followed by Indian (5.2 million), Filipino (4.6 million), Vietnamese (2.3 million), Korean (2.0 million), and Japanese Americans (1.6 million), together accounting for approximately 86% of the U.S. Asian population[51]. Despite this rapid population growth, Asian immigrants remain highly diverse with respect to country of origin, migration pathways, immigration status, language, and socioeconomic position[50,52,53]. These diverse contexts shape sexual and reproductive healthcare access and utilization, highlighting the importance of studying the heterogeneity rather than treating Asian immigrant women as a homogeneous population, which research often does. In addition to this context, Asian immigrant women's SRH experiences are further shaped by sociocultural influences, including cultural and religious beliefs surrounding sexuality, reproductive decision-making, and family roles[43,54,55].

Consistent with these intersecting structural and sociocultural influences, studies have documented lower utilization of sexual and reproductive healthcare services among Asian

women such as lower use of highly effective contraception, cervical cancer screening, and other preventive reproductive healthcare services compared with other racial and ethnic groups[4,56–58]. Studies have also demonstrated significant heterogeneity in sexual and reproductive healthcare utilization across Asian ethnic groups, highlighting the importance of disaggregating Asian populations rather than treating them as a homogeneous group[57,59–63]. Although relatively few studies have examined SRH differences by nativity among Asian women, those that have generally found that foreign-born Asian women experience lower utilization of SRH services, including cervical cancer screening, abortion, and effective contraceptive use, than U.S.-born Asian women[4,28,29,62,64].

Beyond nativity, prior evidence suggests that sexual and reproductive healthcare utilization also varies according to immigration-related characteristics and the broader state policy contexts[5,18,24,35,65–68]. Prior studies have also found that longer duration of U.S. residence is associated with greater utilization of preventive reproductive healthcare services, including cervical cancer screening, likely reflecting increased familiarity with the U.S. healthcare system, expanded insurance coverage, and improved healthcare access over time[28,29]. Together, these findings suggest that SRH utilization is shaped by multiple intersecting dimensions of heterogeneity rather than nativity alone.

One important yet understudied strategy through which immigrants respond to barriers in the U.S. healthcare system is the use of transnational healthcare. Transnational healthcare refers to the practices through which individuals residing outside their country of origin obtain healthcare services, health information, medications, or other healthcare resources from their home country while maintaining cross-border social and institutional ties[69]. Rather than representing a rejection of U.S. healthcare, transnational healthcare often reflects adaptive

healthcare-seeking strategies shaped by structural barriers, affordability, cultural preferences, trust in providers, family networks, and ongoing ties to countries of origin[69–72].

A systematic literature review of 26 studies on transnational healthcare identified several important gaps in the literature. Although transnational healthcare has been examined across diverse migrant populations in multiple countries, only one study specifically investigated transnational sexual and reproductive healthcare among Asian immigrant women in the United States[71]. Most studies included focused on general healthcare utilization rather than sexual and reproductive healthcare and disproportionately examined Latino immigrant populations[71,73–75]. Existing studies have primarily documented the barriers and motivations associated with seeking healthcare across borders but provide limited understanding of how immigrants compare healthcare systems across countries and make decisions regarding where to obtain specific healthcare services[71]. As a result, transnational healthcare decision-making remains poorly understood, particularly among immigrant women navigating multiple healthcare systems across the reproductive life course.

Understanding transnational healthcare is particularly important in the context of sexual and reproductive health. Unlike many other forms of healthcare, SRH encompasses highly personal and culturally embedded services—including contraception, pregnancy care, abortion, infertility care, and gynecologic services—that are shaped not only by affordability and healthcare access but also by privacy, stigma, cultural norms, trust, and reproductive health policies[58,71,76,77]. Existing qualitative research suggests that these considerations may be especially important for immigrant women. For example, a qualitative study among Bengali immigrant women in New York demonstrated that pregnancy-related healthcare decisions were strongly influenced by transnational family networks that provided emotional support, culturally

informed advice, and guidance throughout pregnancy[78]. Similarly, studies of other immigrant populations have shown that women strategically combine healthcare across countries according to the type of service needed, rather than relying exclusively on a single healthcare system[70]. Across these studies, immigrants commonly report seeking healthcare abroad because of lower costs, lack of insurance coverage, shorter wait times, trusted provider relationships, language concordance, cultural familiarity, and family support[70,71,79]. These findings suggest that transnational sexual and reproductive healthcare decision-making is shaped by unique clinical, cultural, and structural factors that remain poorly understood, especially among Asian immigrant women.

This study is guided by the transnationalism framework, which conceptualizes migration as an ongoing process through which immigrants remain simultaneously embedded within the social, cultural, and institutional contexts of both their countries of origin and countries of residence[80,81]. From this perspective, healthcare decision-making is understood as occurring across interconnected transnational social fields rather than within a single national healthcare system. Structural barriers within the United States—including healthcare costs, insurance exclusions, language barriers, discrimination, and restrictive immigration and reproductive policy environments—may encourage immigrants to seek alternatives outside the United States, while healthcare systems in countries of origin may attract women through affordability, trusted providers, cultural familiarity, language concordance, and continuity of care. Together, these push and pull factors shape how immigrant women evaluate healthcare options and navigate healthcare across national borders.

Summary

This dissertation uses a sequential mixed methods design to examine transnational sexual and reproductive healthcare (SRH) utilization among Asian immigrant women in the United States. Drawing on qualitative and quantitative data from the Building Community, Raising All Immigrant Voices for Health Equity (BRAVE) Study, this dissertation examines how Asian immigrant women navigate SRH care across national borders and how transnational SRH utilization varies by ethnicity, immigration status, years of U.S. residence, and state policy context.

Study 1: The first study uses qualitative life history interviews to explore how Asian immigrant women conceptualize and experience transnational SRH care across the reproductive life course and how these experiences vary by ethnicity, immigration status, years of U.S. residence, and state of residence.

Study 2: The second study uses quantitative survey data to examine the sociodemographic and immigration-related correlates of transnational SRH care utilization by comparing four patterns of care utilization: non-use, U.S.-only care, mixed U.S. and transnational care, and transnational-only care.

Study 3: The third study focuses on women who reported transnational SRH utilization to examine how the types of transnational SRH services used and the reasons for seeking care outside the United States vary by ethnicity, immigration status, years of U.S. residence, and state of residence.

By integrating qualitative and quantitative evidence, this dissertation advances understanding of how structural barriers, migration experiences, and transnational ties shape cross-border SRH decision-making. Conducted during a period of rapidly evolving immigration and reproductive health policies in the United States, this dissertation provides timely evidence

to inform more equitable, culturally responsive, and accessible sexual and reproductive healthcare policies and programs.

II. BACKGROUND AND LITERATURE REVIEW

2.1.Conceptualizing Transnational Sexual and Reproductive Healthcare

Defining Transnationalism

Transnationalism provides a foundational theoretical lens for understanding immigrant health behavior, emphasizing that migrants maintain multiple and sustained social, economic, cultural, and institutional ties across national borders[80,82,83]. Rather than viewing migration as a one-way process of assimilation into the host society, the transnationalism framework conceptualizes migrants as simultaneously embedded in both their countries of origin and countries of residence through ongoing exchanges of resources, relationships, identities, and practices[69,71,82]. This perspective recognizes that healthcare-seeking is shaped by these cross-border connections, allowing immigrants to draw upon healthcare systems, social networks, and resources in multiple countries when making healthcare decisions.

Defining Transnational Health care

Transnational healthcare refers to the ways in which individuals access, utilize, and engage with health-related resources across national borders. Embedded in broader theories of transnationalism, which emphasize sustained ties and exchanges between migrants and their countries of origin[83], transnational healthcare extends beyond physical mobility to include a range of practices that connect individuals to multiple healthcare systems simultaneously[80]. Rather than viewing healthcare use as bounded within a single national context, this perspective recognizes that migrants often navigate overlapping systems of care shaped by social ties, institutional structures, and prior experiences across borders[84].

Existing scholarship conceptualizes transnational healthcare as a multidimensional phenomenon that includes both formal and informal engagement with healthcare systems across

borders. For example, in a systematic review of transnational health practices, authors define it as encompassing a range of cross-border activities, including seeking care abroad, consulting providers in countries of origin, obtaining medications, and relying on transnational networks for health-related information and support[71]. Similarly, transnational healthcare was described as a strategy through which migrants access culturally familiar, affordable, or trusted care outside the host-country system[70]. Together, this body of work highlights that transnational healthcare is not a singular behavior, but rather a set of practices shaped by both structural constraints and access to transnational resources.

To address the lack of conceptual clarity in prior research, this study conceptualizes transnational healthcare as comprising three analytically distinct but interconnected domains. First, cross-border clinical engagement includes direct interaction with healthcare providers located outside the United States, such as traveling abroad for treatment or consulting providers remotely through telecommunication technologies[85–88]. Second, material exchanges refer to the acquisition and use of medications, treatments, or health products obtained from countries of origin or through transnational networks[89,90]. Third, informational and advisory practices encompass the use of transnational social ties—such as family members, friends, and community networks—to obtain health-related advice, recommendations, or guidance[90–93].

While these domains are analytically distinct, they often operate together in practice, reflecting the fluid nature of healthcare engagement among migrant populations. Across these domains, transnational healthcare operates through key mechanisms, including the mobilization of transnational social ties, the circulation of material resources, and the use of digital and communication technologies to facilitate access to care across borders. These mechanisms enable

individuals to overcome structural barriers in the host-country context while maintaining connections to healthcare systems in their countries of origin.

Importantly, transnational healthcare is not limited to episodic or one-time interactions but is often sustained through ongoing social relationships that span borders. Migrants may maintain long-term connections with trusted providers, rely on family members to facilitate access to medications, or regularly consult transnational networks for health decision-making. These practices are enabled by advancements in communication technologies and the persistence of transnational social fields, allowing individuals to access care without the need for physical travel[84,86,94]. As such, transnational healthcare should be understood as a socially mediated process, in which access to care is facilitated through relationships, trust, and the circulation of resources across borders.

At the same time, it is important to distinguish transnational healthcare from related, but conceptually distinct, phenomena. Communication tools such as phone calls or messaging platforms do not constitute healthcare in themselves; rather, they function as mechanisms that facilitate access to care by enabling coordination, information exchange, and consultation across borders. Similarly, health beliefs and cultural practices shape healthcare decision-making but are not equivalent to healthcare use unless they are performed through engagement with specific health-related resources or services. Clarifying these distinctions is critical for analytically capturing how transnational healthcare operates and for avoiding overly broad definitions.

While transnational healthcare is often used interchangeably with medical tourism, the two concepts are analytically distinct. Connell argues that the dominant framing of cross-border healthcare as medical tourism is both narrow and misleading, as it overemphasizes consumer

choice, leisure, and elective procedures while overlooking the broader realities of healthcare mobility[95]. Instead, he proposes understanding these practices as transnational healthcare**,** a more inclusive concept that captures the diverse, every day, and often necessity-driven ways individuals access care across borders[95]. Much cross-border healthcare, he shows, is not undertaken for convenience or preference, but emerges from structural constraints such as high costs, long wait times, lack of insurance, and the unavailability or restriction of services in the country of residence[95]. These practices are frequently regional, informal, and embedded in social networks, with migrants and diaspora populations relying on family ties, community knowledge, and familiarity with healthcare systems in their countries of origin. By shifting the focus from tourism to transnational healthcare, Connell highlights how cross-border care reflects broader processes of inequality, globalization, and policy variation, including the need to circumvent legal and institutional barriers to access care.

Taken together, transnational healthcare can be defined as a set of social practices through which individuals engage with healthcare resources across national borders, including clinical consultation, material exchanges, and informational support. This definition emphasizes that transnational healthcare is not a singular event, but an ongoing, multi-dimensional process shaped by social relationships, structural constraints, and access to transnational resources. By conceptualizing transnational healthcare in this way, this study provides a framework for examining how individuals strategically navigate healthcare systems across borders, particularly within contexts of restricted healthcare access.

Defining Transnational Sexual and Reproductive Healthcare

Sexual and Reproductive health (SRH) includes a broad range of services across the reproductive life course, including contraception, fertility and infertility care, maternal and

perinatal health, prevention and treatment of sexually transmitted infections, protection from sexual and gender-based violence, and sex education[26]. Transnational sexual and reproductive health (SRH) refers to the ways individuals access, utilize, and engage with sexual and reproductive health–related services, information, and resources across national borders. It includes practices such as seeking reproductive care (e.g., contraception, abortion, prenatal care) outside the country of residence, consulting providers in countries of origin (in person or remotely), obtaining medications or reproductive health products through transnational networks, and relying on cross-border social ties for SRH-related advice and decision-making. Grounded in broader theories of transnationalism, which emphasize sustained cross-border ties and exchanges among migrants[80,96], this conceptualization extends existing work on transnational healthcare, which highlights how migrants engage with multiple healthcare systems simultaneously through clinical, material, and informational practices[70,71,95].

2.2.Theoretical Perspectives on Transnational Healthcare

Transnational Healthcare as a Social Practice

Transnational healthcare is best understood not as an episodic behavior, but as an ongoing social practice embedded within migrants' everyday lives and sustained connections across national borders. Drawing on theories of transnationalism, migrants are situated within transnational social fields that enable them to maintain simultaneous ties to both their country of residence and country of origin, shaping how they access and engage with healthcare across multiple contexts[80,84,97]. Within this framework, healthcare is not confined to a single national system but is instead multi-sited, occurring across overlapping institutional and social spaces.

A central feature of transnational healthcare is its hybridization of healthcare[91]. Rather than fully substituting one healthcare system for another, migrants often engage with multiple

systems concurrently, combining care obtained in the origin country to complement or supplement care in the destination country[78,90,98]. For example, individuals may seek diagnosis or emergency care in the United States while consulting providers in their country of origin for second opinions, follow-up treatment, or culturally familiar care. Empirical research demonstrates that such patterns reflect a layering of healthcare systems, in which individuals strategically combine resources across borders rather than relying exclusively on a single system[71]. This co-occurrence challenges existing assumptions that healthcare utilization is bounded within national systems and instead highlights the fluidity or flexibility with which migrants navigate multiple sources of care.

Additionally, transnational healthcare is not a temporary strategy but often reflects sustained and repeated engagement over time. Migrants may maintain long-term relationships with healthcare providers in their countries of origin, routinely obtain medications from abroad, or repeatedly consult transnational networks for health-related advice[71,84,99]. These practices are embedded within broader life trajectories, evolving across the migration and reproductive life course as individuals' needs, resources, and constraints change.

Central to this social practice is the role of transnational social ties, including family members, friends, and community networks. These relationships facilitate access to care by providing information, coordinating services, and enabling the circulation of resources across borders. As prior research shows, decisions about where and how to seek care are often shaped less by formal healthcare markets and more by informal, trust-based networks, which play a critical role in guiding healthcare navigation[78,93,95,98]. In this sense, transnational healthcare is fundamentally relational, grounded in social connections that extend beyond geographic boundaries.

Advancements in communication technologies have further transformed transnational healthcare practices by enabling remote and digital forms of engagement. Migrants increasingly rely on phone calls, messaging platforms, and telecommunication technologies to consult providers, seek advice, and coordinate care across borders[69,86,100–102]. These developments allow individuals to maintain active connections to healthcare systems in their countries of origin without the need for physical travel, reinforcing the notion that transnational healthcare extends beyond mobility to include non-physical forms of care engagement[71,103].

Taken together, transnational healthcare can be understood as a multi-sited, simultaneous, and socially embedded practice through which migrants engage with multiple healthcare systems over time. This perspective shifts the focus away from one-time cross-border travel and toward a more nuanced understanding of healthcare as an ongoing process shaped by social relationships, mobility, and the ability to navigate across institutional contexts.

Mechanism Of Transnational Healthcare:

While transnational healthcare can be described as a multi-sited social practice, it is equally important to understand the mechanisms through which individuals are able to engage in healthcare across borders. These mechanisms operate as the processes that enable migrants to mobilize resources, navigate constraints, and access care beyond the limits of a single healthcare system.

A primary mechanism is the mobilization of transnational social ties. Migrants actively draw on relationships with family members, friends, and community networks to facilitate healthcare access, including identifying providers, coordinating appointments, and obtaining health-related information. These ties are not merely passive connections but are strategically activated to overcome barriers and expand access to care. In many cases, social

networks function as intermediaries between individuals and healthcare systems, particularly in contexts where formal access is limited or constrained.

A second key mechanism involves the circulation of material resources across borders, including medications, treatments, and financial support. Migrants may obtain pharmaceuticals from their countries of origin through family members or informal distribution networks, particularly when such medications are more affordable, more accessible, or unavailable in the United States. These material exchanges allow individuals to access care that would otherwise be difficult or impossible to obtain within their country of residence, highlighting the importance of cross-border flows in sustaining healthcare practices.

Third, information and knowledge flows serve as a critical mechanism through which transnational healthcare operates. Migrants frequently rely on transnational networks to seek advice, interpret diagnoses, and obtain second opinions from providers in their countries of origin. These information exchanges enable individuals to make informed decisions about care and to compare healthcare options across systems. As prior research demonstrates, such knowledge flows are often grounded in trust and familiarity, reinforcing the role of social relationships in shaping healthcare behavior[71].

Closely related to these processes is the role of digital and communication technologies as enabling mechanisms. Technologies such as phone calls, messaging platforms, and telemedicine facilitate real-time interaction across borders, allowing individuals to access care without physical travel. These tools reduce the barriers associated with geographic distance and enable the continuation of transnational healthcare practices even among those with restricted mobility.

Importantly, these mechanisms function within a broader context of structural constraints, including legal, financial, and institutional barriers to care. Migrants often engage in transnational healthcare as a way of navigating challenges such as lack of insurance, high costs, language barriers, or restricted access to specific services. In some cases, individuals may seek care abroad to circumvent legal restrictions in the United States, particularly in the context of sexual and reproductive health. Much cross-border healthcare is driven by necessity, frustration, and the inability to access adequate care within national systems[95].

Finally, transnational healthcare is characterized by selective and strategic engagement across systems. Rather than fully abandoning one system in favor of another, individuals often choose specific aspects of care from different contexts based on perceived advantages. For example, migrants may rely on U.S.-based providers for emergency care while seeking routine or specialized services from providers in their countries of origin. This selective engagement reflects a process of strategic navigation, in which individuals actively manage their healthcare across multiple systems to optimize access and outcomes.

2.3. U.S. Healthcare Contexts as Push Factors for Transnational Care

Immigrant women's engagement with healthcare in the United States is shaped by a range of structural, institutional, and social constraints that can limit access to timely, affordable, and culturally appropriate care. These constraints function as push factors, creating conditions under which individuals may seek alternative forms of care, including transnational healthcare practices.

A. Legal Status, Insurance Eligibility, and Restrictive Immigration Policy:

One of the most significant structural determinants of healthcare access is legal status, which directly influences eligibility for insurance coverage and public health programs.

Undocumented immigrants are largely excluded from federally funded programs such as Medicaid, and even lawfully present immigrants may face eligibility restrictions, including waiting periods under federal policy[21,104]. These exclusions contribute to higher rates of uninsurance and create substantial financial barriers to accessing care. In addition, concerns about immigration enforcement and policies such as the Public Charge Rule can deter individuals from seeking healthcare services, even when they may be eligible[9,68].

Eligibility for programs like Medicaid or ACA marketplace subsidies varies by immigration status[21,104]. Undocumented immigrants are often explicitly excluded, and even lawful immigrants may face "five-year waiting periods" under the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA)[104]. These restrictions, along with fear of deportation or anti-immigrant enforcement, deter healthcare seeking in the United States[9,68]. Moreover, structural policies, including public charge rules, Medicaid exclusions, and abortion restrictions can intersect with cultural and linguistic barriers to make U.S. healthcare feel inaccessible, pushing some women to consider transnational alternatives[64,90,105–107].

Although legal status can limit the ability to travel for healthcare, those who are unable to cross borders often rely on transnational networks to access care indirectly, highlighting the stratified nature of transnational healthcare practices. A qualitative study conducted among Mexican migrants revealed how transnational healthcare extended beyond travel[89]. Migrants accessed medications and remedies through ethnic shops in the United States and consulted traditional healers in their home countries via phone or by sharing information remotely. These providers were often preferred due to trust, cultural familiarity, and flexible payment options, highlighting how transnational care can be sustained through informal and network-based practices[89]. Similarly, another qualitative study conducted among Guatemalan women revealed

that migrants often engaged in transnational healthcare by mobilizing social networks such as family, friends, and ethnic stores to access both allopathic and traditional medicines[90]. Digital platforms and informal networks offer culturally and linguistically relevant information, which help migrants navigate both traditional and biomedical care systems, while also facilitating the exchange of knowledge and identification of culturally competent providers [86,100,101,108].

While much of the existing research on transnational healthcare has focused on Latino immigrant populations, these dynamics are also highly relevant for Asian immigrant women, who face similar structural constraints related to legal status, insurance eligibility, and restrictive policy environments. Asian immigrants constitute approximately 11% of 11.2 million undocumented individuals in the United States [109,110]. Among the 37 studies included in the concept analysis conducted to study transnational healthcare practices among migrants, only two focused on Asian immigrant populations, highlighting their limited representation in the literature[69]. One such study among Korean immigrants found that participants perceived the U.S. health insurance system as complex and unpredictable compared to Korea's single-payer system, which discouraged healthcare utilization in the United States[111]. Another study among Korean immigrants in Hawaii also mentioned differences in health insurance systems playing a central role in shaping healthcare use among migrants[86].

B. State-Level Sexual and Reproductive Health Policy Environment:

Beyond legal status, state-level policy environments further shape access to care. Variability across states in Medicaid expansion, reproductive health policies, and immigrant-inclusive programs results in uneven access to healthcare services depending on geographic location[105]. State-level variation creates differing "policy climates." States such as California, Illinois, and New York expand coverage to noncitizen or undocumented

residents, whereas others remain restrictive[112]. Even in inclusive states, policy shifts—such as pausing enrollment or adding premiums—threaten access[105].

Local policy climates influence whether Asian immigrant women engage with local systems or turn to transnational care as an adaptive strategy[71,90]. Restrictive reproductive policies, particularly following the *Dobbs v. Jackson Women's Health Organization* decision, have further intensified these disparities by limiting access to abortion and other sexual and reproductive health services in many states[106]. This uneven policy landscape not only constrains access to care but may also push individuals to seek services across state or national borders, reinforcing transnational healthcare as an adaptive strategy. As a result, the extent and form of transnational healthcare engagement are likely to vary depending on state of residence, with immigrants in more restrictive policy environments more likely to rely on cross-border or transnational care strategies compared to those in more inclusive states.

C. High Cost of healthcare in the United States:

Economic constraints also play a central role in shaping transnational healthcare use. Many immigrant women are employed in low-wage or unstable jobs that lack employer-sponsored insurance and offer limited flexibility for seeking care. High out-of-pocket costs, transportation barriers, and opportunity costs associated with taking time off work further restrict access to healthcare services[9]. Migrants often seek care across borders due to lower costs in their countries of origin, particularly when facing gaps in insurance coverage in the United States. For example, qualitative research shows that families may turn to transnational care during periods of Medicaid lapse, when access to affordable services becomes temporarily unavailable[113]. Economic barriers including out-of-pocket costs, lack of insurance, transportation, and opportunity costs disproportionately affect immigrants in low-wage or unstable employment[9].

D. Perceived Healthcare system complexity, quality, and trust:

The complexity of the U.S. health system further incentivizes reliance on home-country providers or networks, especially for culturally sensitive SRH services [71,90]. Migrants often face structural barriers in host-country healthcare systems—such as long wait times, high costs, insurance limitations, and unfamiliar procedures—which can discourage local care use and encourage transnational healthcare [69,114–116]. In addition, weak social integration and cultural mismatches between migrants' health beliefs and host-country practices can reduce trust in local systems, reinforcing transnational care as a practical and culturally aligned strategy[71,117–119].

E. Discrimination, Provider Bias, and Lack of Culturally Competent Care:

Language barriers, lack of culturally competent care, and experiences of discrimination or provider bias can undermine trust and reduce healthcare utilization among immigrant women[120]. These challenges are especially salient in the context of SRH, where communication, cultural sensitivity, and trust are critical for effective care. Negative experiences within healthcare settings may lead individuals to perceive U.S.-based care as inaccessible, inadequate, or culturally misaligned. Even when legal eligibility exists, structural racism, linguistic barriers, provider cultural incompetency, and discriminatory experiences act as powerful deterrents[120]. Immigrant women report negative interactions, lack of interpreters, and judgment around language or gender norms, pushing them toward culturally familiar providers abroad or within diaspora networks[90,121]. Transnational healthcare offers access to care that is culturally safe and trusted [71,122]. Home country healthcare is often considered more empathetic and respectful by migrants[89,116,123]. Immigrants often relied on ethnic enclaves and expressed preference for culturally concordant providers[86].

F. Availability and Accessibility Barriers

Limited availability and accessibility of health services remain significant barriers for many immigrant populations. Even when services exist, they are often unevenly distributed across geographic areas, with rural regions and underserved urban communities facing shortages of providers, particularly for specialized SRH care[124–126]. Structural barriers such as limited clinic hours, long wait times, transportation challenges, and high out-of-pocket costs further constrain access. For immigrant women, these challenges are compounded by factors such as lack of insurance eligibility, language barriers, and limited culturally competent care[9,127]. As a result, individuals may delay or forgo necessary services, or seek alternatives outside the local healthcare system, including transnational care. These accessibility constraints highlight how structural inequalities in healthcare systems shape care-seeking behavior and reinforce disparities in SRH outcomes.

2.4.Home-Country Healthcare Contexts as Pull Factors for Transnational Care:

Home-country healthcare systems play a critical role in shaping migrants' health-seeking behaviors by providing alternative pathways to care that may be perceived as more accessible, affordable, or culturally aligned. These systems function as pull factors, attracting individuals toward transnational healthcare practices not only because of constraints in the United States, but also due to the perceived advantages and familiarity of care in their countries of origin. Understanding these dynamics requires attention to both institutional characteristics of home-country healthcare systems and the sociocultural contexts in which care is embedded.

A. Accessibility of Care

A key dimension of home-country healthcare systems is their accessibility and organization of care. In many Asian countries, healthcare systems allow more direct access to specialists without requiring referrals, and services may be delivered more quickly compared to

the often complex and fragmented structure of the U.S. healthcare system[128–131]. Shorter wait times, fewer bureaucratic barriers, and more streamlined pathways to care can make home-country systems appear more efficient and responsive to patients' needs. These features may be particularly important for time-sensitive or urgent health concerns, including certain sexual and reproductive health (SRH) services[114,132].

B. Cost and Affordability

Cost and affordability also serve as significant pull factors. For many migrants, out-of-pocket healthcare expenses in their countries of origin may be lower or more predictable than in the United States, even in systems with substantial private sector involvement. The ability to access consultations, diagnostic services, or medications at lower cost can make transnational healthcare a financially viable option, particularly for individuals who are uninsured or underinsured in the U.S. context. In some cases, migrants may strategically combine resources across settings, seeking more expensive or specialized services in the United States while relying on home-country providers for routine or follow-up care[114,115].

C. Cultural Familiarity and Provider Relationships

Equally important are the cultural and relational dimensions of care in home-country contexts. Shared language, cultural norms, and communication styles between patients and providers can facilitate trust, improve understanding, and enhance perceived quality of care. Migrants may prefer providers in their countries of origin because of familiarity with medical practices, expectations of care, and culturally specific approaches to health and illness[70]. These preferences are often reinforced by longstanding relationships with providers or healthcare institutions established prior to migration, which can continue to shape healthcare decisions over time[117].

D. Privacy, Stigma, and SRH-Specific Considerations

For sexual and reproductive health in particular, privacy, stigma, and cultural expectations are central considerations. In some cases, home-country contexts may offer more discreet or socially acceptable pathways to care, particularly for sensitive services such as contraception, abortion, or fertility treatment. In addition, some countries may provide fewer legal or policy restrictions on specific SRH services than those currently in place in parts of the United States, making them a more accessible option for some immigrant women. Following the *Dobbs v. Jackson Women's Health Organization* decision, increasing variation in state-level abortion policies has further altered access to reproductive healthcare, potentially influencing where immigrant women seek care. Alternatively, migrants may seek care through trusted networks to avoid stigma or judgment within U.S. healthcare settings. The ability to navigate care in a familiar cultural environment, or through transnational social ties that provide confidentiality and support, can make home-country options especially attractive for SRH-related needs.

E. Transnational Social Ties as Mechanisms of Access

Access to home-country healthcare is often mediated through transnational social ties, which facilitate coordination, information exchange, and resource mobilization across borders. Family members, friends, and broader community networks play a critical role in identifying providers, relaying medical advice, assisting with treatment decisions, and even connecting migrants to healthcare practitioners or traditional healers in their countries of origin. These networks may enable migrants to engage in healthcare transnationally—through phone, internet, or intermediaries—without necessarily traveling[90,133]. Empirical evidence shows that transnational network members frequently guide healthcare decision-making and

facilitate connections to providers, sometimes even coordinating consultations or treatments remotely. In this way, transnational social ties effectively extend the reach of home-country healthcare systems beyond national borders. Consequently, the pull of home-country healthcare is not solely driven by institutional characteristics such as cost or accessibility, but also by the strength, availability, and functionality of migrants' transnational connections.

F. Comparative Evaluation of Healthcare Systems

At the same time, home-country healthcare contexts are not uniformly advantageous and may vary significantly across countries and regions in terms of quality, regulation, and access. Migrants' engagement with transnational healthcare is therefore shaped by comparative evaluations of multiple systems, balancing perceived benefits and limitations in both the United States and their countries of origin. In this sense, transnational healthcare reflects an active and strategic process of navigating overlapping healthcare environments, rather than a simple substitution of one system for another.

2.5.Health Care System in Key Asian Sending Countries:

Given that this study focuses on Asian immigrant women, it is important to contextualize transnational healthcare practices within the healthcare systems of major sending countries from which the study population is drawn—particularly South Korea, China, India, and the Philippines. These countries represent diverse healthcare system structures yet share characteristics that may function as pull factors for transnational care, including accessibility, affordability, and cultural familiarity.

South Korea

Healthcare in South Korea is organized as a single-payer system administered through the National Health Insurance Service (NHIS)**,** which provides near-universal coverage to the

population[131,134]. Enrollment is mandatory for most residents, including foreign nationals who plan to stay in the country for more than six months. This system ensures broad access to medical services, relatively low out-of-pocket costs, and streamlined care delivery, all of which contribute to its high accessibility and efficiency. These features, particularly universal coverage and ease of access, can make South Korea's healthcare system an attractive option for migrants considering transnational care[134]. For Korean migrants, the combination of high-quality care, affordability, and familiarity with the system may encourage continued engagement with providers in South Korea, particularly for specialized or time-sensitive services [131,134].

China

China's healthcare system is characterized by a hybrid model combining public insurance schemes with a significant private sector[135,136]. While near-universal coverage has been achieved through major reforms, access and quality vary considerably by region, with urban hospitals offering more advanced and specialized services. Tertiary hospitals in major cities are often perceived as centers of high clinical expertise, drawing both domestic and transnational patients. Chinese migrants may leverage family networks to access these facilities, particularly when seeking trusted providers, second opinions, or culturally familiar care practices[129,137].

India

India has a highly pluralistic healthcare system, where a large private sector operates alongside a public system that is often under-resourced[135]. Although recent initiatives such as Ayushman Bharat yojana have expanded insurance coverage, out-of-pocket expenditures remain substantial[138]. Private healthcare providers offer relatively rapid access to care, flexible service delivery, and a wide range of treatment options, including both biomedical and traditional systems (e.g., Ayurveda). For Indian migrants, lower costs, provider flexibility,

and alignment with cultural health practices may make India an appealing option for transnational healthcare, especially for routine, elective, or culturally sensitive services [139,140].

Philippines

The Philippines maintains a mixed healthcare system supported by PhilHealth, a national insurance program aimed at achieving universal health coverage. Despite improvements, disparities in access and quality persist, particularly across geographic regions. However, private healthcare facilities especially in urban areas—are often regarded as offering high-quality services at relatively affordable costs. The widespread use of English in medical settings, along with strong family-based support systems, enhances accessibility for Filipino migrants. Transnational social ties frequently play a central role in coordinating care, reinforcing the feasibility of cross-border healthcare engagement[141,142].

Taken together, home-country healthcare systems function as important pull factors that shape transnational healthcare practices. By offering accessible, affordable, and culturally familiar alternatives—often facilitated through enduring social ties—these systems play a central role in how immigrant women evaluate and navigate healthcare options across borders.

2.6.Empirical Evidence on Transnational Healthcare

A growing body of empirical research demonstrates that transnational healthcare is a common and patterned strategy among migrant populations, rather than a marginal or exceptional practice. Studies across diverse immigrant groups show that individuals engage in a range of cross-border healthcare activities, including traveling to countries of origin for treatment, consulting providers remotely, obtaining medications, and relying on transnational networks for health-related advice and support [71,143]. These practices reflect migrants' capacity to

navigate multiple healthcare systems simultaneously, drawing on resources embedded in transnational social fields.

Although estimates of prevalence vary depending on population and measurement, existing studies suggest that a substantial proportion of migrants report some form of transnational healthcare use. For example, research on Latin American, Asian, and European migrants has documented frequent reliance on cross-border care, particularly among those with strong transnational ties or limited access to healthcare in host-country systems [87]. Importantly, transnational healthcare is not limited to physical travel. Many migrants engage in non-physical forms of care, such as remote consultations with providers, communication with family members about treatment options, and the acquisition of medications through transnational networks[89,90].

Empirical studies consistently suggest that transnational healthcare utilization is shaped by the interplay of push and pull factors. Rather than responding to a single barrier or motivation, migrants often make strategic healthcare decisions by weighing the relative advantages and disadvantages of healthcare systems across countries[9,70]. In addition to structural and institutional factors, social ties play a central role in shaping transnational healthcare use. Migrants frequently rely on family members, friends, and community networks to access information, coordinate care, and obtain medications or referrals to providers abroad[90,93]. These ties function as critical mechanisms that enable healthcare engagement across borders, particularly for individuals who face constraints on mobility or access within the host country. As a result, transnational healthcare practices are deeply embedded in relational networks that extend beyond national boundaries.

Despite these insights, the existing literature remains fragmented in several important ways. Much of the empirical evidence is based on qualitative or small-sample studies, limiting

generalizability and the ability to quantify patterns of transnational healthcare use. Additionally, research has largely focused on specific immigrant groups—particularly Latin American populations—with relatively limited attention to Asian immigrant populations. Studies that do examine Asian migrants often emphasize general healthcare utilization rather than domain-specific practices such as sexual and reproductive health. Taken together, these gaps highlight the need for more systematic and population-specific research that captures both the prevalence and determinants of transnational healthcare practices.

2.7.Sexual And Reproductive Health Focus

Sexual and reproductive health (SRH) represents a critical domain for understanding healthcare access and utilization among immigrant women, given its sensitivity, complexity, and centrality to women's health across the life course. Existing research consistently documents disparities in SRH outcomes and service utilization between foreign-born and U.S.-born women, including differences in contraceptive use, prenatal care, cancer screening, and abortion access[4,122]. Among Asian immigrant women in particular, studies have identified lower rates of contraceptive use[57], reduced uptake of preventive screening services[28,29], and barriers to accessing culturally and linguistically appropriate care[54].

These disparities are shaped by a combination of structural, cultural, and interpersonal factors. Structural barriers—including lack of insurance, restrictive policies, and limited access to affordable services—can significantly constrain SRH care utilization. At the same time, cultural norms and stigma surrounding sexuality, contraception, and abortion may discourage open discussion and limit engagement with healthcare providers. Language barriers and lack of culturally competent care further compound these challenges, affecting both access to and quality of care[85,129].

Importantly, SRH differs from other domains of healthcare in ways that make transnational healthcare particularly relevant. SRH services often involve issues of privacy, stigma, and personal autonomy, which can shape where and how individuals seek care. For example, women may prefer to access contraception, abortion, or fertility services in settings where they feel culturally understood, less judged, or more confident in the confidentiality of care. In some cases, this may lead individuals to seek care through transnational channels, including consulting providers in their countries of origin or relying on trusted networks for guidance and resources.

Despite the relevance of transnational healthcare to SRH, empirical research explicitly examining this intersection remains limited. While studies have documented transnational healthcare practices among migrant populations more broadly, few have focused specifically on SRH-related behaviors or explored how these practices vary across different domains of reproductive health. Even fewer studies examine these dynamics among Asian immigrant women, who remain underrepresented in SRH research and are often treated as a homogeneous group despite substantial heterogeneity.

The limited existing evidence suggests that transnational healthcare may play an important role in addressing unmet SRH needs, particularly in contexts where U.S.-based care is perceived as inaccessible, unaffordable, or culturally incongruent. However, there remains a lack of systematic research examining how and why immigrant women engage in transnational SRH care, what forms these practices take, and how they vary across different social and structural contexts. Addressing these gaps is essential for understanding the full spectrum of SRH care-seeking behaviors and for developing interventions and policies that more effectively meet the needs of diverse immigrant populations.

2.8. Immigrant Women's SRH Healthcare Utilization in the U.S.

A. Differences Between Foreign-Born and U.S.-Born Women

Foreign-born women exhibit different SRH behaviors and outcomes compared to U.S.-born counterparts, even within racial/ethnic groups[4,64]. Patterns include contraceptive use, fertility preferences, prenatal care access, and abortion utilization. These differences may reflect selective migration, cultural norms, and barriers within the U.S. health system. Over time, some gaps narrow, while others persist (the "immigrant health paradox") [144].

B. SRH Domains

Asian immigrant women's sexual and reproductive health (SRH) experiences encompass a wide continuum of needs—from contraception and fertility care to prenatal, postpartum, and menopausal health—yet significant disparities persist in their access and utilization of these services. Compared to U.S.-born women, Asian immigrant women often exhibit lower rates of contraceptive counseling, prenatal and postpartum care, STI screening, abortion access, and use of fertility and menopause-related services[4,64]. These gaps are not simply a reflection of individual preferences but arise from the intersecting influences of cultural norms, gendered expectations, structural exclusion, and policy environments. Cultural norms, stigma, provider insensitivity, and legal or policy constraints may lead women to bypass U.S. systems in favor of transnational care[78,90].

More specifically, among Asian American women, disparities persist in contraceptive uptake: for example, a recent California survey found that Filipina, Korean, and Vietnamese women were less likely than non-Hispanic Whites to use long-acting reversible contraceptives (LARC) and had lower overall contraceptive use[57].Studies of cervical cancer screening among Vietnamese, Chinese, Korean, and Filipino women repeatedly find that language discordance,

limited knowledge, modesty concerns, and lack of female or culturally concordant providers reduce screening, suggesting that women prefer settings that match their language and cultural expectations[145]. Work on Korean immigrant women's preventive care similarly links underuse to system navigation barriers and insurance, again implying that more culturally and linguistically aligned care would improve uptake[85].

A recent qualitative study further highlights that undocumented Asian and Latina women experience fear of immigration enforcement, disrespectful treatment, and lack of informed consent in SRH settings, showing how structural racism and legal precarity jointly constrain their reproductive healthcare access and quality[24]. The lack of disaggregated, ethnicity-specific data on many of these SRH services means that these issues remain under-analyzed in Asian immigrant populations. A recent commentary calls out persistent invisibility of Asian American and Native Hawaiian/Pacific Islander (NHPI) populations in SRH research, underlining the importance of targeted inquiry[56]. These documented disparities across the SRH continuum highlight the need to examine not only whether Asian immigrant women access care, but where and under what conditions they do so. The persistent barriers and inequities described above—ranging from cultural and linguistic mismatches to exclusionary policies and experiences of discrimination—suggest that some women may seek alternative or supplementary care outside the United States. Indeed, patterns of transnational SRH care may emerge as a response to these intersecting constraints within U.S. systems.

B. Barriers and Motivators in U.S.-Based SRH Utilization

Barriers exist at multiple levels. On an individual level, limited English, low health literacy, fear of immigration consequences, and stigma may reduce utilization. On an interpersonal level, family or community norms can restrict SRH agency. Institutionally,

provider bias, lack of interpreters, and inflexible clinic hours may impede access. Structurally, legal restrictions, insurance exclusion, policy climate, and economic constraints can shape health-seeking. Motivators may include trust in providers, community-based programs, low-cost clinics, and hybrid strategies that combine U.S. care for emergencies and transnational care for culturally sensitive or preferred SRH services.

2.9. Asian Immigrant Women in the U.S.: Context and Diversity

A. Demographic Trends, Representation, and Transnational care

Asian immigrants are among the fastest-growing segments of the U.S. foreign-born population, with their numbers increasing by 81% from 2000 to 2019[146]. Despite this rapid growth, these groups remain underrepresented in sexual and reproductive health (SRH) research and programming[56]. Prior studies indicate that foreign-born Non-Hispanic Asian women are less likely to receive SRH services in the U.S. compared to their U.S.-born NH Asian counterparts[4,64], raising questions about how Asian immigrant women navigate SRH access, including the potential for seeking care across borders.

Asian-origin immigrants increasingly settle in metropolitan hubs beyond traditional gateways (e.g., Los Angeles, New York, San Francisco) to secondary destinations (e.g., Atlanta, Houston, Dallas). This differing state of residence matters because local policy environments, health infrastructure, and immigrant-friendly services vary across cities and states. The BRAVE study itself leverages this geographic variation to examine how state-level context shapes SRH experiences. Within the broad "Asian immigrant" category lies considerable heterogeneity by country of origin, language, migration histories, and socioeconomic status. Common subgroups in U.S. immigration include Chinese, Filipino, Korean, Vietnamese, Indian, and others. These subgroups differ not only in baseline health profiles and health systems in origin countries, but

also in migration selectivity, transnational ties, diaspora networks, and cultural norms around gender and sexuality. Transnational healthcare—where migrants seek medical care either abroad or through remote transnational networks—has been documented among other immigrant groups and appears increasingly common, particularly among those maintaining strong ties to their countries of origin.

However, research specifically examining how Asian immigrants engage in transnational healthcare for SRH needs is limited. In a systematic review of 26 empirical studies on migrant health and transnationalism, only one qualitative study focused on Asian immigrant women's experiences with transnational SRH care[71,122].

B. Motivations for Transnational SRH Care

The reasons Asian immigrant women may seek transnational SRH care remain underexplored. Existing evidence suggests that cultural alienation, lack of structural support, and provider insensitivity can make U.S. healthcare feel inadequate, pushing women to seek care abroad [78]. Structural and policy-level barriers—including public charge rules[47], Medicaid exclusions[214], abortion restrictions[248] and general mistrust in U.S. healthcare systems[147] may also limit access. These challenges can be compounded by cultural and linguistic barriers[90], stereotypes such as the model minority myth[120], and stigma surrounding reproductive health, potentially making transnational care a crucial alternative for addressing unmet SRH needs. Despite the growing need for research on transnational healthcare practices, significant theoretical gaps remain. Limited frameworks exist to explain how Asian immigrant women navigate transnational SRH care, whose experiences are shaped by immigration status, country of origin, transnational ties, and cultural differences.

C. Gendered Migration and Family Roles

Gender fundamentally structures migration trajectories and health outcomes among Asian immigrant women. Many migrate through family-based pathways, often accompanying spouses, parents, or children, which can limit autonomy over employment, social networks, and access to resources. Others migrate through care or domestic labor channels, entering precarious labor markets characterized by low wages, informal employment, and minimal health protections—all of which constrain healthcare engagemen[148,149]. Within these gendered contexts, expectations surrounding childbearing, filial duty, and spousal support shape women's capacity to prioritize their own sexual and reproductive health (SRH) needs.

These expectations often position women as health brokers within transnational families—coordinating care for relatives across borders, remitting funds for medical expenses, and drawing on their familiarity with multiple health systems to navigate care for others. The dual role of caregiver and care-seeker complicates women's SRH trajectories: many defer or interrupt their own care needs while facilitating care for family members. At the same time, because SRH services such as contraception, abortion, and infertility treatment are deeply personal and often stigmatized, women tend to seek gender-concordant, culturally familiar, and nonjudgmental providers. The fragmentation of SRH services within broader healthcare systems—shaped by patriarchal and moral frameworks—further constrains immigrant women's reproductive autonomy and reinforces gendered inequities in transnational health access[150].

At the structural level, gendered inequities in social policy have made SRH services particularly vulnerable to restriction and cost barriers, especially for low-income and immigrant women. Policies targeting abortion, contraception coverage, or insurance eligibility disproportionately affect women's ability to access affordable and comprehensive reproductive care. Moreover, the gendered organization of medical knowledge and insurance systems—where

treatments related to women's reproductive health are underfunded or excluded compared to male-centered interventions—reinforces these disparities and constrains women's agency in managing their reproductive lives[151]. Taken together, these intersecting dynamics reveal how gender not only structures migration and family roles but also permeates every layer of SRH care—from the micro-level of bodily experience and provider interaction to the macro-level of policy. Understanding these multi-level gendered forces is thus essential for analyzing how Asian immigrant women navigate SRH care across both U.S. and transnational contexts.

C. Acculturation, Social Integration, and Health Behavior

Acculturation and social integration are frequently invoked to explain changes in health behaviors among immigrants. Years in the U.S., English proficiency, and strength of ethnic identity are common proxies[152]. Empirical work shows mixed patterns: greater acculturation can correlate with better self-rated health or increased healthcare use, but assimilation may also lead to adverse behaviors, including dietary changes and stress from discrimination[73,153]. Acculturation interacts with age at arrival, social networks, enclave residence, and discrimination experiences shape levels of comfort navigating U.S. health systems or continued trust in home-country providers[154]. Transnational healthcare, which involves migrants seeking medical care across borders or through remote transnational networks, may offer an important strategy for navigating these challenges[64,71]. Systematic reviews show that while transnational care is common among other immigrant groups, research examining Asian immigrant women's engagement remains extremely limited, with only one qualitative study identified exploring transnational SRH practices[64,71].

2.10. Conceptualization and Conceptual Framework:

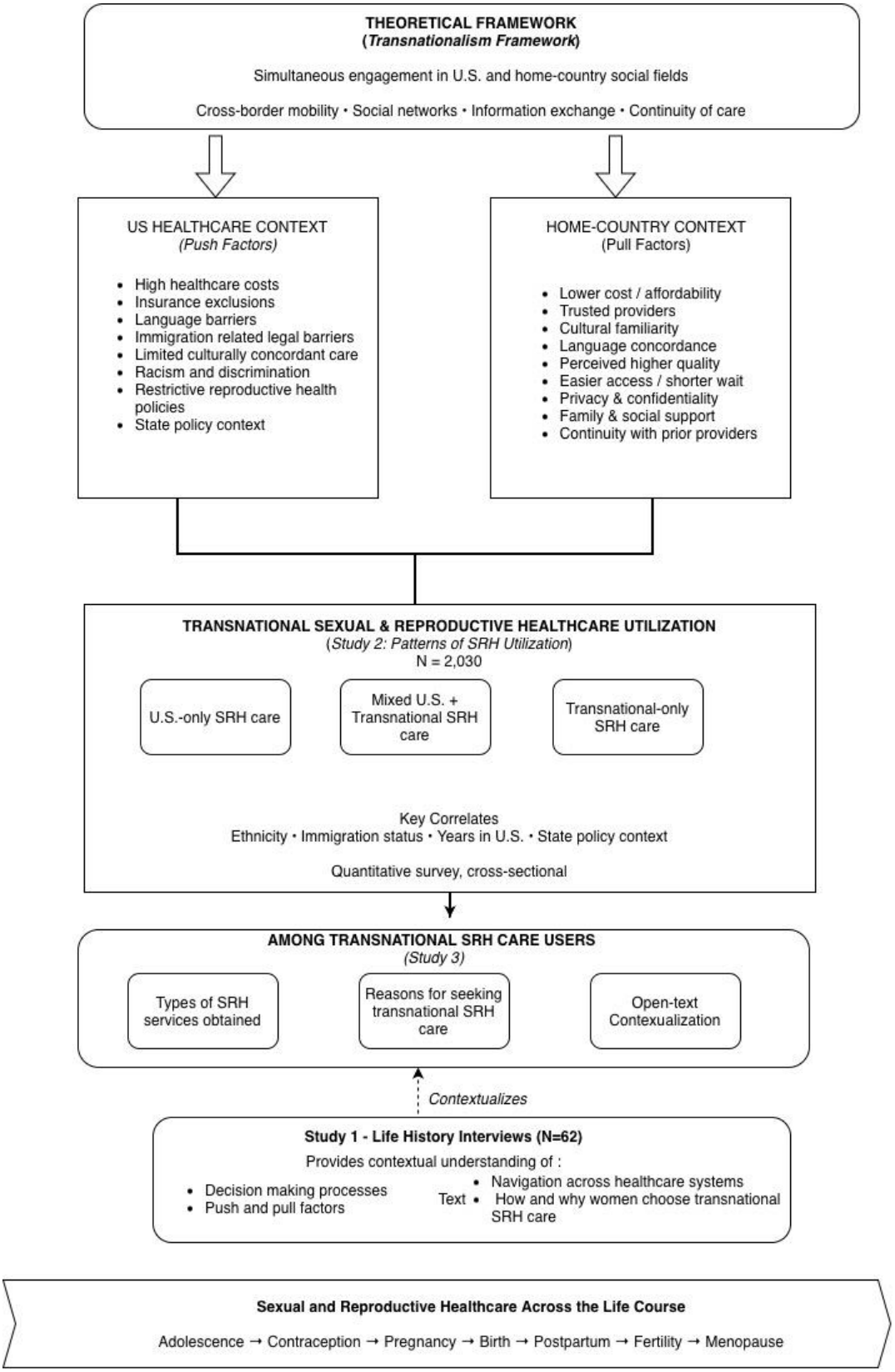
Building on these perspectives, this dissertation conceptualizes transnational sexual and reproductive health (SRH) service utilization among Asian immigrant women as emerging from the dynamic interplay of individual, interpersonal, structural, and transnational domains across the life course. This multilevel framework reflects how immigrant women's reproductive health behaviors are situated within intersecting systems of constraint and possibility—shaped simultaneously by personal characteristics, relational contexts, institutional structures, and cross-border opportunities. At the individual level, factors such as ethnicity, age, reproductive life phase, legal status, English proficiency, and length of U.S. residency influence women's familiarity with health systems, their perceived agency in navigating reproductive care, and their health-seeking preferences. These characteristics shape not only access, but also the meanings and priorities attached to SRH care across different stages of the reproductive life course.

At the interpersonal level, relationships with partners, family members, peers, and healthcare providers mediate women's decisions and experiences surrounding SRH. Family expectations gendered cultural norms, and spousal or parental influence can determine whether women disclose reproductive decisions or seek services across borders. This level also encompasses interpersonal violence, reproductive coercion, and discrimination from providers—factors that shape trust, safety, and the perceived acceptability of different forms of care. Interpersonal dynamics thus bridge the individual and structural, translating social hierarchies into lived experiences of support or exclusion. At the structural level, access to insurance, immigration and reproductive health policy environments, institutional discrimination, and economic constraints delineate the broader opportunities and barriers to care. These structural determinants interact with interpersonal and individual conditions to constrain choice, reinforce

inequities, and shape the distribution of reproductive health resources across geographic and policy contexts.

Finally, transnational opportunities and ties capture the enduring connections that Asian immigrant women maintain with their countries and cultures of origin. These include familial, cultural, and linguistic ties; trust in home-country providers or traditional healing systems; and the feasibility of travel or remote communication. Such transnational connections enable women to navigate care across multiple health systems—using return visits, imported medicines, or virtual consultations—to fill gaps left by exclusion, distrust, or cultural mismatch within U.S. health care systems. Together, these dimensions shape how women define, seek, and time transnational SRH care use—whether relying exclusively on U.S. systems, exclusively on transnational sources, or combining both. This conceptual framework situates transnational SRH utilization within a multilevel, intersectional, and life-course-informed model, providing a foundation for analyzing both the qualitative and quantitative components of this dissertation. It emphasizes that women's transnational SRH practices are not merely individual strategies of choice but rather socially and structurally embedded responses to complex systems of inequality, belonging, and transnational connectivity.

Figure 1. Conceptual Framework



This conceptual framework illustrates how transnational sexual and reproductive healthcare (SRH) utilization among Asian immigrant women is shaped by the interaction of structural barriers within the U.S. healthcare system, facilitating factors in immigrants' countries of origin, and transnational social ties. Guided by the transnationalism framework[82], the model conceptualizes healthcare-seeking as occurring across interconnected social fields in both the United States and immigrants' countries of origin, rather than within a single national healthcare system.

At the top of the framework, transnationalism serves as the overarching theoretical lens, recognizing that immigrants maintain simultaneous social, cultural, and institutional connections with both their country of origin and country of residence. These transnational ties—including cross-border mobility, social networks, information exchange, and continuity of care—create opportunities for healthcare utilization across national borders[80,155]. Within the U.S. healthcare context, a range of structural barriers (push factors) may discourage women from obtaining SRH care in the United States. These include high healthcare costs, insurance exclusions, language barriers, immigration-related legal barriers, limited access to culturally concordant providers, experiences of racism and discrimination, restrictive reproductive health policies, and differences in state policy environments[9,121,127,156,157]. Together, these structural conditions may reduce the affordability, accessibility, and acceptability of U.S.-based SRH care.

In contrast, the home-country healthcare context represents a set of pull factors that encourage women to seek care outside the United States. These include lower healthcare costs, trusted provider relationships, cultural familiarity, language concordance, perceived higher quality of care, shorter wait times, greater privacy and confidentiality, family and social support,

and continuity with previously established healthcare providers[69,71,84,114]. These factors may make healthcare in the country of origin a more attractive alternative for specific SRH needs.

The interaction of these push and pull factors contributes to transnational SRH care utilization, which is the primary focus of Study 2. Study 2 quantitatively examines patterns of SRH utilization among Asian immigrant women, classifying participants according to whether they obtained SRH care exclusively in the United States, used both U.S. and transnational healthcare, or obtained care exclusively outside the United States. Variation in these utilization patterns is examined according to four key correlates: ethnicity, immigration status, years of residence in the United States, and state policy context.

Among women who reported using transnational SRH care, Study 3 further investigates the specific types of SRH services obtained, the reasons for seeking care outside the United States, and contextual information provided through open-ended survey responses. This analysis extends beyond identifying whether women engage in transnational healthcare to understanding what services they obtain and the motivations underlying their healthcare decisions.

Finally, Study 1 provides qualitative contextualization for the quantitative findings. Through life history interviews, Study 1 explores women's decision-making processes, the push and pull factors influencing transnational healthcare, navigation across U.S. and home-country healthcare systems, and the broader social and structural contexts shaping transnational SRH care utilization. Rather than functioning as a separate component of the framework, the qualitative findings complement and deepen interpretation of the quantitative results by explaining the mechanisms underlying observed utilization patterns.

Across all three studies, the framework recognizes that sexual and reproductive healthcare needs evolve over the reproductive life course—from adolescence through contraception, pregnancy, childbirth, postpartum care, fertility decision-making, and menopause. Consequently, decisions regarding transnational SRH care are dynamic and may change across different stages of women's reproductive lives and with changing policy environments.

2.11. Gaps in the Literature

Despite a growing body of scholarship on transnational healthcare, several important conceptual, empirical, and substantive gaps remain. Addressing these gaps is critical for advancing understanding of how individuals navigate healthcare across borders, particularly within the domain of sexual and reproductive health (SRH)[69,71].

First, there remains a lack of conceptual clarity and consistency in how transnational healthcare is defined and operationalized. Existing studies variably conceptualize transnational healthcare as cross-border travel, medical tourism, or broader engagement with transnational networks, often without clearly delineating the boundaries between these constructs[69,114]. As a result, it is frequently unclear whether activities such as remote consultation, informal information exchange, or the acquisition of medications from abroad constitute healthcare use. This lack of definitional precision limits comparability across studies and poses challenges for empirical measurement, particularly in quantitative research.

Second, much of the existing literature has been shaped by a medical tourism framework, which emphasizes mobility among relatively privileged populations seeking elective or specialized care abroad[95]. This framing obscures the experiences of migrants and other

marginalized populations, for whom transnational healthcare often emerges not as a matter of choice, but as a response to structural constraints. Consequently, there is a need to shift the analytical focus from consumer-driven models toward understanding transnational healthcare as a practice that can also be shaped by inequality, constraint, and necessity.

Third, there is a notable lack of research on sexual and reproductive health (SRH) within the transnational healthcare literature[69,71]. While prior studies document a range of cross-border healthcare practices, very few examine how individuals seek care for services such as abortion, contraception, and prenatal care. This gap is particularly significant given that SRH services are highly regulated, socially stigmatized, and deeply shaped by policy environments[158]. In the wake of the *Dobbs v. Jackson Women's Health Organization* Supreme Court decision, understanding transnational pathways to SRH care has become increasingly important[159].

Fourth, although prior research highlights the importance of structural barriers and social ties, there is limited attention to the mechanisms through which individuals engage in transnational healthcare[71]. Existing studies often describe patterns of use without fully explaining how decisions are made, how resources are mobilized, or how individuals navigate multiple healthcare systems simultaneously. In particular, the role of transnational social networks such as family members, community ties, and digital platforms in facilitating access to care remains under-theorized and inconsistently measured.

Fifth, there is insufficient attention looking at access to transnational SRH across different structural and individual level factors. While factors such as immigration status, socioeconomic position, gender, and ethnicity are often examined independently, few studies consider how these dimensions intersect to shape access to transnational healthcare. As a result,

existing research does not fully capture the ways in which structural inequalities are compounded for individuals occupying multiple marginalized positions, such as undocumented immigrant women.

Sixth, the literature remains limited by a lack of quantitative and mixed-methods research. Much of the existing evidence is based on qualitative studies with small or localized samples, which, while providing rich insights into lived experiences, offer limited generalizability[69,71]. There is a need for research that integrates quantitative and qualitative approaches to better assess the prevalence, patterns, and determinants of transnational healthcare use across populations.

Seventh, existing research has largely focused on host-country barriers (push factors), with comparatively less attention to the role of home-country healthcare systems (pull factors)[69,71,114]. While dissatisfaction with healthcare in the country of residence is well documented, fewer studies examine how perceptions of quality, cultural familiarity, trust, and accessibility in countries of origin shape healthcare decision-making. Without accounting for these pull factors, explanations of transnational healthcare remain incomplete.

Eighth, there is limited integration of policy and institutional contexts into analyses of transnational healthcare. Healthcare access is significantly shaped by immigration policies, insurance status, and state-level policy environments, yet these factors are often not significantly highlighted rather than central analytical components. This is particularly important in the context of shifting policy landscapes, where legal restrictions may both constrain and reconfigure pathways to care.

Finally, there is a lack of research focusing on Asian immigrant populations, particularly with disaggregated analyses across ethnic subgroups. Much of the existing literature has concentrated on Latin American or European populations, leaving significant gaps in understanding the experiences of Asian immigrant women, who may navigate distinct cultural, structural, and policy contexts in accessing transnational healthcare.

III. STUDY AIMS OF DISSERTATION RESEARCH

1. **Aim 1:** Qualitative data analysis

How do Asian immigrant women conceptualize and experience transnational sexual and reproductive health (SRH) care across the reproductive life course through qualitative analysis of Life History Interviews (LHIs; *n*= 62) from the BRAVE Study, including how these conceptualizations, experiences, and patterns of engagement vary by ethnicity, immigration status, years in the United States, and state of residence.

2. **Aim 2**: Quantitative data analysis

Examine the sociodemographic and immigration-related correlates of transnational SRH care utilization among Asian immigrant women in the United States. A four-category outcome — non-use, US-only care, mixed US and transnational care, and transnational-only care captures the full spectrum of SRH care utilization patterns, with mixed and transnational-only care constituting the primary outcomes of interest and non-use and US-only care serving as comparison categories.

Hypothesis 2a*:* Women with greater immigration legal precarity, specifically legal permanent residents and temporary visa holders will have significantly higher odds of transnational SRH care use (mixed and transnational-only) relative to US-only care compared to naturalized citizens, after adjusting for ethnicity, length of U.S. residence, and relevant sociodemographic covariates, reflecting the structural exclusions that push noncitizen immigrants toward transnational SRH care-seeking.

Hypothesis 2b*:* Transnational SRH care utilization patterns will differ significantly across Asian ethnic subgroups after adjusting for immigration status, state or residence, length of U.S. residence, and relevant sociodemographic covariates.

***Hypothesis 2c**:* Transnational SRH care utilization will differ significantly by years of U.S. residence among Asian immigrant women, with women with fewer years of residence having higher odds of transnational SRH care utilization compared to women with longer duration of residence, after adjusting for immigration status, ethnicity, state of residence and relevant sociodemographic covariates.

3. **Aim 3**: Quantitative analysis

Among transnational SRH care users, examine how the five structured transnational SRH service types and five structured reasons for transnational care-seeking vary across ethnicity, immigration status, years of U.S. residence, and state of residence.

Hypothesis 3a: The types of transnational SRH services utilized will differ significantly across ethnicity, immigration status, years of U.S. residence, and state of residence.

Hypothesis 3b: The reasons for seeking transnational SRH care will differ significantly across ethnicity, immigration status, years of U.S. residence, and state of residence.

Hypothesis 3c: Open-text responses will identify additional contextual factors influencing transnational SRH care utilization beyond the five structured reason categories.

IV. METHODS

This chapter describes the overall research design and methods used across the three studies included in this dissertation. Following this chapter, each study is presented as a standalone manuscript in the format submitted to peer-reviewed journals, with complete references and citations retained in each manuscript.

Overall Study Design:

This dissertation draws on data from the Building Community, Raising All Immigrant Voices for Health Equity (BRAVE) Study, a community-engaged, exploratory sequential mixed-methods study designed to examine sexual and reproductive health (SRH) among Asian immigrant women in the United States. The BRAVE Study was developed using a community-based participatory research (CBPR) approach and an exploratory sequential mixed-methods design in which qualitative findings informed the development of a subsequent quantitative survey. This design enabled an in-depth examination of immigrant women's lived experiences while providing population-level evidence regarding patterns of SRH care utilization.

The BRAVE Study was conducted in two sequential phases. Phase I consisted of qualitative Life History Interviews (LHIs) with Asian immigrant women and key informant interviews with community experts. Findings from these interviews informed the development of the Phase II survey instrument, including survey measures, sampling procedures, and recruitment strategies. Phase II consisted of a multi-site cross-sectional survey administered to Asian immigrant women residing across four metropolitan areas in the United States.

Each of the three studies presented in this dissertation draws on a distinct component or subsample of the BRAVE study: Study 1 uses Phase I life history interview data; Study 2 and Study 3 both use Phase II quantitative survey data, applied to different analytic samples and

research questions. This chapter first describes elements common across the BRAVE study — its community-based participatory research (CBPR) foundation and, for the quantitative phase, its multi-site sampling design — before detailing the design, sample, measures, and analytic approach specific to each of the three studies.

Community-Based Participatory Research Approach:

The BRAVE study was conducted within a CBPR framework across both phases. Community partner organizations co-directed all research activities, including providing feedback on sampling procedures and survey and interview instruments, hiring and training multilingual field staff, and conducting recruitment events at their respective sites. A BRAVE Community Advisory Board (CAB), composed of immigrant-led and reproductive justice organizations, reviewed study instruments and evaluated the cultural appropriateness of measures, interview guides, and translations. This partnership structure was intended to strengthen the study's ability to reach Asian immigrant women across the full spectrum of immigration statuses, including populations — undocumented individuals, Deferred Action for Childhood Arrivals (DACA) recipients, and those in other liminal or temporary statuses that are frequently excluded from health research.

Study 1 Transnational Healthcare Utilization and Decision-Making- A Qualitative Life History Analysis

How do Asian immigrant women conceptualize and experience transnational sexual and reproductive health (SRH) care across the reproductive life course through qualitative analysis of Life History Interviews (LHIs; n= 62) from the BRAVE Study, including how these conceptualizations, experiences, and patterns of engagement vary by ethnicity, immigration status, years in the United States, and state of residence.

1.1.Study Design

Study 1 uses data from 62 in-depth life history interviews conducted as part of BRAVE Phase I between June and September 2023. The study employed a life course perspective to examine participants' immigration trajectories and the cumulative influence of social, cultural, legal, and healthcare experiences on SRH knowledge, attitudes, and healthcare utilization across childhood, adolescence, and adulthood.

1.2. Inclusion Criteria and Sampling

Participants were eligible if they (1) identified as women; (2) were between the ages of 18 and 49 years; (3) resided in Los Angeles County, California, or the Atlanta metropolitan area, Georgia; (4) identified as Chinese, Indian, Korean, or Filipino; (5) were born outside the United States; and (6) provided informed consent and participated in the interview in one of the study languages (English, Mandarin, Cantonese, Tagalog, Hindi, or Korean). Purposive sampling was used to recruit participants across diverse ethnic, legal status, and age groups. Los Angeles and Atlanta were selected because they represent distinct immigration and SRH policy environments and contain large and growing Asian immigrant populations.

1.3. Recruitment

Participants were recruited using a combination of online, venue-based, and snowball sampling strategies. Community-based recruitment was conducted through partnerships with community organizations serving Asian immigrant populations, with recruitment materials distributed through organizational listservs, social media, online community groups, and printed flyers. Direct recruitment also took place at community events, health centers, cultural gatherings, and religious institutions. Snowball sampling was used to expand recruitment through participants'

social networks. These combined strategies were intended to reach women with diverse migration experiences, legal statuses, and healthcare utilization histories.

1.4. Data Collection

The semi-structured Life History Interview guide was pilot tested and refined prior to data collection. Eight trained multilingual researchers conducted 60–90-minute interviews in participants' preferred language (English, Mandarin, Cantonese, Tagalog, Hindi, or Korean) via Zoom or telephone. Interviews explored migration histories, healthcare experiences, sexual and reproductive health, and perceptions of healthcare systems in the United States and participants' countries of origin. The interview guide included a dedicated section on transnational SRH care, examining experiences obtaining care outside the United States, types of services received, reasons for seeking care abroad, and perceptions of healthcare quality, accessibility, and safety. Throughout data collection, the research team met weekly to refine interviewing strategies, assess thematic saturation, and engage in reflexive discussions supported by analytic memos and field notes[160–162]. All interviews were audio-recorded, deidentified, professionally transcribed, translated into English when necessary, and managed and coded using Dedoose.

1.5. Data Analysis

Data were analyzed using a hybrid inductive–deductive thematic analysis informed by adapted grounded theory principles[163,164]. The research team collaboratively developed and refined the codebook through an iterative process, and two independent researchers double coded a subset of transcripts to establish coding consistency, with discrepancies resolved through team consensus. For this analysis, a focused secondary analysis examined transnational healthcare utilization and decision-making.

Study 2 Correlates of Transnational SRH Care Utilization Patterns

Examine the sociodemographic and immigration-related correlates of transnational SRH care utilization among Asian immigrant women in the United States. A four-category outcome — non-use, US-only care, mixed US and transnational care, and transnational-only care captures the full spectrum of SRH care utilization patterns, with mixed and transnational-only care constituting the primary outcomes of interest and non-use and US-only care serving as comparison categories.

2.1. Study Design and Data Source

Study 2 draws on BRAVE Phase II quantitative survey data, a multi-site, cross-sectional survey conducted in Atlanta, Houston, Los Angeles, and New York City and employs a quantitative, cross-sectional analytic design to examine the correlates of four SRH care utilization patterns: non-use, U.S.-only care, mixed U.S. and transnational care, and transnational-only care among Asian immigrant women.

2.2. Sampling and Data Collection

The study population consisted of individuals who were assigned female at birth, aged 18–49 years, self-identified as Asian, were born outside the United States, currently resided in the United States, and were able to complete the survey in English, Chinese (Mandarin or Cantonese), Hindi, Korean, or Vietnamese. Consistent with the study's focus on reaching invisibilized and structurally marginalized populations, participants were eligible across the full spectrum of immigration statuses, including undocumented individuals, DACA recipients, individuals in liminal or temporary (e.g., visa) status, lawful permanent residents, and naturalized citizens. Data collection began in January 2025 across Atlanta, Houston, Los Angeles, and New York City,

which were selected because they are in states with large Asian immigrant populations and represent diverse reproductive rights environments and immigrant policy contexts.

Participants were recruited using an adapted Starfish Sampling methodology, a novel hybrid approach combining random time-location sampling (TLS) and respondent-driven sampling (RDS) developed specifically to reach populations often excluded from traditional survey frames[165,166]. In the TLS component, trained multilingual field officers recruited participants at randomly selected venue–date–time combinations across venues frequented by Asian immigrant women, including grocery stores, religious centers, community-based organizations, and restaurants. In the RDS component, each recruited participant could refer up to three peers from their social networks, extending reach into harder-to-reach segments of the population, including women with undocumented or liminal immigration status.

Recruited participants completed a 40-minute survey in their preferred language, in person at recruitment venues, by phone, or online through Qualtrics, a HIPAA-compliant survey platform. Upon completion, participants received a $40 gift card and were invited to refer up to three peers, receiving an additional $10 gift card for each referred peer who completed the survey. All study team members, including field officers at each site, completed CITI Human Subjects Research Training and HIPAA training, and the study protocol received IRB approval from the University of California, Los Angeles.

2.3. Study Measures

Outcome: Transnational SRH healthcare use was operationalized as a four-category measure — non-use, U.S.-only use, mixed use (engagement in both U.S. and transnational SRH care), and transnational-only use — constructed from two survey items: "Which of these sexual and reproductive healthcare services have you ever used in the U.S.?" and "While you have lived in

the U.S., which of these sexual and reproductive healthcare services have you used outside the U.S.?" Women who selected "prefer not to answer" were treated as missing and excluded from analyses.

Key independent variables:

- *Current immigration status:* naturalized citizen (reference), legal permanent resident, temporary non-immigrant/immigrant visa holder, and undocumented (with and without DACA).
- *Ethnicity:* six categories — Chinese (reference), Korean, Indian, Vietnamese, Filipino, and Other Asian (other East Asian, South Asian, and Southeast Asian).
- *Years of U.S. residence:* calculated by subtracting year of first arrival from 2025 and categorized as 0–4 years (reference), 5–9 years, or 10 or more years, consistent with prior literature demonstrating differences in healthcare integration with acculturation and time in the U.S.
- *State of residence:* a proxy for contextual policy environment, categorized as California (34%) (reference), Georgia (11.5%), New York (15.8%), Texas (14.9%), or other states (23.6%). The largest represented states included in the “other states” category are New Jersey, Massachusetts, Florida, Indiana, Illinois, Maryland, Michigan, and Alabama.

Covariates:

Age(years); marital status (married/partnered [reference], widowed/separated/divorced, never married); education (college degree or higher [reference], high school or less); household income (<$30,000, $30,000–$79,999 [reference], $80,000–$149,999, ≥$150,000); and health insurance status, presented as a three-category variable (private/other insurance [reference], public

insurance, uninsured) in descriptive analyses but collapsed to a binary variable (insured versus uninsured) in the multinomial regression model.

2.4. Analysis

Analyses were conducted in four stages. First, descriptive statistics summarized participant characteristics and SRH care utilization patterns, with chi-square tests and one-way ANOVA examining bivariate associations. Participants with missing outcome data (n = 29, 1.4%) were excluded from regression analyses. Second, multinomial logistic regression examined associations between immigration-related factors and SRH care utilization patterns, using U.S.-only care as the reference category. Base models included immigration status, ethnicity, years in the United States, and state of residence, while fully adjusted models additionally controlled for age, insurance status, marital status, household income, and education. Results are presented as relative risk ratios (RRRs) with 95% confidence intervals.

Third, average marginal effects (AMEs) were estimated to express associations as percentage-point differences in predicted probabilities, which were also graphed across categories of the primary predictors. Finally, three sensitivity analyses evaluated the robustness of findings by examining (1) any transnational SRH care use versus no transnational care, (2) a three-category outcome combining mixed and transnational-only users, and (3) models including undocumented/DACA respondents. All analyses were conducted using Stata 18.

Study 3 Transnational SRH Service Types and Reasons Among Transnational Users

3.1. Study Design and Data Source

Study 3 draws on the same BRAVE Phase II quantitative survey data as Study 2, but employs a quantitative descriptive design with supplemental open-text contextualization to

examine the types of SRH services sought transnationally and the reasons for transnational SRH care-seeking among the subset of Asian immigrant women who reported any transnational SRH care use since migrating to the United States. Whereas Study 2 examined sociodemographic and immigration-related correlates of transnational SRH care utilization patterns across the full analytic sample, Study 3 focuses specifically on the transnational care experience itself, describing what services women seek outside the U.S. healthcare system and why- among women who reported using such care.

3.2. Sample

The study population, recruitment methodology (adapted Starfish Sampling combining TLS and RDS), CBPR framework, and data collection procedures are identical to those described for Study 2. The full BRAVE analytic sample comprised 2,030 Asian immigrant women after exclusion of 29 participants (1.4%) with missing data on the primary outcome variable. Study 3, however, restricts analysis to women who reported any transnational SRH care use, defined as explicit endorsement of at least one specific SRH service used outside the United States since migration. This yielded a final analytic sample of N=745 transnational SRH care users, representing 36.3% of the full BRAVE analytic sample. For the reasons analyses, women who selected "prefer not to answer" on the reasons survey item (n=26) were additionally excluded, producing a reasons analytic sample of N=719. For the open-text analyses (H3c), all valid open-text responses (n=113) were analyzed and recoded to existing structured reason categories where appropriate; responses that could not be mapped onto existing categories were analyzed using inductive content analysis to identify themes not captured by the structured categories.

3.3. Study Measures

Transnational SRH service types: The primary outcome for H3a asked: "While you have lived in the U.S., which of these sexual and reproductive healthcare services have you used outside the U.S.?" Response options included five structured categories — birth control counseling or method, abortion or termination of pregnancy, prenatal and pregnancy care, general women's health care, and other (with open-text specification) — each operationalized as a separate binary variable (1=endorsed, 0=not endorsed). Because women could select multiple service categories simultaneously, reported percentages represent the proportion of the 745 transnational users endorsing each service type and do not sum to 100%.

Reasons for transnational SRH care-seeking: Reasons were captured through a survey item asked of women who reported any transnational SRH care use: "What are the main reasons you have used sexual and reproductive health services outside the U.S.? Please select all that apply." Response options included five structured categories — more affordable healthcare, higher quality healthcare, more culturally competent healthcare, ease in understanding language, and my family asked me to — with an open-text "other" option. As with service types, each reason was operationalized as a separate binary variable. Of the 745 transnational users, 719 responded to this item (excluding 26 who selected "prefer not to answer"), yielding the reasons analytic sample (N=719).

Open-text responses (H3c). Open-text responses to the "other" reasons category were reviewed and, where appropriate, recoded into existing structured categories. Responses that did not map onto existing categories were retained as "other" and were further analyzed. Remaining valid open-text responses were further analyzed through inductive content analysis to identify additional contextual factors not captured by the five structured reason categories; responses

were read in full, and recurring themes were identified inductively and organized into thematic categories

Key correlates. Consistent with Study 2, four variables constituted the primary correlates of interest for the sub-aim examining variation in service types and reasons across subgroups: ethnicity (Chinese/Taiwanese [reference], Korean, Indian, Vietnamese, Filipino, Other Asian), immigration status (naturalized citizen [reference], legal permanent resident, temporary visa holder, undocumented/DACA), years of U.S. residence (0–4 years [reference], 5–9 years, 10+ years), and state of residence (California [reference], Georgia, New York, Texas, Other states).

3.4. Analysis

Analyses were conducted in three stages corresponding to the study hypotheses. For **H3a**, descriptive statistics summarized transnational SRH service types among transnational users (N = 745), and Pearson chi-square or Fisher's exact tests (for sparse cell counts) examined differences by ethnicity, immigration status, years in the United States, and state of residence. For **H3b**, descriptive statistics characterized reasons for transnational SRH care-seeking among respondents with valid data (N = 719), and Pearson chi-square tests assessed subgroup differences. All statistical tests were two-tailed with a significance level of $p < 0.05$. For **H3c**, valid open-text responses (N = 113) were analyzed using inductive content analysis following recoding of responses into existing categories where appropriate. Remaining responses were coded into emergent themes. Because participants could select multiple service types and reasons, percentages do not sum to 100%. All quantitative analyses were conducted using Stata 19.

Human Subjects Protections

All three studies were conducted under a single protocol approved by the University of California, Los Angeles Institutional Review Board (IRB #22-0493 for Phase I qualitative data collection, with corresponding approval for Phase II quantitative data collection). All study team members, including field officers and interviewers at each site, completed CITI Human Subjects Research Training and HIPAA training. For Study 1, participants provided oral informed consent prior to participation and received a $50 incentive for completing the interview; interviews were conducted in private settings selected by participants, identifying information was removed from all transcripts prior to analysis, and audio recordings, transcripts, and study data were stored on secure, password-protected servers accessible only to authorized study personnel. For Studies 2 and 3, participants provided consent prior to completing the Phase II survey, received a $40 gift card upon completion, and were compensated an additional $10 for each successfully referred peer; survey data were collected and stored via Qualtrics, a HIPAA-compliant platform.

V. STUDY 1:

1. Introduction

Immigrants represent a substantial and growing share of the U.S. population. As of January 2025, an estimated 53.3 million immigrants lived in the United States — the largest number ever recorded[167]. Despite this magnitude, immigrants continue to face substantial barriers to healthcare in the United States, including high costs, insurance instability, complex system navigation, discrimination, language barriers, and, for women of reproductive age, increasingly restrictive state-level reproductive health policy[9,73,168]. In response to these barriers, a growing body of evidence suggests that many immigrants maintain healthcare ties with their countries of origin and seek care across national borders, a practice referred to as transnational healthcare[70,71,95].

Transnational healthcare refers to the healthcare practices through which individuals residing outside their country of origin obtain healthcare from their home country while maintaining cross-border healthcare ties[169]. These practices may involve travel to the country of origin to receive healthcare or non-travel-based approaches, such as virtual consultations with healthcare providers, obtaining medications or other health-related products from abroad, or accessing other healthcare resources across national borders[71,86,95,170,171]. Rather than being confined to a single healthcare system, immigrants' healthcare decision-making increasingly spans multiple countries and institutional contexts , a pattern that is likely to grow as global interconnectedness, ease of communication, and international travel continue to expand and as the U.S. immigrant population increases[146].

Sexual and reproductive health (SRH) is defined by the World Health Organization as a state of complete physical, mental, and social well-being, not merely the absence of disease in all

matters relating to sexuality and the reproductive system, encompassing services such as contraception, pregnancy-related care, preventive screening, and abortion[26]. Most existing research on transnational healthcare, however, examines healthcare-seeking broadly rather than SRH specifically, despite the distinct clinical, social, and policy considerations that shape SRH care. These include privacy, stigma, differences in contraceptive availability and healthcare organization across countries (e.g., over-the-counter access to oral contraceptives in some countries such as China), and, in the United States, a rapidly evolving reproductive policy landscape characterized by increasing state-level abortion restrictions and changes to publicly funded family planning programs[172–176].

Existing research identifies a consistent set of factors shaping immigrants' decisions to seek care abroad: affordability, insurance limitations, direct access to specialists, shorter wait times, perceived quality of care, and trusted family and provider relationships in the home country[70,71,91,95,114]. Reasons specific to SRH care appear to overlap with, but also extend beyond, this general pattern. Among Thai-born women in Sweden, poor perceived access to local SRH services contributed to preferences for obtaining care in Thailand, with intimate partners also shaping care-seeking decisions across settings[177]. Qualitative research among Bengali immigrant women in New York further demonstrates the importance of transnational social therapeutic networks during pregnancy. Through frequent telephone communication, women obtained emotional reassurance, culturally informed pregnancy advice, and practical guidance from mothers and other female relatives in Bangladesh, creating forms of pregnancy support that extended across national borders. These networks supported women’s physical and emotional well-being even when family members could not be physically present, although immigration restrictions and travel costs constrained access to in-person support[78].

Asian immigrants are the fastest-growing immigrant population in the United States[146], yet Asian immigrant women remain underrepresented in both transnational healthcare and SRH research specifically[56]. Existing U.S.-based research establishes that foreign-born Asian women face distinct barriers to SRH care, including language barriers, cultural stigma, provider discrimination, and immigration-related constraints[4,24,64,85], but this research has not examined whether or how these women respond to such barriers by seeking care transnationally. At the same time, the broader transnational healthcare literature has focused disproportionately on Latino immigrant populations and Mexico-U.S. "medical returns"[70], with comparatively little attention to Asian immigrant populations[71,169,178] and even less to Asian immigrant women's SRH care specifically.

A systematic review of migrant Asian women's sexual health in high-income Western countries similarly found that individual, interpersonal, institutional, and societal-level factors, including stigma, provider relationships, and health system structure, jointly shape SRH care-seeking, and that these dynamics can operate differently for SRH than for general healthcare[178]. Together, this literature suggests that transnational SRH practices are shaped not only by healthcare-system comparisons but also by cross-border family relationships, social support, and culturally grounded forms of care that may be especially important during pregnancy and other sensitive reproductive health experiences.

Direct estimates of transnational healthcare prevalence remain limited. One of the few available studies, conducted among migrant women in Montreal, Canada, found that 4% of women who were already residing in Canada before pregnancy sought prenatal care in their country of origin, highlighting that cross-border healthcare utilization persists even after settlement in the receiving country[179]. Comparable prevalence data for transnational SRH care

among immigrants in the United States, and among Asian immigrant women specifically, does not yet exist — a critical gap given that SRH care is often the type of care most shaped by the stigma, confidentiality concerns, and policy restrictions that might make transnational alternatives especially attractive.

Taken together, the existing literature demonstrates that transnational healthcare is an important but poorly understood dimension of immigrant healthcare. Although growing evidence suggests that immigrants maintain healthcare ties across national borders, relatively little is known about how transnational SRH care should be conceptualized, how common it is within the United States, what types of services women obtain across borders, and how immigrants make decisions regarding where to seek care. These gaps are particularly pronounced among Asian immigrant women, despite evidence that they face unique structural, cultural, and policy-related barriers to SRH care. Addressing these gaps is increasingly important in the context of rapidly evolving immigration and reproductive health policies, making a comprehensive examination of transnational SRH care among Asian immigrant women both timely and necessary.

A final, methodological gap is definitional: studies in this area have not always clearly distinguished transnational healthcare, which is care obtained abroad or through a cross-border arrangement with a home-country provider — from domestic use of traditional or complementary medicine (e.g., acupuncture or herbal medicine practiced by a U.S.-based provider), which reflects a different phenomenon and should be separated from transnational care[171].

A Transnational Framework: Definition and Operationalization

This study is guided by a transnational framework, which conceptualizes migration not as a singular, one-directional move but as an ongoing process through which immigrants maintain economic, social, and institutional ties across the borders of both origin and destination countries[83,180]. Applied to health, this framework understands transnational healthcare as the set of practices through which individuals living outside their country of origin seek healthcare information, resources, or services connected to that country[169,171]. Consistent with recent typological work in this literature, we distinguish travel-based transnational care — physically returning to the country of origin to obtain services — from non-travel-based practices, such as importing medications or consulting a home-country provider virtually[171]. For this study, transnational SRH care refers specifically to sexual and reproductive health services — including preventive screening, contraceptive care, pregnancy-related care, and gynecological or reproductive procedures — obtained through either pathway. Consistent with this definition, care obtained from a domestically located traditional, complementary, or alternative medicine provider in the United States is not classified as transnational care unless it was obtained abroad or through direct arrangement with a provider in the country of origin.

Immigrants in the United States often face substantial barriers to obtaining timely, affordable, and culturally responsive healthcare. High healthcare costs, insurance instability, complex healthcare navigation, discrimination, language discordance, and increasingly restrictive state policy environments can limit access to needed healthcare services and contribute to delayed or forgone care[2,9,44,73]. As migration, international travel, and communication technologies continue to expand, many immigrants respond to these challenges by maintaining healthcare ties with their countries of origin and navigating healthcare across national borders.

Existing research suggests that transnational healthcare reflects more than a response to barriers within host-country healthcare systems. Structural barriers within the U.S. healthcare system — including high costs, insurance instability, complex navigation requirements, discrimination, language barriers, and restrictive state policy environments — can push immigrants to consider healthcare alternatives outside the United States[9,73]. At the same time, healthcare systems in countries of origin can pull immigrants toward transnational care through greater affordability, accessibility, cultural familiarity, trusted provider relationships, and established social networks[70,71,114]. Transnational healthcare is therefore rarely a simple substitute for host-country care; it more often reflects a strategic process through which immigrants compare and selectively draw on multiple healthcare systems to meet their needs[91,95].

Despite growing scholarly attention to transnational healthcare, the exact scale of the practice remains poorly documented — a gap that reflects both the difficulty of capturing informal, cross-border care-seeking in routine health data systems and the limited research attention paid to it among specific immigrant subgroups. Much of the existing literature has focused on Latino immigrant populations and Mexico-U.S. medical returns[70], with comparatively little attention to Asian immigrant populations[69,71], despite Asian immigrants being among the fastest-growing immigrant populations in the United States — an estimated 10.7 million Asian American and Pacific Islander women of reproductive age currently reside in the U.S.[146] Asian immigrant women in particular remain underrepresented in both transnational healthcare and sexual and reproductive health (SRH) research[56]. Existing evidence suggests that foreign-born Asian women face distinct barriers to SRH care specifically, including language barriers, cultural stigma surrounding SRH topics, provider discrimination, and immigration-related constraints on access[4,24,64,85], yet little is known about how these women evaluate

healthcare systems across countries, why they choose to seek SRH or general care abroad, and how social locations such as ethnicity, immigration status, length of U.S. residence, and state policy context shape those decisions.

Guided by a transnational framework[83,180], this study examines transnational healthcare decision-making among Asian immigrant women participating in the Building Community, Raising All Immigrant Voices for Health Equity (BRAVE) Study. Using life history interviews with four ethnic subgroups (Chinese, Indian, Korean, and Filipino) of immigrant women residing in two distinct state policy contexts (California and Georgia), this study examines: (1) the comparative factors — spanning both U.S. healthcare barriers and home-country healthcare advantages — that shape consideration and use of transnational sexual, reproductive, and general healthcare; (2) the strategic patterns through which women who had sought care abroad navigated healthcare across borders; and (3) how ethnicity, immigration status, length of U.S. residence, and state policy context shape transnational healthcare decision-making. By centering the experiences of Asian immigrant women, this study contributes to a small but growing body of research on transnational healthcare and advances understanding of how immigrants strategically navigate healthcare across national boundaries.

Figure 2 Analytical Framework

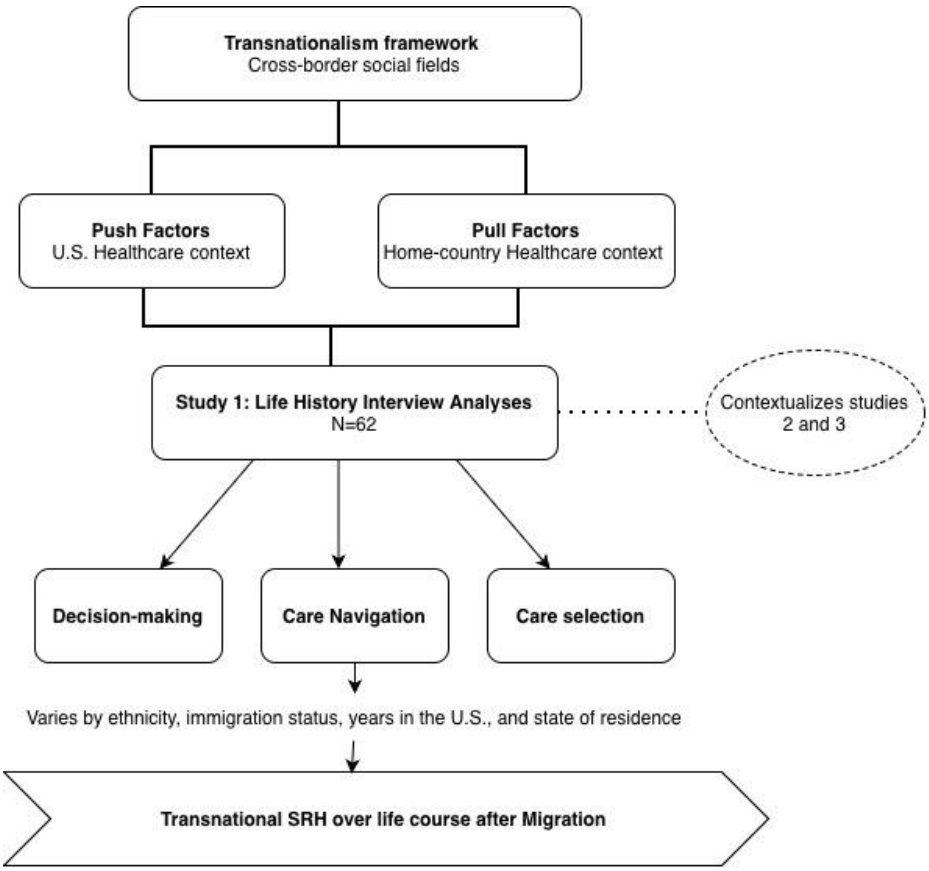


Figure 2 presents the analytical framework that guided the qualitative analysis for Study 1. This framework is grounded in the transnationalism perspective, which conceptualizes immigrants as simultaneously embedded within the social, cultural, and healthcare systems of both their countries of origin and the United States[80,181]. Rather than viewing healthcare decisions as occurring within a single national context, the framework recognizes that immigrants actively compare, navigate, and maintain connections across multiple healthcare systems throughout the migration process.

Within this framework, participants' decisions regarding sexual and reproductive healthcare were understood as emerging through the interaction of healthcare contexts in both

the United States and their countries of origin. U.S. healthcare factors including affordability, insurance coverage, language barriers, immigration-related constraints, healthcare navigation, provider relationships, discrimination, and reproductive health policies were compared alongside home-country factors such as lower costs, trusted providers, cultural familiarity, language concordance, accessibility, privacy, continuity of care, and family and social networks. These interacting contexts shaped how participants evaluated available healthcare options and determined where to seek care.

Using an adapted grounded theory approach[164,182] with constant comparative analysis, life history interviews were analyzed to identify patterns in participants' healthcare decision-making across the reproductive life course after migration to the U.S. Analysis focused on understanding how women navigated healthcare systems, weighed competing structural and interpersonal considerations, and made decisions regarding transnational sexual and reproductive healthcare. Through iterative coding and thematic analysis[163], two overarching themes emerged: (1) patterns of transnational sexual and reproductive healthcare utilization and (2) the contextual or motivational factors that influenced these decisions. Throughout the analysis, themes were compared across participants' ethnicity, immigration status, years residing in the United States, and state of residence to examine how migration experiences and structural contexts shaped transnational healthcare decision-making.

2. Methods

2.1.Study Design

This study draws on data from the Building Community, Raising All Immigrant Voices for Health Equity (BRAVE) Study, a community-engaged mixed-methods study examining

sexual and reproductive health (SRH) among Asian immigrant women in the United States. The study employed a life course perspective to examine participants' immigration trajectories and the cumulative influence of social, cultural, legal, and healthcare experiences on SRH knowledge, attitudes, and healthcare utilization across childhood, adolescence, and adulthood. This paper utilizes data from 62 in-depth life history interviews conducted as part of the BRAVE study between June and September 2023 to specifically explore immigrant women's perceptions and utilization of transnational sexual, reproductive, and general healthcare services.

2.2.Inclusion Criteria and Sampling

Participants were eligible for inclusion in the BRAVE study if they: (1) identified as women; (2) were between the ages of 18 and 49 years; (3) resided in Los Angeles County, California, or the Atlanta metropolitan area, Georgia; (4) identified as Chinese, Indian, Korean, or Filipino; (5) were born outside the United States; and (6) provided informed consent and participated in one of the study languages, including English, Mandarin, Cantonese, Tagalog, Hindi, or Korean. Purposive sampling was used to recruit participants across diverse ethnic, legal status, and age groups. Los Angeles and Atlanta were selected because they represent distinct immigration and sexual and reproductive health policy environments and contain large and growing Asian immigrant populations.

2.3. Recruitment

Participants were recruited using a combination of online, venue-based, and snowball sampling strategies. Community-based recruitment was conducted through partnerships with community organizations serving Asian immigrant populations. Recruitment materials were distributed through organizational listservs, social media platforms, online community groups,

and printed flyers. Direct recruitment was also conducted at community events, health centers, cultural gatherings, and religious institutions. Snowball sampling was used to expand recruitment through participants' social networks and community connections. These multiple recruitment approaches were employed to reach women with diverse migration experiences, legal statuses, and healthcare utilization histories.

2.4. Data Collection and Analysis

The semi-structured life history interview guide was pilot tested prior to data collection and refined based on interviewer feedback and participant responses. Interviews were conducted by eight trained researchers representing diverse Asian cultural and linguistic backgrounds. Interviewers received training in qualitative interviewing techniques and culturally responsive data collection practices. Interviews lasted approximately 60–90 minutes and were conducted in participants' preferred languages, including English, Mandarin, Cantonese, Tagalog, Hindi, and Korean. Interviews were conducted either via Zoom or telephone. Interviews were completed via Zoom or telephone and explored participants' migration histories, family experiences, educational and employment trajectories, healthcare utilization, sexual and reproductive health experiences, and perceptions of healthcare systems in both the United States and their countries of origin. Participants also completed a separate demographic form that included a grid of SRH services received.

To explore transnational healthcare utilization, the interview guide (Appendix A) included questions about participants' experiences obtaining sexual and reproductive healthcare outside the United States, including the types of services received, reasons for seeking care abroad, and perceptions of quality, safety, and accessibility. Follow-up probes explored factors such as cost, familiarity with healthcare systems, family or social network recommendations, and

comparisons between healthcare experiences across countries. Throughout data collection, the research team met weekly to discuss emerging findings, refine interviewing strategies, assess thematic saturation, and engage in reflexive discussions about how their positionalities and experiences might shape data collection and interpretation[183,184]. Analytic memos, field notes, and team-based analysis further supported rigorous and reflexive interpretation of the data[183,184].

All interviews were audio-recorded, deidentified, professionally transcribed, and translated into English when necessary. Data management and coding were conducted using Dedoose. Data were analyzed using an adapted grounded theory approach combined with thematic analysis and a hybrid inductive-deductive coding strategy that incorporated both theory-driven and data-driven codes[185,186]. The research team collaboratively developed and refined a comprehensive codebook through an iterative process. Two independent researchers double coded a subset of transcripts to ensure consistent application of codes, refine code definitions, and establish coding reliability. Coding discrepancies were reviewed by a third team member and discussed collectively until consensus was reached.

For the present analysis, we examined factors shaping transnational healthcare utilization across all 62 participants by reviewing excerpts coded under Transnational Healthcare Experiences and related codes addressing healthcare experiences, healthcare access, structural barriers, and sociocultural influences. Using an iterative process of constant comparison, we examined how participants discussed both U.S. and home-country healthcare systems, including participants who had not personally utilized transnational healthcare but shared perspectives on transnational care. Initial analyses identified 10 participants who reported utilizing transnational sexual, reproductive, or general healthcare services outside the United States. We then conducted a focused sub analysis of these participants' narratives to examine their transnational healthcare

utilization and decision-making in greater depth. Two independent researchers reviewed and double-coded a subset of transcripts to refine the transnational healthcare coding framework and ensure consistent code application before applying the finalized framework to the remaining relevant excerpts. Through repeated transcript review, memo writing, and team discussions, themes were refined and organized into four overarching categories: (1) structural barriers within the U.S. healthcare system, (2) comparative advantages of home-country healthcare systems, (3) patterns of strategic transnational healthcare utilization, and (4) the influence of social location on healthcare decision-making.

2.5.Ethical Considerations

The study protocol was approved by the University of California, Los Angeles Institutional Review Board (IRB #22-0493). All participants provided oral informed consent prior to participation and received a $50 incentive for completing the interview. To protect participant confidentiality, interviews were conducted in private settings selected by participants, and identifying information was removed from all transcripts prior to analysis. Audio recordings, transcripts, and study data were stored on secure, password-protected servers accessible only to authorized study personnel.

3. Results

Table 1. Demographic Characteristics of Study Participants (N=62)

Characteristic	N (Range)	Percentage (%)
Mean age	30.7 years (20-48)	
Ethnicity		
India	13	21
Korean	20	32
Filipino	13	21
Chinese	16	26
City of residence		
Los Angeles	35	56

Atlanta	27	44
Current legal status		
US Citizenship/LPR	31	50
Temporary visa (Employment/Student visa)	17	27
Undocumented (DACA and Non DACA)	14	23
Highest level of Education Completed		
High school graduate, GED, or equivalent	1	2
Some college, junior college or vocational school	7	11
College Graduate	21	34
Graduate or Professional Degree	33	53
Marital status		
Partnered (Married or in relationship)	42	67
Previously Partnered (Divorced/Separated/Widowed)	5	9
Single	15	24
Health Insurance Status		
Has health insurance	55	89
Does not have health insurance	7	11
Types of Health Insurance		
Public Insurance	20	37
Private Insurance	35	63
Transnational Healthcare Sought	11	18

Participant Characteristics:

As noted in Table 1, a total of 62 Asian immigrant women participated in the study, including women of Chinese (26%), Korean (32%), Indian (21%), and Filipino (21%) origin residing in Los Angeles, California (56%), and Atlanta, Georgia (44%) (Table 1). Participants had a mean age of 30.7 years (range: 20–48 years) and represented diverse immigration statuses, including U.S. citizens or lawful permanent residents (50%), temporary visa holders (27%), and undocumented immigrants (23%). Most participants had completed at least a college degree (87%) and had health insurance coverage (89%).

Overview of Transnational Healthcare Utilization

Ten participants (16%) reported obtaining sexual, reproductive, or related healthcare services in their countries of origin (Table 2). Participants sought care in Korea, India, China, and the Philippines for preventive screenings, annual gynecologic examinations, Pap smears, breast

examinations, contraceptive counseling, reproductive health consultations, diagnostic testing, treatment of gynecologic conditions, ultrasound examinations, fibroid surgery, and traditional Chinese medicine for menstrual concerns. Rather than replacing U.S. healthcare, participants described strategically combining healthcare across countries by selecting where to obtain different types of services according to affordability, accessibility, provider trust, cultural familiarity, and continuity of care.

Two overarching themes emerged. Theme 1 examines how women who utilized transnational healthcare strategically navigated healthcare across countries. Theme 2 describes the broader factors shaping transnational healthcare decision-making across the full sample of 62 participants.

Table 2. Summary Characteristics of Participants Who Utilized Transnational Sexual and Reproductive, or General Healthcare (N=10)

Characteristic	Summary (N=10)
Ethnicity	Korean (n = 5); Indian (n = 2); Filipino (n = 2); Chinese (n = 1)
Age	26–48 years
State of residence	California (n = 4); Georgia (n = 6)
Immigration status	U.S. citizen (n = 8); F-1 visa (n = 2)
Years in the U.S.	1–27 years
Countries where care was obtained	South Korea (n = 5); India (n = 2); Philippines (n = 2); China (n = 1)
Types of transnational healthcare utilized	Preventive screening and annual examinations (n = 6); gynecologic consultations and reproductive healthcare (n = 5); diagnostic testing and imaging (n = 4); treatment of gynecologic conditions, including fibroids (n = 3); traditional Chinese medicine for menstrual concerns (n = 1)†

*Participants could report more than one type of healthcare service.

†Categories are not mutually exclusive.

Theme 1: Use of and Decision-Making for Transnational Sexual and Reproductive Healthcare (N=10)

Among participants who sought healthcare outside the United States, transnational healthcare was rarely described as a substitute for U.S. healthcare. Instead, women selectively combined healthcare systems, obtaining different services in different countries according to the nature of the health concern, perceived strengths of each healthcare system, and broader life circumstances. Four interconnected patterns characterized transnational healthcare utilization.

a. Seeking Specialized Diagnostic and Procedural Care Abroad

Participants also selectively sought specialized diagnostic, gynecologic, and surgical services in their countries of origin. Although the specific services varied across participants, including fibroid surgery, ultrasound examinations, reproductive health consultations, and treatment for gynecologic conditions—these services were consistently described as requiring greater confidence in providers and continuity of care.

One Indian participant said:

> *"If I had to get a surgery I might as well do it in India not out here because again, it's cheaper, it's faster. I know the doctors personally. It's harder to make that kind of connection out here because the health service is so convoluted." (Indian, 32, Los Angeles, U.S. Citizen)*

b. Combining Healthcare Systems Across Borders

Rather than relying exclusively on one healthcare system, many participants selectively combined healthcare services across countries, as participants perceived neither of the health systems to be universally superior and have their *"own flaws"*. Participants frequently described

obtaining some services in the United States while seeking other services abroad depending on the nature of the healthcare need. One participant said:

> *"With those kinds of services where it does not require you to talk to somebody… that's okay here. But something more procedural… I'm deciding to do that in India." (Indian, 41, Atlanta, U.S. Citizen)*

These narratives suggest that participants evaluated healthcare systems comparatively and selectively drew upon the strengths of each system to meet different healthcare needs.

c. Integrating Healthcare into Transnational Mobility

Healthcare utilization was closely integrated with participants' broader patterns of international mobility. Rather than traveling exclusively for healthcare, participants frequently scheduled preventive care, traditional medicine, or follow-up treatment during planned trips home for family visits, school breaks, or employment-related travel.

For example, one Chinese participant described seeking traditional Chinese medicine for menstrual concerns during a planned visit to China:

> "*This March, I went back to China because all my big projects just ended and I had a holiday... When I was back, I visited the traditional Chinese doctor." (Chinese, 27, Los Angeles, F1 visa)*

Similarly, one Korean participant explained how preventive healthcare had become a routine component of visits to Korea:

> *"Because the Korean healthcare system tends to focus more on prescreening and preventative health than the United States, whenever we would go back to Korea, we would try and get a couple exams done." (Korean, 26, Los Angeles, U.S. Citizen)*

Across participants, return visits served as opportunities to obtain preventive screenings, gynecologic care, traditional medicine, and specialized procedures that were perceived as more accessible, convenient, or appropriate in their countries of origin. These findings suggest that transnational healthcare was rarely the sole purpose of international travel; rather, healthcare-seeking was embedded within participants' broader patterns of transnational mobility, shaping both the timing of care and the types of services obtained abroad.

d. Leveraging Family and Provider Networks

Finally, participants frequently described trusted provider relationships and family networks as facilitating transnational healthcare utilization. Longstanding relationships with physicians and recommendations from family members increased participants' confidence in seeking care abroad, particularly for specialized reproductive healthcare.

One participant explained that she continued receiving gynecologic care from a physician who had longstanding ties to her family:

> *"My mom's friend… she's a gynecologist… my parents, my sister, and extended family are there, so I can get a lot of support." (Indian, 41, Atlanta, U.S. Citizen)*

For another participant, choosing India for fibroid surgery reflected not only concerns about the U.S. healthcare system but also the availability of family support during recovery:

> *"I have a major distrust of the US healthcare system… They do not recognize the pain or recognize experiences of women of color... and also because my parents, my sister, and, you know, have extended families, so I can get a lot of support. I'm deciding to do that fibroid procedure in India." (Indian, 41, Atlanta, U.S. Citizen)*

These narratives suggest that transnational healthcare decisions extended beyond healthcare system characteristics alone. Trust in providers and the availability of family support were integral to decisions about where to obtain more complex reproductive healthcare services

Theme 2: Drivers of Transnational Sexual and Reproductive Healthcare Decision-making: Comparing U.S. and Home Country Contexts (N=62)

While Theme 1 describes how women who utilized transnational healthcare navigated healthcare across national borders, Theme 2 examines the broader factors shaping transnational healthcare decision-making across the full sample. Regardless of whether participants had personally obtained healthcare abroad, women routinely compared healthcare in the United States with that in their countries of origin when discussing sexual and reproductive healthcare. These comparisons extended beyond healthcare costs to encompass accessibility, provider trust, cultural familiarity, and broader home country healthcare seeking behavior and policy contexts.

a. Affordability and Financial Accessibility

Affordability emerged as one of the most frequently discussed factors shaping participants' evaluations of healthcare systems. Participants consistently contrasted the financial uncertainty and insurance complexity of the U.S. healthcare system with the greater affordability and predictability of healthcare in their countries of origin. These comparisons extended beyond the absolute cost of services and reflected broader differences in health insurance coverage, payment systems, and financial accessibility.

Few participants described healthcare systems in their countries of origin as more affordable and financially accessible than the U.S. healthcare system. For participants from South Korea in particular, universal health insurance and lower out-of-pocket costs contributed

to perceptions that healthcare could be accessed without substantial financial concern. One Korean participant explained:

> *"In Korea, for example, if we are Korean, we have national health insurance, so we can easily go to any hospital and we don't have to worry about the cost of the hospital." (Korean, 32, Atlanta, J2 visa)*

In contrast, participants described health insurance in the United States as closely tied to employment, immigration status, and age, creating periods of insurance instability that affected healthcare access. One Korean participant explained that after aging out of her insurance coverage, she was no longer able to obtain gynecologic care in the United States and instead sought care in Korea:

> *"After I turned 18, I no longer had health insurance, so I was not able to see a gynecologist in the United States. Instead, I would go to a gynecologist in Korea because the services were cheaper." (Korean, 31, Atlanta, U.S. Citizen)*

One participant, who was born in Canada and had lived in both Canada and the United Kingdom before relocating to the United States, described how navigating multiple healthcare systems shaped her perceptions of continuity of care. Having previously experienced the Canadian and UK healthcare systems, she found the transition between U.S. insurance plans—from a PPO to an HMO requiring referrals and new providers, particularly disruptive to maintaining gynecologic care:

> *"That OBGYN was really lovely, but I haven't gone back because the idea of starting over with another OBGYN is difficult. My healthcare is different now. Before, I had a PPO*

plan, which is totally different from what we have in Canada, and now I think I have an HMO. That means I would have to see my primary care provider first, then get a referral, and then be referred to someone else. The thought of having a random person I don't know perform my Pap smear is horrifying. I would rather fly home." (Chinese, 44, Los Angeles, O1 work visa)

Beyond insurance coverage itself, participants frequently expressed frustration with the financial unpredictability of healthcare in the United States. Unlike healthcare systems in their countries of origin, where costs were often known before receiving care, participants described uncertainty regarding deductibles, copayments, and unexpected medical bills. As one Indian participant explained:

"In our country, when you go to a doctor, they tell you how much it costs upfront and that's it… But here, it doesn't happen that way... We think, 'Okay, if I pay $400, then I will get the treatment,' but later we keep getting bills." (Indian, 31, Atlanta, F1 student visa)

Participants further emphasized that healthcare in their countries of origin often remained financially advantageous even after accounting for travel costs. One Korean participant explained:

"I always recommend getting health care services in Korea over the States. I think it's mostly the quality. The quality of care is better, but also the prices are more affordable in Korea. Even with a flight that costs $1,000, I feel like it's worth going to Korea to get that care." (Korean, 31, Atlanta, U.S. Citizen)

Similarly, an Indian participant noted:

> *"It's kind of cheaper to go back home and get a procedure if you need to… it's cheaper, it's faster." (Indian, 32, Los Angeles, U.S. Citizen)*

Rather than seeking healthcare abroad solely because services were less expensive, participants described strategically postponing nonurgent healthcare until return visits home when healthcare could be obtained at lower cost and with greater financial certainty. As one Chinese participant explained:

> *"I just did it that time when I was doing that bevy of tests before my healthcare expired. And then now it's like, whenever I go home." (Chinese, 44, Los Angeles, O1 work visa)*

Another participant summarized this pattern across immigrant communities:

> *"A lot of immigrants, especially immigrants from places where they have universal health care. Once they go back to their home country, they're like, 'Oh, this is my chance to get everything done I want.'" (Korean, 30, Atlanta, U.S. Citizen)*

Collectively, these findings suggest that participants valued not only lower healthcare costs but also predictable pricing, government provided healthcare, and greater financial accessibility, making healthcare in their countries of origin more attractive for routine and nonurgent sexual and reproductive care.

b. Accessibility and Healthcare Navigation

Beyond affordability, participants frequently evaluated healthcare systems based on how easily healthcare could be accessed and navigated. Across interviews, women described the U.S.

healthcare system as administratively complex, fragmented, and difficult to understand. In contrast, healthcare systems in their countries of origin were commonly characterized as more straightforward, efficient, and responsive, allowing patients to obtain care with fewer administrative barriers. Participants compared the two systems in terms of insurance complexity, appointment scheduling, referral requirements, access to specialists, and the overall ease of obtaining healthcare services.

One Chinese participant reflected on the challenges of adapting to an unfamiliar healthcare system after immigrating to the United States:

"It's very confusing. I don't even know how to get the medicine. It's very difficult. It's very different. American healthcare insurance is operating very differently than the Chinese health care." (Chinese, 29, Atlanta, U.S. Citizen)

Similarly, a Korean participant contrasted the simplicity of Korea's insurance system with the complexity of navigating multiple insurance plans in the United States:

> *"In Korea, the insurance system is very simple. Here, each insurance plan is different and covers different services, so you have to understand everything on your own." (Korean, 43, Atlanta, H4 dependent visa)*

Participants also emphasized the absence of formal guidance to help immigrants navigate the U.S. healthcare system. As one undocumented Filipino participant explained:

> *"Nobody gave us a rulebook for that; you know what I mean? Like, nobody gave us like, a step by step on, like, how to find insurance, like how to find like, health care providers." (Filipino, 20, Los Angeles, Undocumented)*

Beyond understanding the healthcare system, participants frequently compared how healthcare services were organized across countries. Several women contrasted the referral-based structure of U.S. healthcare with the more direct access to specialists available in their countries of origin. One Indian participant explained that obtaining specialty care in the United States often required multiple appointments and prolonged waiting periods, even when immediate care was needed:

> *"In India, you can just book an appointment with any doctor at any time. But here, you have to go to your primary provider and then go to that specialized doctor... if I want to see a doctor right away, if I'm in pain, I cannot get an appointment with the correct specialized doctor, because I have to go through a primary provider and it may take around one month or even 15 days to get a doctor appointment. Whereas my current situation requires me to have an immediate consultancy." (Indian, 28, Los Angeles, H4 dependent visa)*

Participants also highlighted differences in the accessibility of sexual and reproductive healthcare services. For example, one Chinese participant described how contraceptives were readily available in China without requiring a physician's prescription:

> *"In China, for the birth control pill, you can just go to any drugstore and buy it. It's not like here, you don't need a prescription. In China, you can buy it anywhere. And it's not expensive." (Chinese, 35, Los Angeles, U.S. Citizen)*

Participants described healthcare in their countries of origin as offering more direct access to providers, shorter wait times, fewer administrative barriers, and greater flexibility than

the U.S. healthcare system. Rather than attributing these advantages solely to familiarity, participants identified structural differences in healthcare organization that shaped their preferences for where to seek sexual and reproductive healthcare.

c. Provider Trust, Cultural Concordance, and Perceived Quality of Care

Beyond affordability and accessibility, participants' decisions about where to seek sexual and reproductive healthcare were strongly influenced by trust in healthcare providers and perceptions of healthcare quality. Across interviews, women compared not only the technical aspects of healthcare systems but also their interpersonal experiences with providers.

Several participants described healthcare encounters in the United States that left them feeling dismissed, inadequately treated, or unheard. One Chinese participant recalled seeking care for severe throat pain but leaving without treatment despite feeling seriously ill:

> *"They ran a strep throat test with me, and the result was negative. Then, they just told me to go home and drink hot water. Then, I felt like I wasted my time and money... I felt like I was sitting there for hours, with the throat pain, for nothing. I thought it was unacceptable. Back in China, at least the doctors will give you Chinese medicines or liquid medicines... But they really didn't give me any medicine, I was speechless." (Chinese, 27, Los Angeles, F1 student visa)*

Similarly, another participant described broader structural barriers that limited meaningful healthcare access for immigrant women despite formal eligibility for care:

"I know that immigrant women... have less realistic choices... because of these barriers, both languages, cultural, and like the medical model, they're very racist enabling." (Korean, 33, Los Angeles, U.S. Citizen)

One participant described how navigating an abnormal breast cancer screening without an established provider, receiving impersonal communications from laboratories, and losing insurance during follow-up care undermined her confidence in the healthcare system. Although she later obtained coverage through Covered California, she explained that she remained reluctant to seek care except in emergencies:

"Yeah, it's very... now I'm on a different plan through Covered California that's different and I'm scared to participate in it and I'm only going to use it if I'm really in trouble." (Chinese, 44, Los Angeles, O1 work visa)

Participants frequently contrasted these experiences with healthcare encounters in their countries of origin, where cultural familiarity and longstanding provider relationships fostered greater trust. Several women emphasized feeling more comfortable communicating with providers who shared their language and cultural background. As one Indian participant explained:

"Sometimes, I feel difficult to convey my message to them in English compared to Indian language... as somebody is Indian, I can ask them more questions." (Indian, 39, Atlanta, H4 dependent visa)

Likewise, one Korean participant described feeling more comfortable with healthcare providers in Korea despite occasionally struggling with medical terminology:

"*The doctors here, they're nice too, but I feel like the Korean doctors are more... I felt more comfortable with them... I think there was a language barrier... But other than that, I feel like the nurses there at the hospitals are very, like they're nicer." (Korean, 31, Atlanta, U.S. Citizen)*

Participants also explained how longstanding relationship with their providers back home influenced their decision to obtain SRH care in their home country. An Indian participant said:

"My mom's friend. She's a gynecologist, and she lives literally five minutes from our house... So, I started getting my examinations done with her." (Indian, 41, Atlanta, U.S. Citizen)

Therefore, for many women, culturally familiar healthcare environments and established provider relationships in their countries of origin increased confidence in seeking care outside the United States.

d. ***Home Country Healthcare-Seeking Culture and Policy Contexts***

Participants' evaluations of healthcare systems were further shaped by broader cultural norms, policy environments, and their social locations as immigrants. Rather than viewing healthcare decision-making as solely an individual choice, women described how expectations surrounding preventive care, reproductive health, immigration status, length of residence in the United States, and state policy environments collectively influenced where healthcare was sought and how healthcare systems were evaluated.

Participants frequently explained that health-seeking behaviors developed in their countries of origin continued to shape healthcare practices after migration. Korean participants commonly described preventive healthcare as a routine part of healthcare, emphasizing comprehensive health screenings during visits home. One participant explained:

> *"The Korean healthcare system tends to focus more on pre screening and preventative health than the United States one. Whenever we would go back to Korea, we would try and get a couple exams done. And I know my parents... they've done like the full body physical exams when they go to Korea." (Korean, 26, Los Angeles, U.S. Citizen)*

A Filipino participant likewise described annual physicals as a routine family practice that continued to shape her healthcare behavior as an adult in the U.S.:

> *"My parents were always going into their annual physical. So that's kind of how I grew up... you have to get your annual physical." (Filipino, 41, Atlanta, U.S. Citizen)*

By contrast, other participants described growing up in contexts where preventive care was uncommon and healthcare was sought only once symptoms became severe:

> *"I feel like because Asian immigrants, like, basically, if it doesn't hurt, they won't get it checked out by a doctor." (Chinese, 28, Atlanta, U.S. Citizen)*

Additionally, an Indian participant explained that she felt more comfortable seeking gynecologic care in the United States because reproductive healthcare carried greater stigma in India:

> *"I was able to go and consult a doctor... I wasn't judged. I never thought about what the doctor would think. In India... you are scared to even go to the gynecologist." (Indian, 25, Los Angeles, F1 student visa)*

These divergent norms around preventive care, some formed in the home country, some formed in the U.S. — shaped how and when participants evaluated care across systems, including whether they used return trips home to catch up on routine screening.

Participants' perceptions of transnational healthcare were also shaped by state policy environments. Women residing in Georgia more frequently discussed restrictive abortion policies and contingency plans involving interstate or international travel if reproductive healthcare became inaccessible. In contrast, participants residing in California generally reported fewer concerns regarding abortion access, although participants in both states described similar challenges related to healthcare costs, insurance complexity, provider trust, and healthcare navigation. One participant explained:

> *"Suppose if I got pregnant by mistake... this is Georgia law, you can't have an abortion... So I'll go to my country, India." (Indian, 39, Atlanta, H4 dependent visa)*

Another participant described considering obtaining abortion medication from outside the United States in anticipation of future restrictions:

> *" I know that is not allowed. I will have to travel out of state if I were to get pregnant. I thought about spending 200 bucks to order some mail-order abortion pills just in case I need it from another country. I thought about that, but I didn't execute that plan." (ID321-18)*

Participants also recognized that opportunities to utilize transnational healthcare were unequally distributed across immigrant communities. Immigration status influenced both access to

healthcare within the United States and the ability to travel internationally for care. One participant said:

> *"If it happened to me, if I really want to get abortion, I buy a ticket and I fly back to China. But for a lot of people, they just don't have this opportunity." (Chinese, Atlanta)*

Length of residence in the United States also shaped participants' relationships with healthcare systems in their countries of origin. Participants who had immigrated as young children sometimes described diminished familiarity with healthcare systems abroad and difficulties communicating in their native language. One Korean participant explained:

> *"There was a language barrier... those health words in Korean are very hard words for me to understand." (Korean, 31, Atlanta, U.S. Citizen)*

Taken together, these findings demonstrate that transnational healthcare decision-making was shaped not only by comparisons of healthcare systems but also by participants' broader social locations and migration experiences.

4. Discussion

This study examined how Asian immigrant women navigate transnational sexual, reproductive, and general healthcare and the factors shaping their decision-making. Using a transnational perspective, findings suggest that transnational healthcare decisions emerged through participants' ongoing comparative evaluation of U.S. and home-country healthcare systems, and that among the subset of women who actually sought transnational care, care-seeking was highly strategic and shaped by individual needs, mobility, and social location.

A central contribution of this study is that transnational healthcare is best understood as a strategic healthcare navigation strategy, not simply a response to U.S. barriers of healthcare or a form of medical tourism. This is broadly consistent with prior work on transnational healthcare among other immigrant groups, including Horton and Cole's work on Mexican immigrants' "medical returns"[70] and Roosen et al.'s review of transnational social networks and health , and extends this literature to a population — Asian immigrant women — that has received comparatively little attention [69,71].

Consistent with prior research, participants identified cost, insurance instability, and navigation challenges as key U.S. barriers. This study extends that literature by showing that these barriers extended beyond financial constraints to include distrust, discrimination, and limited access to culturally and linguistically concordant care, several factors that plausibly reflect broader administrative burden in the U.S. healthcare system[187]. Importantly, decisions to seek care abroad were motivated by more than affordability alone: participants described home-country systems as offering universal coverage, direct specialist access, shorter wait times, a stronger preventive care orientation, and culturally familiar providers, facilitated by family and social networks that extended trust and support across borders.

At the same time, home-country contexts functioned as both resource and constraint. While often affordable and accessible, they could also carry stigma, privacy concerns, and in at least one case — restrictive norms around SRH care that pushed a participant toward U.S. care instead. These findings underscore that transnational healthcare decision-making was not simply a matter of personal preference but was shaped by broader structural factors, including healthcare costs, insurance coverage, immigration status, and the ability to travel across national borders.

Participants' comparisons also reflected differences in the healthcare systems and sociocultural contexts of their countries of origin. Korean participants frequently emphasized universal health insurance and preventive health screening, whereas Indian participants often highlighted affordability, healthcare efficiency, and trusted provider relationships. Chinese participants more commonly discussed healthcare accessibility, system navigation, and traditional Chinese medicine. Several temporary visa holders also described periods of insurance instability that increased reliance on healthcare during return visits to their countries of origin. State policy differences emerged primarily through discussions of abortion access, with participants residing in Georgia more frequently describing contingency plans involving interstate or international travel should abortion become inaccessible. Together, these findings suggest that opportunities to engage in transnational healthcare are shaped not only by healthcare systems but also by immigrants' migration experiences and continued ties to their countries of origin.

Findings also demonstrate that transnational healthcare decision-making varied by social location. Ethnic differences reflected variation in the healthcare systems and cultural contexts of participants' countries of origin, immigration status shaped both exposure to U.S. barriers and capacity to seek care abroad, and length of U.S. residence and state policy context (particularly abortion restrictions in Georgia) further shaped healthcare decision-making. A more targeted focus on transnational care in future work — rather than general healthcare utilization would allow deeper examination of how these dynamics unfold over time, including whether and how transnational healthcare use changes with length of U.S. residence.

These findings have several implications for clinical practice, health systems, and future research. First, although transnational healthcare served as an important strategy for addressing

unmet sexual and reproductive healthcare needs, not all immigrants possess the financial resources, legal documentation, or mobility required to obtain care abroad. Transnational healthcare should therefore not be viewed as a substitute for equitable access to high-quality care within the United States. Participants' experiences suggest that improving culturally responsive, person-centered, and linguistically appropriate sexual and reproductive healthcare, while reducing administrative and financial barriers to care, may lessen the need for immigrants to seek care outside the United States. Efforts to recruit, train, and retain a diverse healthcare workforce that reflects the populations served may further improve healthcare experiences for immigrant communities.

Second, healthcare providers should recognize that many immigrant patients receive preventive and reproductive healthcare outside the United States. Participants frequently described obtaining routine gynecologic examinations, Pap smears, breast examinations, and other preventive services during visits to their countries of origin. Routinely asking patients about healthcare received abroad and documenting these services may improve continuity of care. Finally, these findings raise important considerations for immigrant health research and surveillance. Estimates of preventive sexual and reproductive healthcare utilization based solely on U.S. healthcare encounters may underestimate true utilization among immigrant populations if healthcare received outside the United States is not captured. Future research should examine the extent to which transnational healthcare contributes to observed disparities in preventive service utilization and develop approaches to better measure healthcare received across national borders.

Limitations

Several limitations should be considered. First, although all 62 participants discussed factors shaping healthcare-seeking in the U.S. and their countries of origin, only 10 reported directly utilizing transnational healthcare; this constrains our ability to examine differences in utilization patterns within and between subgroups (e.g., by ethnicity or legal status) with precision. Second, as with any qualitative study, participants were purposively sampled from two metropolitan regions; findings may not be statistically generalizable, but are likely transferable to Asian immigrant women in other geographic contexts, and possibly to other immigrant communities navigating transnational healthcare [188]. Third, consistent with broader patterns in the U.S. Asian population[189], the sample was relatively highly educated and largely insured, which may shape healthcare access and decision-making in ways that would differ in a less advantaged sample. Finally, interviews captured a single point in time and cannot directly document how transnational healthcare practices change over the life course.

Contributions

Despite these limitations, this study makes several contributions. Research on transnational SRH care remains limited, particularly among Asian immigrant women — a population overlooked in both immigrant health and transnational healthcare research. This study demonstrates that transnational healthcare utilization is shaped by the interaction of healthcare systems, migration experience, social networks, policy environment, and individual need. Findings highlight the importance of improving affordability, navigation support, cultural responsiveness, and language access within the U.S. healthcare system, while recognizing that many immigrants will continue to maintain meaningful transnational healthcare ties regardless. As healthcare systems become more interconnected and migration continues to shape population

health, understanding how immigrants strategically navigate healthcare across countries remains critical to advancing health equity for immigrant communities.

VI. STUDY 2:

1. Introduction

Immigrant women in the United States represent a large and rapidly growing population with diverse sexual and reproductive health (SRH) needs, whose healthcare experiences are shaped by the intersecting forces of immigration, acculturation, structural exclusion, and a rapidly shifting policy environment[190]. As of 2020, approximately 45 million immigrants resided in the United States, representing 14% of the total population, with an estimated 27.5% being females of reproductive age, a population whose SRH needs remain critically underserved.[2] Compared to their US-born counterparts, immigrant women face well-documented disparities across multiple dimensions of SRH care: they are less likely to use highly effective contraceptive methods[4,191], less likely to access preventive SRH services including breast and cervical cancer screenings[29,30,192] and have lower prenatal care utilization compared to US-born individuals[193].These disparities are rooted in and aggravated by intersecting structural barriers including immigration status[39,40], insurance exclusions[4,41], language barriers[42], cultural stigma[46], as well as restrictive immigration[45,46] and reproductive health policies[19] that that systematically constrain immigrant women's ability to access and utilize SRH care[47,49].

At the most fundamental level, immigration status determines access to health insurance: noncitizen immigrants - particularly those who are undocumented are explicitly barred from federally funded insurance programs including Medicaid, Medicare, and the Children's Health Insurance Program, and from purchasing insurance from the federal marketplace[194]. As a result, approximately 46% of undocumented immigrant adults are uninsured, compared to just 6% of U.S. born adults, a disparity that directly constrains access to SRH services[6]. Even among immigrants with some form of insurance coverage, citizenship-based Medicaid eligibility

restrictions have been shown to widen prenatal care disparities. A cross-sectional analysis of over 8 million birth records found that access to timely prenatal care increased for US-born women but not immigrant women following Medicaid expansion, with the widening gap attributable to exclusions from eligibility for many immigrant subgroups. Beyond insurance, language barriers, limited health literacy, lack of culturally concordant providers, and navigational challenges within the US healthcare system compound immigrants' structural disadvantage in accessing SRH care[46,73]. Immigration enforcement further exacerbates these barriers: research documents chilling effects that delay care[68,195] and lead to decreased participation in public programs[196]. The cumulative effect of these intersecting structural barriers among immigrant women whose SRH needs are systematically unmet by the US healthcare system may motivate alternative care-seeking strategies, including seeking SRH care in countries of origin.

The structural environment shaping immigrant women's SRH care access is defined by two intersecting policy landscapes - immigration policy and reproductive health policy that together create compounding constraints with particular impact on immigrant women of reproductive age. On the immigration policy side, decades of federal and state legislation have systematically restricted immigrant access to healthcare and social services. The 1996 Personal Responsibility and Work Opportunity Reconciliation Act established five-year waiting periods for lawful permanent residents to access Medicaid and barred undocumented immigrants from most federal benefit programs[40,197]. The public charge rule has further deterred immigrant families from utilizing benefits they are entitled to, and escalating immigration enforcement has produced chilling effects across healthcare settings that disproportionately affect communities with high concentrations of legally precarious immigrants[39,40,198]. State-level immigration

policies add additional layers of variation: states with restrictive immigration enforcement postures, limited sanctuary protections, and narrow Medicaid eligibility rules for immigrants create systematically worse structural environments for SRH care access than states with more protective policies[199–201].

On the reproductive health policy side, the 2022 Supreme Court decision in *Dobbs v. Jackson Women's Health Organization* overturned nearly five decades of federally protected abortion rights, granting states authority to restrict or ban abortion care and triggering a cascade of restrictions across approximately half of US states[202,203]. These reproductive policy changes compound pre-existing immigration-related barriers: research documents that abortion bans have deepened barriers for immigrant communities through fear of surveillance, documentation requirements, and geographic barriers to abortion access, while also restricting the broader SRH services available in states where abortion providers have closed or curtailed operations[20,204]. For immigrant women navigating both a restrictive immigration policy environment and a post-*Dobbs* reproductive health landscape, the cumulative structural burden may motivate transnational care-seeking as an adaptive strategy where women may return to countries of origin for SRH services that are unavailable, unaffordable, or unsafe to access in the United States.

Within the broader landscape of immigrant women's SRH disparities, Asian immigrant women represent a particularly understudied yet rapidly growing population warranting focused attention. Asian Americans are currently the fastest-growing racial group in the United States, having experienced an 81% population increase since 2000, with 71% of adult Asian Americans being immigrants[206]. Despite their demographic significance, research consistently treats this population as a monolithic group, an aggregation that obscures substantial heterogeneity across ethnic subgroups, countries of origin, immigration pathways, languages, socioeconomic

circumstances, and health behaviors[207–209]. This aggregation is particularly problematic for SRH research. Data from the California Health Interview Survey reveal that Filipina, Korean, and Vietnamese women exhibit markedly different contraceptive utilization patterns, with acculturation level, particularly among Vietnamese and Korean subgroups significantly associated with contraceptive use[57]. Similarly, foreign-born Asian immigrant women experience greater difficulties obtaining timely SRH care than non-Hispanic White women even within the same state, with disparities varying substantially by country of origin, length of US residence, and insurance status[57,210]. These subgroup differences may extend to transnational healthcare utilization. Asian ethnic subgroups differ in migration-related characteristics, language, socioeconomic resources, and access to healthcare in the country of residence, factors that may shape whether and how immigrants seek care abroad[211,212]. Comparative research also documents differences in transnational healthcare practices between Asian immigrant groups, while broader research on diasporic medical travel demonstrates that family, community, and ethnic networks can facilitate access to healthcare in countries of origin[79,213].

Asian immigrant women also span the full spectrum of immigration statuses from naturalized citizens and legal permanent residents to temporary visa holders and undocumented individuals creating meaningful heterogeneity in structural vulnerability that aggregate analyses obscure[50,51]. Immigration status may shape transnational healthcare through two related mechanisms: access to healthcare in the United States and the ability to travel across national borders. Among the groups included in the present analysis, naturalized citizens generally have the most secure eligibility for public health coverage. Many lawful permanent residents are subject to a five-year waiting period for Medicaid, although exceptions and state-level coverage options apply, while temporary visa holders' eligibility depends on their visa category, insurance

arrangements, income, and state policy[40,214]. Prior research demonstrates that immigration status affects health-service utilization partly through insurance coverage and other enabling resources[215,216]. These differences in U.S. healthcare access, together with varying degrees of familiarity with the U.S. healthcare system and continuing ties to origin-country providers, families, and healthcare systems, may produce differences in transnational care-seeking[216,217].

A prior BRAVE study conducted to examine the role of health insurance and SRH use among undocumented Asian and Latinx immigrants revealed that undocumented Asian respondents had lower adjusted odds than undocumented Latinx respondents of obtaining contraception a private clinic rather than a public clinic or another source and using health insurance to pay for contraception used at last sex[66]. These patterns underscore the necessity of disaggregating Asian immigrants by not only ethnic subgroup but also by immigration status and examining the structural factors that differentially shape SRH care utilization across this population. Understanding not just whether Asian immigrant women use SRH care, but the patterns of care they utilize including care sought across national borders requires an analytic framework that attends to structural context, ethnic diversity, and the adaptive strategies immigrants employ in response to healthcare barriers.

One adaptive strategy that immigrant women may employ in response to structural barriers in the U.S. healthcare system is seeking healthcare in their countries of origin, a practice commonly described as transnational healthcare or diasporic return healthcare[95]. Such care-seeking may be shaped by multiple, overlapping considerations, including cost, service availability, perceived quality, cultural familiarity, language concordance, trust in providers, and family and social ties to the country of origin[69,95,218]. Consistent with scholarship emphasizing the fluid boundaries among forms of cross-border healthcare seeking, we do not treat

transnational healthcare and medical tourism as mutually exclusive categories[217]. Instead, we use transnational healthcare descriptively to refer to participants' use of healthcare in their countries of origin while residing in the United States and examine the motivations underlying this practice, particularly in relation to intimate and culturally embedded domains of care such as SRH[69,95,218].

Research across diverse immigrant populations documents the prevalence and adaptive logic of transnational health-seeking. Among Central and Eastern European migrants in the United Kingdom, push factors including cultural expectations of medical services, distrust in the National Health Service, and ongoing transnational ties led migrants to seek healthcare in their home countries, often combining home visits with medical appointments[219]. Among older Chinese and Korean immigrants in Canada, transnational health practices including traveling to home countries for healthcare and accessing home-country medicines were directly linked to sociocultural and economic barriers encountered in the Canadian healthcare system[79].

Theoretically, transnational healthcare can be understood within Levitt and Glick Schiller's transnational social field framework, which proposes that assimilation and enduring transnational ties are neither incompatible nor binary opposites, immigrants can simultaneously participate in US healthcare systems while maintaining healthcare connections to their countries of origin[81]. This simultaneity may be especially relevant for SRH care given its culturally embedded nature and the heightened barriers immigrant women face in the US context. Yet, despite growing recognition of transnational healthcare as an adaptive strategy, to our knowledge, no quantitative research has examined the full spectrum of transnational SRH care utilization patterns among Asian immigrant women in the United States including who uses

exclusively transnational care, who uses both US and transnational care simultaneously (mixed care), and what structural and sociodemographic factors predict each pattern.

The present study integrates two complementary theoretical frameworks to examine correlates of transnational SRH care utilization among Asian immigrant women. First, Andersen's Behavioral Model of healthcare utilization[220] provides the organizing structure for the study's predictors, categorizing factors that shape healthcare-seeking into three domains: predisposing factors - sociodemographic characteristics that exist prior to the onset of illness or need, including ethnicity, years of US residence, age, and marital status; enabling factors- structural resources and barriers that facilitate or impede access to care, including immigration status, state of residence, insurance status, and income; and need factors - perceived and evaluated health needs that motivate care-seeking, including SRH care need and cultural norms around healthcare.

Originally developed to explain healthcare utilization in general populations, the Andersen model has subsequently been extended and adapted for immigrant populations by incorporating migration-specific and structural factors[216,220]. Within these adaptations, immigration status and insurance coverage may be especially consequential enabling factors because legal eligibility restrictions and other structural exclusions shape immigrants' access to healthcare[215,216]. Second, the transnationalism framework of Levitt and Glick Schiller, specifically the concept of transnational social fields, provides the theoretical lens through which we understand how these predisposing, enabling, and need factors shape patterns of SRH care utilization across national borders[81]. The transnational social field framework proposes that immigrants are simultaneously embedded in social fields spanning both their origin and

receiving countries — maintaining social, cultural, and institutional ties across borders even as they integrate into host country contexts[81].

Applied to healthcare, this framework conceptualizes transnational healthcare not as a failure of integration but as a rational adaptive response to the push and pull forces operating within immigrants' transnational social fields: structural barriers in the US healthcare system (push factors) combined with cultural familiarity, trust, and ongoing social ties to origin-country healthcare systems (pull factors) simultaneously motivate transnational care-seeking. As illustrated in Figure 1, predisposing, enabling, and need factors shape immigrants' position within transnational social fields, which in turn predict the four-category SRH care utilization outcome - non-use, US-only care, mixed US and transnational care, and transnational-only care, with mixed and transnational-only care representing the primary outcomes of interest.

Duration of US residence is a key structural and social determinant of immigrant healthcare utilization, widely used as a proxy for acculturation — the process by which immigrants adopt host country behaviors, norms, and institutional practices over time[221–223]. The healthy immigrant effect posits that recent arrivals often exhibit health-protective behaviors shaped by origin-country norms, with gradual integration into US healthcare systems as length of residence increases; however, the relationship between residence duration and healthcare behavior is neither linear nor uniform across health domains, racial and ethnic groups, or structural contexts[221,224,225]. A critical review of the acculturation literature among Asian immigrants found substantial heterogeneity in duration patterns across health outcomes, cautioning against the assumption that longer residence uniformly predicts assimilation toward host-country healthcare behaviors, and proposing alternative frameworks that consider structural and environmental influences alongside cultural processes[153]. For SRH specifically,

acculturation level has been positively associated with contraceptive use among Asian immigrant women, particularly among Vietnamese and Korean subgroups with lower acculturation suggesting that SRH behaviors shift meaningfully with increased integration into the US healthcare system[57]. Drawing on Andersen's behavioral model of healthcare utilization, extended to incorporate immigrant-specific factors, years of US residence can be understood as both an enabling resource providing time to develop familiarity with the US healthcare system and a marker of changing structural context as immigrants' immigration status, insurance coverage, and social networks evolve[220].

Building on these frameworks and the transnational social field perspective, we hypothesize that transnational SRH care utilization follows a three-stage acculturation trajectory: recent arrivals (0–4 years) relying primarily on transnational or no care, reflecting limited integration into the US healthcare system and strong maintenance of origin-country ties; women at intermediate residence durations (5–9 years) engaging in mixed dual-system care as they simultaneously navigate US and home-country healthcare; and longer-term residents (10+ years) transitioning progressively toward US-only care, though potentially retaining mixed care patterns reflecting enduring transnational social ties.

The state policy environment adds a critical geographic dimension to the structural barriers shaping immigrant women's SRH care utilization. States vary dramatically in their immigration enforcement policies, Medicaid eligibility rules for immigrants, sanctuary protections, and reproductive health policy environments creating a patchwork of structural conditions that may differentially motivate transnational care-seeking across geographic contexts[106,199,200]. On the immigration policy side, states range from those with explicit sanctuary protections that limit cooperation between local law enforcement and federal immigration

authorities to those with active enforcement partnerships that heighten fear of care-seeking among immigrant communities[226].

On the reproductive health policy side, the post-*Dobbs* landscape has produced dramatic state-level variation in abortion access, with approximately half of states imposing partial or complete bans including several states with large Asian immigrant populations[203,227]. Research suggests that state restrictiveness in both immigration and reproductive health policy compounds structural barriers for immigrant women, potentially pushing those in more restrictive environments toward transnational care as an alternative when US-based care is unavailable, unaffordable, or unsafe to access[2,19,228,229]. The BRAVE Study's multi-state design recruiting Asian immigrant women across California, Georgia, New York, Texas, and other states captures meaningful variation in both immigration and reproductive health policy environments, providing a unique opportunity to examine how state-level structural context shapes SRH care utilization patterns.

Despite the growing body of research on immigrant women's SRH disparities and the emerging literature on transnational healthcare practices, quantitative research on transnational SRH care utilization patterns among Asian immigrant women in the United States is virtually nonexistent. No prior study has examined the full spectrum of SRH care utilization among this population, nor the sociodemographic and structural predictors that distinguish engagement in each pattern. The present study addresses this critical gap using data from the BRAVE (Building Community, Raising All immigrant Voices for health Equity) Study, a multi-state survey of Asian immigrant women recruited across five US states. The research questions presented below guides the framework of this study.

Research Questions:

1. What are the sociodemographic and immigration-related correlates of transnational sexual and reproductive healthcare (SRH) utilization among Asian immigrant women in the United States?
2. What patterns of SRH care utilization exist among Asian immigrant women, including non-use, U.S.-only care, mixed U.S. and transnational care, and transnational-only care?

Hypotheses:

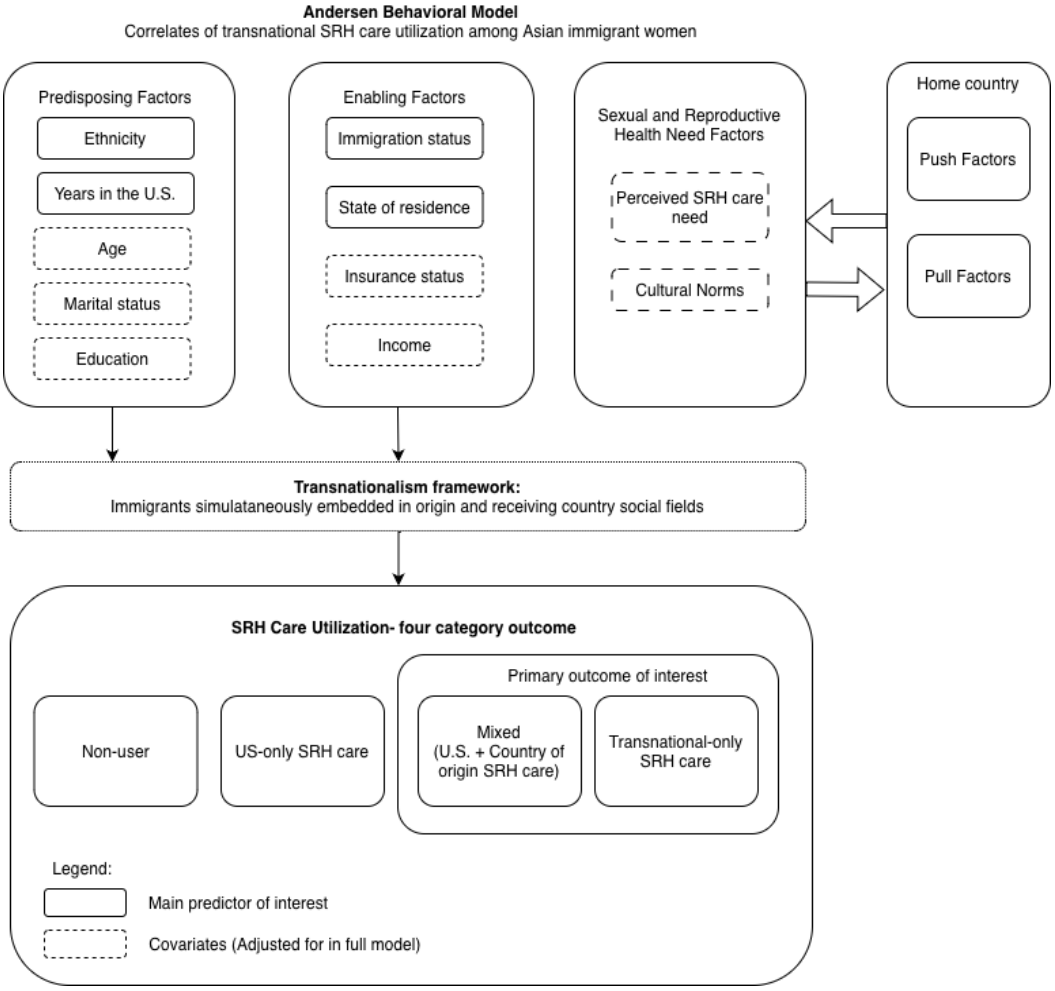
Guided by Andersen's Behavioral Model [220]of Health Services Use and theories of transnational healthcare utilization, we hypothesized that:

H1: Compared with naturalized citizens, lawful permanent residents and temporary visa holders will have higher adjusted odds of mixed and transnational-only SRH care, relative to U.S.-only care, after accounting for relevant sociodemographic and immigration-related characteristics. We further expect temporary visa holders to have the highest odds of transnational SRH care utilization, followed by lawful permanent residents and naturalized citizens.

H2: Transnational SRH care utilization will differ across Asian ethnic subgroups, independent of immigration status, years of U.S. residence, state of residence, and other relevant sociodemographic characteristics.

H3: Women with fewer years of U.S. residence will be independently associated with higher odds of transnational SRH care utilization compared with women with longer durations of U.S. residence, after controlling for relevant sociodemographic and immigration-related characteristics.

Figure 3. Analytical Framework



Applied to Asian immigrant women's SRH care utilization, contextual characteristics include the state-level immigration and reproductive health policy environments that structure care access; predisposing factors include ethnicity, years of US residence, age, and marital status —characteristics that exist prior to the healthcare encounter and shape the likelihood of care-seeking. Enabling factors include immigration status, state of residence, insurance status, and income — structural resources and barriers that facilitate or constrain access to SRH care in both the United States and countries of origin. Immigration status is positioned as a particularly salient enabling factor, given its centrality to insurance eligibility, fear of enforcement, and access to transnational care. Need factors include perceived SRH care need and cultural norms

around reproductive health, the motivating conditions that prompt healthcare-seeking. \Several studies have used Andersen Behavioral Model to study migrants' mental health[230] and few studies have used this model to study maternal health[231,232] globally and maternal health and breast cancer screening in the United States[233–236] and very few studies applied to Asian immigrants[237–240].

The present study extends Andersen's original framework to account for transnational care-seeking, recognizing that immigrant women may simultaneously engage healthcare systems in both the United States and their countries of origin[81]. The transnationalism framework of Levitt and Glick Schiller provides the theoretical lens through which Andersen's predisposing, enabling, and need factors are understood to shape care patterns across national borders. This framework conceptualizes transnational SRH care not as a failure of integration into the US healthcare system, but as a rational adaptive practice shaped by the push and pull forces operating within immigrants' transnational social fields: structural barriers in the US healthcare environment including insurance exclusions, legal precarity, and restrictive reproductive health policies push women toward origin-country care, while cultural familiarity, trust in home country providers, language concordance, and ongoing social ties to origin-country healthcare systems pull them toward transnational care[69].

Critically, these push and pull forces do not operate as an either/or the transnational social field framework predicts that many immigrants will simultaneously engage both US and transnational healthcare systems, reflected empirically in the Mixed care category that is one of the primary outcomes of interest in this study. As illustrated in Figure 1, predisposing, enabling, and need factors shape Asian immigrant women's position within transnational social fields, which in turn predicts their SRH care utilization pattern across four categories: non-use, US-only

care, mixed US and transnational care, and transnational-only care, with mixed and transnational-only care representing the primary outcomes of theoretical interest.

2. Methods

2.1. Study Design and Data Source:

The present study draws on data from the BRAVE (Building Community, Raising All immigrant Voices for health Equity) study, a sequential mixed-methods study to examine the association between immigration status and SRH among Asian immigrant women in the United States[166]. BRAVE Phase I was comprised of qualitative interviews with Asian immigrant women and community experts, whose findings directly informed the design, measures, and recruitment strategies of the Phase II quantitative survey a multi-site, cross-sectional survey, conducted in Atlanta, Houston, Los Angeles, and New York City. The present analysis draws exclusively on Phase II survey data and employs a quantitative, cross-sectional analytic design to examine the correlates of four SRH care utilization patters - non-use, US-only care, mixed US and transnational care, and transnational-only care among Asian immigrant women.

2.2. Sampling and Data Collection:

The study population consists of individuals who were assigned female at birth, aged 18-49 years, self-identified as Asian, were born outside the United States, currently resided in the United States, and were able to complete the survey in English, Chinese (Mandarin and Cantonese), Hindi, Korean, or Vietnamese. Consistent with the study's focus on reaching invisibilized and structurally marginalized populations, participants were eligible across the full spectrum of immigration statuses, including undocumented individuals, Deferred Action for Childhood Arrivals (DACA) recipients, individuals in liminal or temporary status (e.g., visa), lawful permanent residents, and naturalized citizens[166]. Data collection began in January 2025

across Atlanta, Houston, Los Angeles, and New York City. These sites were selected because they are located in states with large Asian immigrant populations and represent diverse reproductive rights environments and immigrant policy contexts[65,241].

Participants were recruited using an adapted Starfish Sampling methodology- a novel hybrid approach combining random time-location sampling and respondent-driven sampling (RDS), developed specifically to reach populations that are often excluded from traditional survey frames[165]. In the TLS component, trained multilingual field officers recruited participants at randomly selected venue–date–time combinations across venues frequented by Asian immigrant women, including grocery stores, religious centers, community-based organizations, and restaurants. In the RDS component, each recruited participant could refer up to three peers from their social networks, extending reach into harder-to-reach segments of the population including women with undocumented or liminal immigration status[166]. The study was conducted within a community-based participatory research framework, with community partner organizations co-directing all research activities, providing feedback on sampling procedures and survey instruments, hiring and training multilingual field officers, and conducting recruitment events at their respective sites. The BRAVE Community Advisory Board, composed of immigrant-led and reproductive justice organizations, additionally reviewed survey instruments and evaluated cultural appropriateness of measures and translations[166].

Recruited participants completed a 40-minute survey in their preferred language in person at recruitment venues, by phone, or online through Qualtrics, a HIPAA-compliant survey platform. Upon survey completion, participants received a $40 gift card and were invited to refer up to three peers from their social networks, receiving an additional $10 gift card for each peer who completed the survey[166]. All study team members, including field officers at each

site, completed CITI Human Subjects Research Training and HIPAA training and the study protocol received IRB approval from the University of California, Los Angeles[166].

2.3. Study Measures:

Outcome: Transnational SRH Healthcare Use is operationalized as a four-category measure: non-use (reference?), US-only use, mixed use (engagement in both U.S. and transnational SRH care), and transnational-only use. — relative to women who did not access care transnationally (Non-user, US-only). This variable constructed using two survey items (See Appendix A)*:* "Which of these sexual and reproductive healthcare services have you ever used in the U.S.?" and a second item, "While you have lived in the U.S., which of these sexual and reproductive healthcare services have you used outside the U.S.?"

Responses were collapsed into a single binary indicator of any transnational SRH care use — defined as endorsing at least one service option — versus no transnational use, defined as selecting "I have never used SRH care outside the United States since moving here." Women who selected "Prefer not to answer" were treated as missing and excluded from analyses (X% of responses).

A four-category outcome variable was constructed:

- *Non-users* (no SRH service use in the US or outside the United States (Q406), *US-only users:* participants who reported using at least one SRH service in the US but no SRH service use outside the US. This category serves as the reference group in all regression analyses.
- *Mixed users:* participants who reported SRH use in the United States and outside the United States, and.

- *Transnational-only users:* participants who reported using at least one SRH service outside the United States but no SRH service use in the United States

Key Independent Variables

a. *Current immigration status*: Immigration status was categorized as naturalized citizen (reference), lawful permanent resident, or temporary visa holder. Participants who identified as undocumented or as DACA recipients (n = 58; 2.9% of participants with non-missing outcome data) were excluded from the analytic sample because their small subgroup size produced sparse cells across the four SRH care-utilization categories, including only one participant in the transnational-only category. The resulting analytic sample included 1,972 participants. In sensitivity analyses that retained undocumented/DACA respondents, estimates for the three primary immigration-status categories were substantively unchanged; however, estimates for undocumented/DACA respondents were unstable and accompanied by extremely wide confidence intervals because of sparse data and separation.

b. *Ethnicity* responses were categorized into six groups: Chinese (reference), Korean, Indian, Vietnamese, Filipino, and other Asian (other East Asian, South Asian, and Southeast Asian).

c. *Years of US residence* was calculated by subtracting the year of first arrival in the United States from 2025, then categorized into three groups: 0–4 years (reference), 5–9 years, and 10 or more years to align with prior literature demonstrating differences in healthcare integration[242–244] acculturation and time in US.

d. *State of residence* served as a proxy for the contextual policy environment and was categorized into five groups: California (reference), Georgia, New York, Texas,

and other states. Per the BRAVE study design, these states represent meaningful variation in both immigration and post-*Dobbs* reproductive health policies. California and New York maintain more protective policy environments — including sanctuary protections[245], expanded Medicaid eligibility for immigrants[40,246], and legally protected abortion access[17,203]— while Georgia and Texas represent more restrictive environments with active immigration enforcement cooperation[247] and highly restrictive post-*Dobbs* abortion policies, including a six-week ban in Georgia[248] and a near-total ban in Texas . The remaining 42 states were collapsed into an 'Other states' category due to small and heterogeneous cell sizes across individual states (ranging from n=1 to n=50), which precluded meaningful state-level analysis. This group comprised 486 participants (23.6%) residing across 35 additional states and the District of Columbia. The largest represented states included New Jersey (n=50), Massachusetts (n=44), Florida (n=29), Indiana (n=29), Illinois (n=27), Maryland (n=25), Michigan (n=22), and Alabama (n=19).

Covariates. Age (years), Marital status (married or partnered (reference), widowed/separated/divorced, and never married); Education (college degree or higher (reference) and high school or less); Household income (less than $30,000, $30,000–$79,999 (reference), $80,000–$149,999, and $150,000 or more). Health insurance status is presented as a three-category variable (private/other insurance [reference], public insurance, and uninsured) in descriptive analyses but subsequently collapsed to a binary variable (insured [private/other insurance and public combined] versus uninsured) in the multinomial model. Sensitivity analyses using the original three-category insurance specification yielded substantively similar findings.

2.4. Statistical Analysis:

Analyses proceeded in three stages. First, descriptive statistics characterized the full analytic sample (N=2,030) across all study measures, including distributions of sociodemographic characteristics, immigration-related variables, and SRH care utilization patterns. Frequencies and cross-tabulations described the prevalence of each SRH care category, and chi-square tests and one-way ANOVA examined bivariate associations between the outcome variable and each predictor and covariate. Missing data on the primary outcome variable (n=29, 1.4%) were primarily attributable to missing responses on the transnational care component (Q406) and were excluded from regression analyses.

Second, multinomial logistic regression was used to estimate associations between primary independent variables and SRH care utilization patterns, with US-only care as the reference outcome category. Two models were estimated: a base model including the four primary predictors (immigration status, ethnicity, years of US residence, and state of residence), and a full model additionally adjusting for age, insurance status, marital status, household income, and education. Undocumented/DACA respondents were excluded from regression analyses due to small cell sizes (n=58, 2.9%), yielding an analytic regression sample of N=1,890 for the base model and N=1,751 for the full model. All models were estimated with robust standard errors to account for potential heteroscedasticity. Results are presented as relative risk ratios (RRRs) with 95% confidence intervals. Joint significance of each predictor across all outcome categories was assessed using Wald chi-square tests. Model fit was assessed using pseudo-R^2 values and Akaike Information Criterion (AIC).

Third, post-estimation average marginal associations were calculated from the fitted models and expressed as percentage-point differences to facilitate interpretation and comparison across predictors. These estimates represent the average difference in the model-adjusted

predicted probability of each outcome associated with a change in each predictor, averaging over the observed values of the other covariates. They are interpreted as adjusted associations rather than causal effects.

Three sets of sensitivity analyses were conducted to assess the robustness of primary findings. First, a binary logistic regression examined predictors of any transnational SRH care use (Mixed + Transnational-only, n=746) versus no transnational use (non-user + US-only, n=1,284) and were compared to primary adjusted model. Second, a three-category outcome collapsing Mixed and Transnational-only users into a single 'any transnational' category was examined using multinomial logistic regression. Third, the primary multinomial model was re-estimated including undocumented/DACA respondents to confirm that their exclusion did not substantially alter findings for other immigration status groups. All analyses were conducted using Stata 18.

3. Results

3.1. Sample Characteristics

The initial study sample consisted of a total of 2,059 Asian immigrant women from the BRAVE Study across the four study sites. Of these, 29 (1.4%) were missing data on the primary outcome variable (transnational healthcare use) and 58 participants who reported being undocumented or having DACA status were excluded because the small subgroup size did not permit reliable estimation of immigration-status differences across the three healthcare-utilization categories. The final analytic sample therefore included 1,972 participants. The mean age of participants was 31.9 years (SD=8.1). Two-fifths of the sample (41.3%) were naturalized citizens, with the remainder distributed across legal permanent residents (28.3%), and temporary visa holders (30.4%). Participants identified across six ethnic groups: Chinese (29.3%), Korean

(20.7%), Indian (13.7%), Vietnamese (13.4%), Filipino (7.8%), and Other Asian (15.2%). The "other" Asian category consisted of participants from other East Asian, South Asian, and Southeast Asian countries. Just over half of participants (55.4%) had resided in the United States for 10 or more years, while 24.9% had resided in the U.S. for 0–4 years and 19.7% for 5–9 years.

Participants were distributed across California (33.6%), New York (16%), Texas (15%), Georgia (11.7%), and 42 other states and the District of Columbia (23.6%). Most participants were highly educated with a college degree or higher (88.9%) and were covered by private insurance (73.9%), with 19.7% covered by public insurance and 6.4% remain uninsured. Approximately half of participants were married or partnered (51.3%), and household income was distributed across four categories, with the largest proportion (34.1%) reporting income between $30,000 and $79,999. Full sample characteristics are presented in Table 3.

Table 3. Sample Characteristics by Sexual and Reproductive Health Care Utilization Pattern Among Asian Immigrant Women, BRAVE Study (N=1,972)

Characteristic	Total (N=1,972)	Non-user (n=434, 21.1%)	US-only (n=850, 41.3%)	Mixed (n=627, 30.5%)	Transnational -only (n=119, 5.8%)	p-value
Age (years), mean ± SD						
Age	31.9 ± 8.1	28.3 ± 7.6	32.7 ± 8.1	33.7 ± 7.8	29.6 ± 8.3	**<0.001**
Immigration Status (ref: Naturalized citizen)						
Naturalized citizen	789 (41.3%)	118 (15.0%)	457 (57.9%)	202 (25.6%)	12 (1.5%)	**<0.001**
Legal permanent resident	540 (28.3%)	102 (18.9%)	181 (33.5%)	229 (42.4%)	28 (5.2%)	
Temporary visa holder	581 (30.4%)	180 (31.0%)	154 (26.5%)	170 (29.3%)	77 (13.3%)	
Ethnicity (ref: Chinese)						
Chinese	575 (29.3%)	115 (20.0%)	252 (43.8%)	173 (30.1%)	35 (6.1%)	**<0.001**
Korean	406 (20.7%)	80 (19.7%)	145 (35.7%)	153 (37.7%)	28 (6.9%)	
Indian	268 (13.7%)	82 (30.6%)	83 (31.0%)	79 (29.5%)	24 (9.0%)	
Vietnamese	262 (13.4%)	79 (30.2%)	103 (39.3%)	63 (24.1%)	17 (6.5%)	

Filipino	152 (7.8%)	14 (9.2%)	90 (59.2%)	42 (27.6%)	6 (4.0%)	
Other Asian	298 (15.2%)	52 (17.5%)	139 (46.6%)	99 (33.2%)	8 (2.7%)	
Years in U.S. (ref: 0–4 years)						
0–4 years	487 (24.9%)	182 (37.4%)	114 (23.4%)	118 (24.2%)	73 (15.0%)	**<0.001**
5–9 years	385 (19.7%)	77 (20.0%)	120 (31.2%)	167 (43.4%)	21 (5.5%)	
10+ years	1,083 (55.4%)	158 (14.6%)	576 (53.2%)	328 (30.3%)	21 (1.9%)	
State of Residence (ref: California)						
California	662 (33.6%)	123 (18.6%)	303 (45.8%)	197 (29.8%)	39 (5.9%)	**<0.001**
Georgia	230 (11.7%)	51 (22.2%)	103 (44.8%)	56 (24.4%)	20 (8.7%)	
New York	316 (16.0%)	64 (20.3%)	131 (41.5%)	110 (34.8%)	11 (3.5%)	
Texas	298 (15.1%)	75 (25.2%)	128 (43.0%)	79 (26.5%)	16 (5.4%)	
Other states	466 (23.6%)	113 (24.3%)	149 (32.0%)	172 (36.9%)	32 (6.9%)	
Education (ref: College or higher)						
College or higher	1,751 (88.9%)	348 (19.9%)	738 (42.2%)	564 (32.2%)	101 (5.8%)	**<0.001**
High school or less	219 (11.1%)	78 (35.6%)	76 (34.7%)	48 (21.9%)	17 (7.8%)	
Insurance Status (ref: Private/Other)						
[a]Private/Other insurance	1,424 (73.9%)	293 (20.6%)	638 (44.8%)	410 (28.8%)	83 (5.8%)	**<0.001**
Public insurance	379 (19.7%)	69 (18.2%)	134 (35.4%)	161 (42.5%)	15 (4.0%)	
Uninsured	124 (6.4%)	40 (32.3%)	36 (29.0%)	32 (25.8%)	16 (12.9%)	
Marital Status (ref: Married/partnered)						
Married/partnered	1,010 (51.3%)	122 (12.1%)	459 (45.5%)	386 (38.2%)	43 (4.3%)	**<0.001**
Widowed/separated/divorced	107 (5.4%)	14 (13.1%)	45 (42.1%)	43 (40.2%)	5 (4.7%)	
Never married	851 (43.2%)	289 (34.0%)	310 (36.4%)	182 (21.4%)	70 (8.2%)	
[b]**Household Income (ref: $30,000–$79,999)**						
Less than $30,000	378 (20.6%)	119 (31.5%)	125 (33.1%)	104 (27.5%)	30 (7.9%)	**<0.001**
$30,000–$79,999	628 (34.1%)	138 (22.0%)	267 (42.5%)	186 (29.6%)	37 (5.9%)	
$80,000–$149,999	483 (26.3%)	81 (16.8%)	213 (44.1%)	168 (34.8%)	21 (4.4%)	
More than $150,000	350 (19.0%)	25 (7.1%)	180 (51.4%)	130 (37.1%)	15 (4.3%)	

Notes:

The initial sample included 2,059 participants. Participants missing the SRH care-utilization outcome (n = 29) and undocumented/DACA participants (n = 58) were excluded, yielding a final sample of 1,972. Row percentages calculated across the four SRH care utilization categories within each characteristic.

Age reported as mean ± SD; p-value from one-way ANOVA. All other p-values from Pearson chi-square omnibus tests across all categories of each variable.

[a] Private/Other insurance includes private employer-based, non-group/marketplace, student health plans, and military-related insurance.

[b] Household income: 'Don't know' responses (n=132) set to missing prior to analysis.

Missing data (excluded from row percentages): SRH care type n=29 (1.4%); Immigration status n=62; Ethnicity n=11; Years in U.S. n=17; Education n=2; Insurance n=45; Marital status n=4; Income n=133. Missing observations were excluded from percentages and omnibus tests.

Reference categories for multivariable regression analyses indicated by (ref).

P values were calculated using one-way analysis of variance for age and Pearson χ^2 tests for all categorical characteristics. Tests were two-sided, and observations with missing data for the characteristic being tested were excluded.

Source: BRAVE Study

4.2 Bivariate Associations Between Sociodemographic Characteristics and SRH Care Utilization Pattern (Transnational Healthcare Use):

Among the analytic sample, 30.5% (n=627) reported using SRH care both in the United States and in their country of origin (Mixed), and 5.8% (n=119) reported using SRH care exclusively in their country of origin (Transnational-only). Together, utilization of transnational SRH care constituted 36.3% of the analytic sample, underscoring that more than one in three Asian immigrant women in this study accessed SRH services outside the U.S. healthcare system at some point after they migrated to the US.

Bivariate analyses revealed significant associations between all examined sociodemographic and immigration-related characteristics and SRH care utilization pattern (all $p<0.001$; Table 3). Mean age differed significantly across groups with mixed care users being oldest (mean=33.7 years, SD=7.8). Immigration status was strongly associated with SRH care utilization pattern ($\chi^2=251.4$, $p<0.001$). Temporary visa holders had the highest proportion of both non-user (31.0%) and Transnational-only (13.3%) care relative to other immigration status groups, while naturalized citizens had the highest proportion of US-only care (57.9%) and legal permanent residents had the highest mixed care use (42.4%).

Ethnicity was significantly associated with SRH care utilization ($\chi^2=80.5$, $p<0.001$). Filipino women had the highest proportion of US-only care (60.1%) compared to other ethnic groups. Korean women had the highest proportion of mixed care use (37%) and Indian women had the highest proportion of Transnational-only care (9.1%). Both Korean and Indian had highest proportion of mixed care and transnational care compared to other ethnic groups.

Years of U.S. residence showed a strong bivariate association with SRH care utilization pattern (χ^2=297.4, p<0.001). Women with 0–4 years of U.S. residence had the highest proportion of both non-use (37.4%) and Transnational-only (14.7%) care, while women with 10 or more years of residence had the highest proportion of US-only care (53.8%). Notably, women with 5–9 years of residence had the highest proportion of Mixed care (43.4%) of any residence duration category, suggesting a non-linear relationship between acculturation and transnational care engagement. State of residence was significantly associated with SRH care utilization (χ^2=43.3, p<0.001), though the four focal states- California, Georgia, New York, and Texas were relatively similar to one compared to the more heterogeneous 'Other states' category. Georgia showed a modestly elevated rate of Transnational-only use (8.6%) compared to other states, while Texas showed elevated non-user rather than elevated transnational care. However, these state differences were not statistically significant in adjusted models.

4.3 Correlates of SRH Care Utilization Pattern: Base Multinomial Model

The base multinomial logistic regression model (N=1,890; Pseudo R^2=0.092) confirmed that the bivariate patterns described above persisted after accounting for the joint influence of main predictors: immigration status, ethnicity, years of U.S. residence, and state of residence. Results are presented as relative risk ratios (RRR) relative to US-only care, the reference outcome category (Table 4).

Consistent with Hypothesis 2a, immigration status was strongly associated with transnational care use (p<0.001) after accounting for other predictors. Relative to naturalized citizens, both legal permanent residents and temporary visa holders had substantially higher relative risk of Mixed care (RRR=2.49 and 2.09, respectively) and Transnational-only care (RRR=2.61 and 5.35, respectively) versus US-only care. The magnitude of the visa holder

finding is noteworthy with temporary visa holders having more than five times the relative risk of relying exclusively on transnational SRH care compared to naturalized citizens, the largest effect of any predictor in the base model.

Consistent with Hypothesis 2b, ethnicity was significantly associated with care pattern even after accounting for immigration status and years of residence. Korean and Indian women were significantly more likely than Chinese women to engage in Mixed care versus US-only care, while Vietnamese and Indian women were significantly more likely to be Non-users of either modality versus US-only care. Filipino women, by contrast, had significantly lower relative risk of Non-use, mirroring the strong U.S. care use observed at the bivariate level. Women in the Other Asian category had significantly lower relative risk of Transnational-only care versus US-only care relative to Chinese women.

Consistent with Hypothesis 2c, years of U.S. residence followed the non-linear pattern depicted by the bivariate results. Compared to recent arrivals (0–4 years), women with 5–9 years of residence had significantly lower relative risk of Transnational-only care, but significantly higher relative risk of Mixed care — indicating a shift away from exclusive transnational reliance toward dual-system use. Women with 10 or more years of residence showed an even sharper decline in Non-use and Transnational-only care but no longer differed significantly from recent arrivals in their likelihood of Mixed care, suggesting that the elevated dual-system use observed at 5–9 years decreased over time in the US.

State policy context was also jointly associated with SRH care-utilization pattern (P=.002). Participants living in other Medicaid-expansion states had higher relative risk of mixed care rather than U.S.-only care compared with California residents (RRR, 1.44; 95% CI, 1.03–2.00). The association was stronger among participants living in other non-expansion states

(RRR, 3.57; 95% CI, 1.79–7.11). Georgia, New York, and Texas did not differ significantly from California in any of the three outcome comparisons. No state-policy category was significantly associated with transnational-only care. These findings indicate that the association previously attributed to the heterogeneous "Other states" category was concentrated in mixed care and was particularly pronounced among participants residing in other non-expansion states.

Table 4. Base Multinomial Logistic Regression Model of Sexual and Reproductive Healthcare Utilization Patterns Among Asian Immigrant Women (N=1,890)

Pseudo R^2=0.092 | Overall p<0.001 | AIC=4,288.9 | Reference outcome: US-only care

	Non-user vs. US-only		Mixed vs. US-only		Transnational-only vs. US-only		Joint p
Variable	**RRR**	**95% CI**	**RRR**	**95% CI**	**RRR**	**95% CI**	
Immigration Status (ref: Naturalized citizen)							
Legal permanent resident	1.35	0.94–1.94	2.49***	1.87–3.31	2.61*	1.19–5.72	<0.001
Temporary visa holder	1.68*	1.09–2.58	2.09***	1.46–2.99	5.35***	2.41–11.86	
Ethnicity (ref: Chinese)							
Korean	1.2	0.83–1.74	1.50*	1.09–2.07	1.56	0.88–2.75	<0.001
Indian	1.65*	1.09–2.50	1.54*	1.03–2.29	1.32	0.70–2.46	
Vietnamese	2.08**	1.35–3.20	1.12	0.74–1.69	1.87	0.92–3.81	
Filipino	0.45*	0.23–0.87	0.88	0.56–1.37	0.69	0.25–1.90	
Other Asian	0.65	0.41–1.03	1.08	0.76–1.53	0.38*	0.16–0.87	
Years in U.S. (ref: 0–4 years)							
5–9 years	0.43***	0.29–0.65	1.69**	1.16–2.47	0.37**	0.20–0.66	<0.001
10+ years	0.25***	0.16–0.37	0.98	0.68–1.43	0.16***	0.08–0.30	
State (ref: California)							
Georgia	0.92	0.60–1.42	0.70	0.48–1.04	1.20	0.62–2.33	.002
New York	1.21	0.82–1.87	1.34	0.96–1.87	0.75	0.36–1.56	
Texas	0.89	0.58–1.37	0.86	0.60–1.24	0.83	0.42–1.63	
Other Medicaid-expansion states	1.40	9.96–2.05	1.44*	1.03–2.00	1.01	0.55–1.87	

Other non-expansion states	2.06	0.89–4.77	3.57***	1.79–7.11	1.89	0.60–5.92

RRR = Relative Risk Ratio with robust standard errors. 95% CI = confidence interval. Undocumented/DACA excluded from regression (n=58, 2.9%); included in Table 1
* p<0.05 ** p<0.01 *** p<0.001. Joint p-values from Wald chi-square tests. Source: BRAVE Study.

4.4 Correlates of SRH Care Utilization Pattern: Fully Adjusted Model

The fully adjusted model, which additionally controlled for covariates such as age, insurance status, marital status, household income, and education, improved model fit compared to the base model (N=1,751; Pseudo R^2=0.133) and largely confirmed the robustness of the primary findings (Table 5).

The immigration status findings not only persisted but strengthened slightly after adjustment. Temporary visa holders remained at substantially higher likelihood of both Mixed care (RRR=2.58) and Transnational-only care (RRR=6.49) relative to naturalized citizens, while legal permanent residents showed a somewhat smaller yet similar pattern (RRR=2.54 and 2.57, respectively). This suggests that the association between immigration status and transnational care use is robust and that immigration status remains a key predictor even after adjusting for other socioeconomic factors.

Ethnic differences also remained statistically significant after adjustment, though the specific pattern shifted slightly. Korean and Indian women continued to show significantly elevated relative risk of Non-use, and Korean women additionally showed elevated relative risk of Transnational-only care after adjustment - a pattern that was not depicted at the bivariate level but suggests that controlling for socioeconomic and structural factors revealed ethnic differences in transnational care that had been partially hidden in unadjusted analyses.

Years in the US continued to remain statistically significant even after controlling for other sociodemographic factors. Women with 5–9 years of U.S. residence continued to show lower Non-use and Transnational-only care alongside elevated Mixed care, while women

with 10 or more years showed the strongest decline in both Non-use and Transnational-only care, with Mixed care no longer differing from recent arrivals. The persistence of this pattern after adjustment for income, insurance, education, and marital status strengthens the interpretation that this reflects a genuine acculturation process rather than confounding by socioeconomic circumstances that happen to correlate with length of residence.

State policy context remained jointly associated with SRH care-utilization pattern after adjustment (*P*=.007). Compared with California residents, participants living in other non-expansion states had more than three times the relative risk of mixed care rather than U.S.-only care (RRR, 3.24; 95% CI, 1.66–6.34). Participants living in other Medicaid-expansion states did not differ significantly from California residents after full adjustment (RRR, 1.36; 95% CI, 0.97–1.91). Georgia, New York, and Texas also did not differ significantly from California in any outcome comparison. No state-policy category was significantly associated with transnational-only care.

Several covariates were independently associated with care pattern. Being uninsured was associated with significantly lower relative risk of both Mixed care (RRR=0.46) and Transnational-only care (RRR=0.41) relative to insured women, suggesting that financial constraints limit transnational as well as domestic care-seeking. Never-married women had significantly elevated relative risk of both Non-use (RRR=2.34) and Transnational-only care (RRR=2.01) relative to married or partnered women, while women with a high school education or less had significantly elevated relative risk of Non-use (RRR=1.85) relative to college-educated women. Age was not significantly associated with care pattern after adjustment for all other factors.

Table 5. Adjusted Multinomial Logistic Regression of Correlates of Sexual and Reproductive Healthcare Utilization Patterns Among Asian Immigrant Women (N=1,751)

Pseudo R^2=0.133 | Overall p<0.001 | AIC=3,777.5 | Reference outcome: US-only care

	Non-user vs. US-only		Mixed vs. US-only		Transnational-only vs. US-only		Joint p
Variable	**RRR**	**95% CI**	**RRR**	**95% CI**	**RRR**	**95% CI**	
Immigration Status (ref: Naturalized citizen)							
Legal permanent resident	1.17	0.78–1.75	2.54***	1.88–3.43	2.57*	1.12–5.91	<0.001
Temporary visa holder	1.27	0.78–2.07	2.58***	1.77–3.76	6.49***	2.68–15.68	
Ethnicity (ref: Chinese)							
Korean	1.80**	1.18–2.75	1.36	0.97–1.90	2.02*	1.08–3.79	0.0002
Indian	1.87**	1.18–2.96	1.38	0.91–2.09	1.36	0.70–2.67	
Vietnamese	1.58	0.96–2.60	1.27	0.83–1.95	1.61	0.72–3.56	
Filipino	0.51	0.25–1.03	0.77	0.49–1.22	0.47	0.14–1.65	
Other Asian	0.72	0.44–1.16	0.87	0.59–1.26	0.38*	0.16–0.91	
Years in U.S. (ref: 0–4 years)							
5–9 years	0.39***	0.25–0.60	1.67**	1.13–2.48	0.40**	0.21–0.76	<0.001
10+ years	0.25***	0.15–0.40	0.94	0.64–1.39	0.18***	0.09–0.36	
State of Residence (ref: California)							
Georgia	0.95	0.58–1.55	0.71	0.47–1.08	1.44	0.71–2.92	.007
New York	1.19	0.79–1.79	1.30	0.92–1.85	0.82	0.38–1.77	
Texas	0.72	0.44–1.19	0.91	0.62–1.34	1.09	0.53–2.27	
Other Medicaid-expansion states	1.33	0.87–2.03	1.36	0.97–1.91	1.14	0.58–2.23	
Other non-expansion states	1.92	0.79–4.66	3.24***	1.66–6.34	1.41	0.36–5.58	
Covariates							
Age (continuous)	0.98	0.96–1.01	1.01	1.00–1.03	1.02	0.99–1.06	ns
Insurance Status (ref: Insured)							
Uninsured	0.70	0.48–1.00	0.46***	0.35–0.62	0.41**	0.22–0.77	<0.001
Marital Status (ref: Married/partnered)							
Widowed/sep/div	1.29	0.61–2.74	1.39	0.81–2.36	1.49	0.47–4.72	<0.001
Never married	2.34***	1.62–3.38	0.76	0.57–1.02	2.01*	1.10–3.66	
Household Income (ref: $30,000–$79,999)							
Less than $30,000	1.19	0.80–1.75	1.16	0.80–1.69	1.22	0.68–2.22	ns
$80,000–$149,999	1.00	0.69–1.46	1.34	0.99–1.82	1.06	0.52–2.15	
More than $150,000	0.54*	0.32–0.89	1.30	0.93–1.82	1.44	0.66–3.12	
Education (ref: College or higher)							
High school or less	1.85**	1.16–2.94	0.63	0.40–1.03	1.66	0.71–3.89	0.001

RRR = Relative Risk Ratio with robust standard errors. 95% CI = confidence interval.
Reference outcome: US-only care.
Undocumented/DACA excluded from regression (n=58); included in Table 1.
Insurance collapsed to binary: Insured (Private/Other + Public) vs. Uninsured.
* p<0.05 ** p<0.01 *** p<0.001. Joint p-values from Wald chi-square tests. ns = not significant.
Source: BRAVE Study.

4.5 Predicted Probabilities and Average Marginal Effects

Predicted probabilities from the full adjusted model (Figure 4-7) visually depict the patterns observed in the multivariable multinomial analyses. The predicted probability of transnational only SRH care declined steadily with longer US residence compared to US only SRH care, which showed the opposite trend by sharp increase as women stayed in the US longer. Women in the US 0-4years had a 10% predicted probability of transnational-only care, dropping to 4% at 5–9 years and about 2% at 10+ years. In contrast, a clear upward trend is seen in US-only care use where women in the U.S. 0–4 years had only a 31% predicted probability of US-only care use, rising to 36% at 5–9 years and reaching 51% at 10+ years. However, an inverted U-shape is observed for mixed SRH care use, where women in the U.S. 0–4 years had only a 22% predicted probability of mixed care use, rising sharply to 43% at 5–9 years, then declining to about 32% at 10+ years.

The predicted probability of transnational only SRH care showed a sharp upward trend with highest predicted probability of transnational-only SRH care among temporary visa holders (approximately 9%) compared to 4% for legal permanent residents and only about 2% for naturalized citizens. Although these percentages are low, the relative increase is substantial with temporary visa holders roughly 4–5 times more likely than naturalized citizens to rely solely on care obtained outside the U.S. In contrast, naturalized citizens had the highest predicted probability of using US-only SRH care at around 50-55%, falling to approximately 38% for LPRs and 33% for temporary visa holders. This is a drop of roughly 17–22 percentage

points across the immigration status gradient, one of the largest effects in the entire analysis. Mixed care follows a similar trend as was observed for years in the US with naturalized citizens with lowest predicted probability of mixed care use at about 21%, rising steeply to 42% for legal permanent residents and 37% for temporary visa holders.

As for ethnicity, Korean women had the highest predicted probability of transnational only SRH care at about 10%, notably above Vietnamese (8%), Chinese (6%), and Indian (6%) women. Filipino (4%) and Other Asian (3%) women were lowest. For mixed SRH care use, predicted probabilities were relatively uniform across ethnic groups, ranging from about 29% (Filipino) to 33% (Korean and Indian). Wide, overlapping confidence intervals suggest ethnicity is not a meaningful differentiator of mixed care use after accounting for immigration status and other covariates. As for US-only SRH care use, Filipino women had the highest predicted probability at about 57%, followed by Other Asian (51%) and Chinese women (47%, reference).

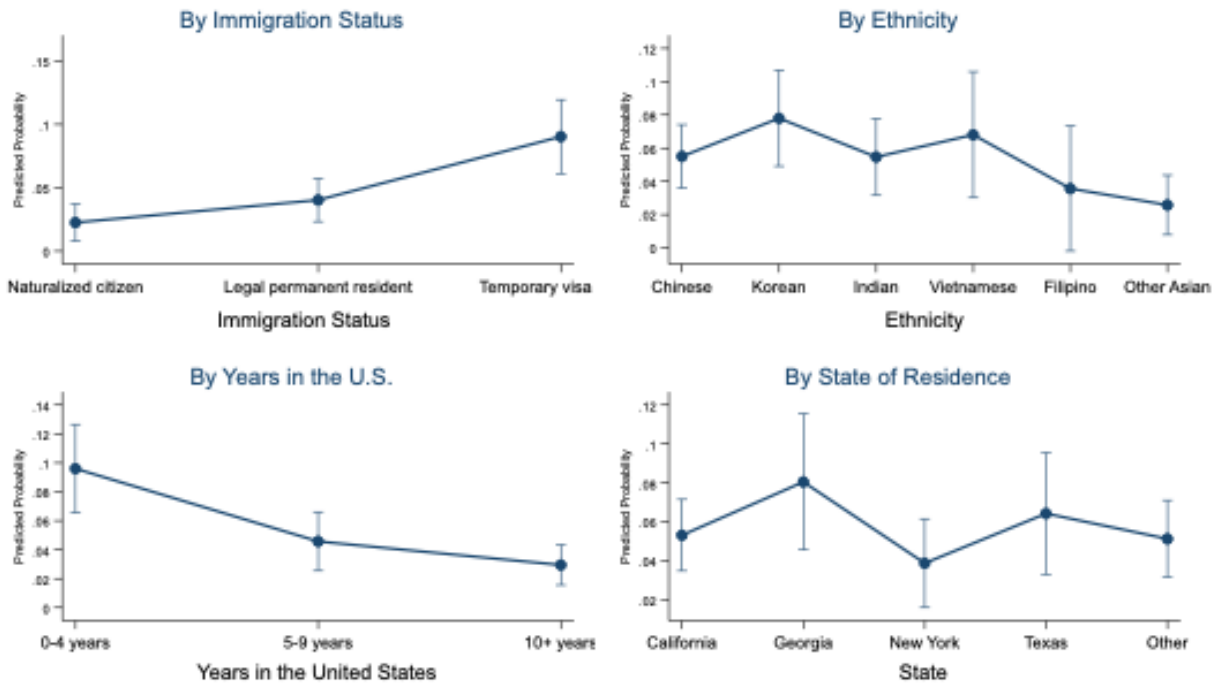
Predicted probabilities of SRH care type varied modestly across states of residence, though differences were generally not statistically significant after accounting for individual-level covariates. The most notable state pattern observed for mixed and transnational-only care included: New York had the highest predicted probability of mixed care use (~37%), while Georgia showed the opposite pattern, with the lowest mixed care (~23%).

Average marginal effects (Figures 6-9) identified immigration legal status and length of U.S. residence as the strongest and most statistically robust predictors of SRH care utilization patterns, while ethnicity and state of residence did not emerge as significant independent predictors after full adjustment. Relative to naturalized citizens, both legal permanent residents and temporary visa holders were significantly more likely to use mixed SRH care (AME ≈ +17 and +15

percentage points respectively) and significantly less likely to forgo SRH care entirely, with temporary visa holders additionally showing a significant positive AME for transnational-only care (∼ +7 percentage points) — a pattern not observed among legal permanent residents.

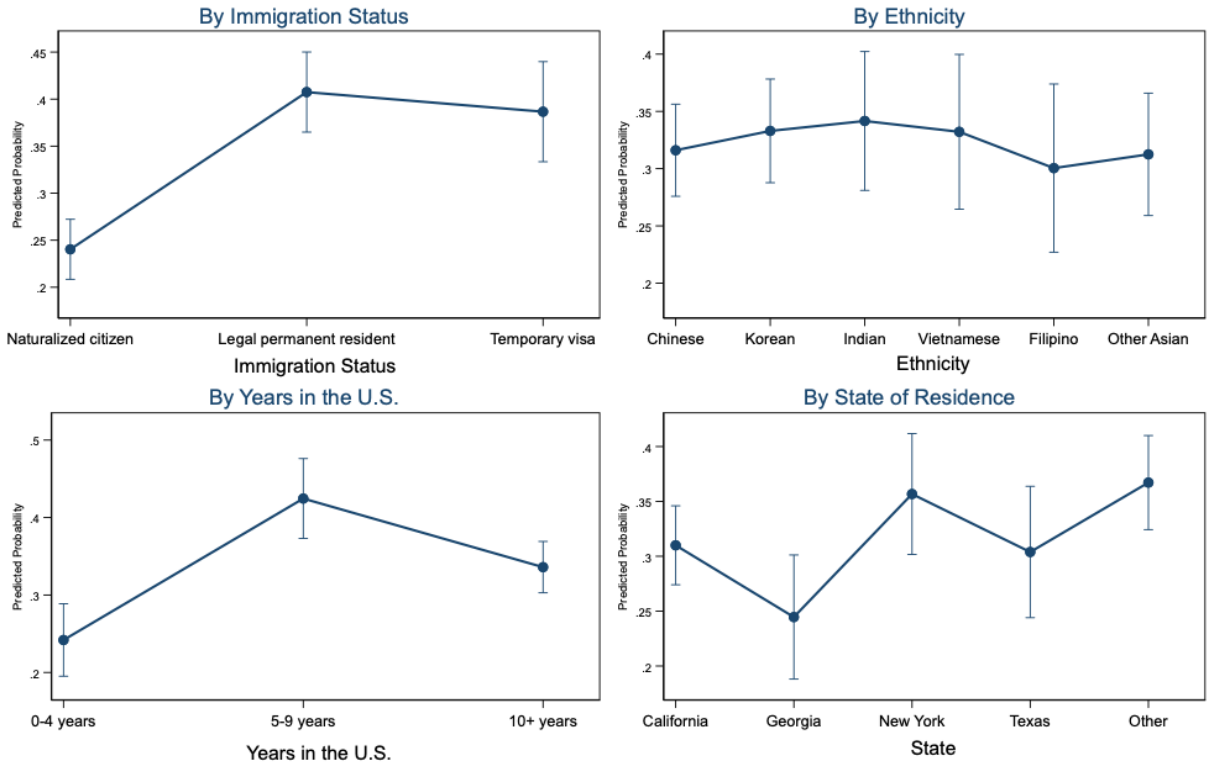
Longer U.S. residence was associated with significant reductions in both non-use (approximately −17 to −19 percentage points at 5–9 and 10+ years relative to 0–4 years) and transnational-only care, alongside significant increases in mixed care use, with the most dramatic shifts occurring between the 0–4 and 5–9-year periods rather than accumulating gradually over time. In contrast, ethnic differences in SRH care type were small and uniformly non-significant across all groups relative to Chinese women, as were state-level differences relative to California, though the directional patterns for state, particularly the inverse relationship between New York and Georgia across mixed and transnational-only care were consistent with those observed in the predicted probability figures.

Figure 4. Predicted Probabilities of Transnational-only SRH Care Use by Key Correlates Among Asian Immigrant Women, BRAVE Study (N=1,751)



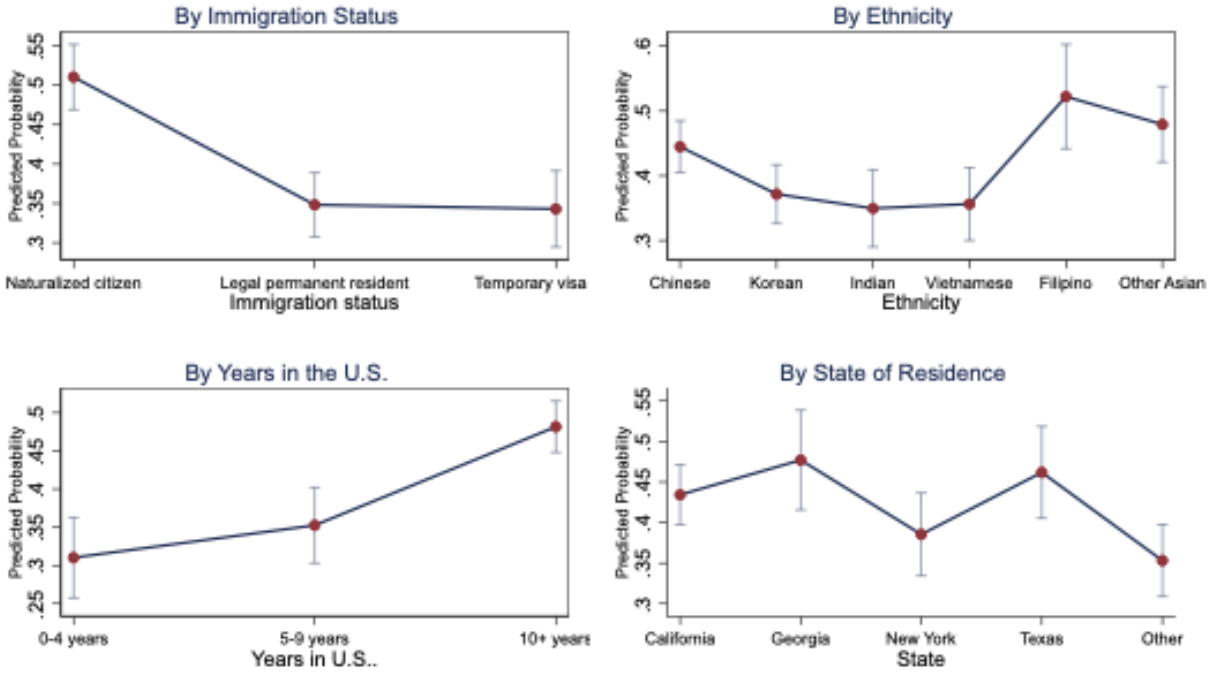
Note: Fully adjusted model (N=1,751). Covariates: age, insurance, marital status, income, education.
References: naturalized citizen; Chinese; 0-4years in the U.S.; California. Undocumented/DACA excluded (n=58). 95% Cis shown.
Source: BRAVE Study.

Figure 5. Predicted Probabilities of Mixed SRH Care Use (U.S. + Transnational) by Key Correlates Among Asian Immigrant Women, BRAVE Study (N=1,751)



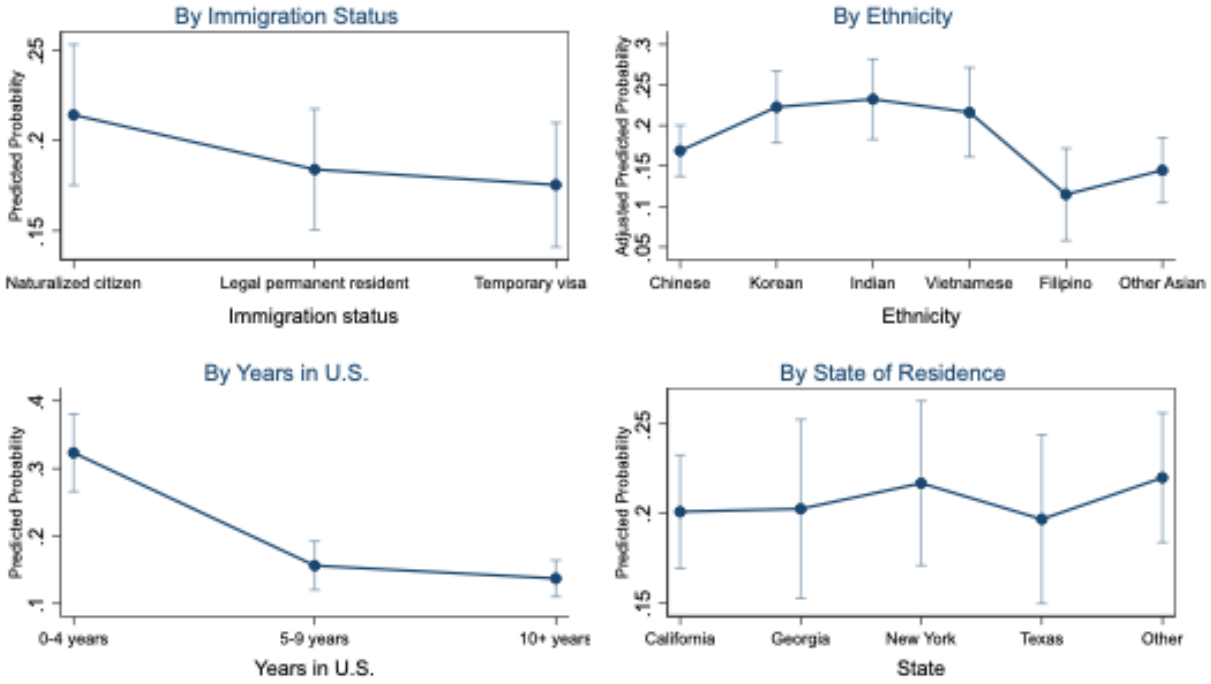
Note: Fully adjusted model (N=1,751). Covariates: age, insurance, marital status, income, education.
References: naturalized citizen; Chinese; 0-4years in the U.S.; California. Undocumented/DACA excluded (n=58). 95% Cis shown.
Source: BRAVE Study.

Figure 6. Predicted Probabilities of US-only SRH Care Use by Key Correlates Among Asian Immigrant Women, BRAVE Study (N=1,751)



Note: Fully adjusted model (N=1,751). Covariates: age, insurance, marital status, income, education.
References: naturalized citizen; Chinese; 0-4years in the U.S.; California. Undocumented/DACA excluded (n=58). 95% Cis shown.
Source: BRAVE Study.

Figure 7. Predicted Probabilities of Non-use of SRH Care by Key Correlates Among Asian Immigrant Women, BRAVE Study (N=1,751)



Note: Fully adjusted model (N=1,751). Covariates: age, insurance, marital status, income, education.
References: naturalized citizen; Chinese; 0-4years in the U.S.; California. Undocumented/DACA excluded (n=58). 95% Cis shown.
Source: BRAVE Study.

Figure 8. Average Marginal Effects of Immigration Status on Sexual and Reproductive Healthcare Utilization Patterns, Adjusted (N=1,751)

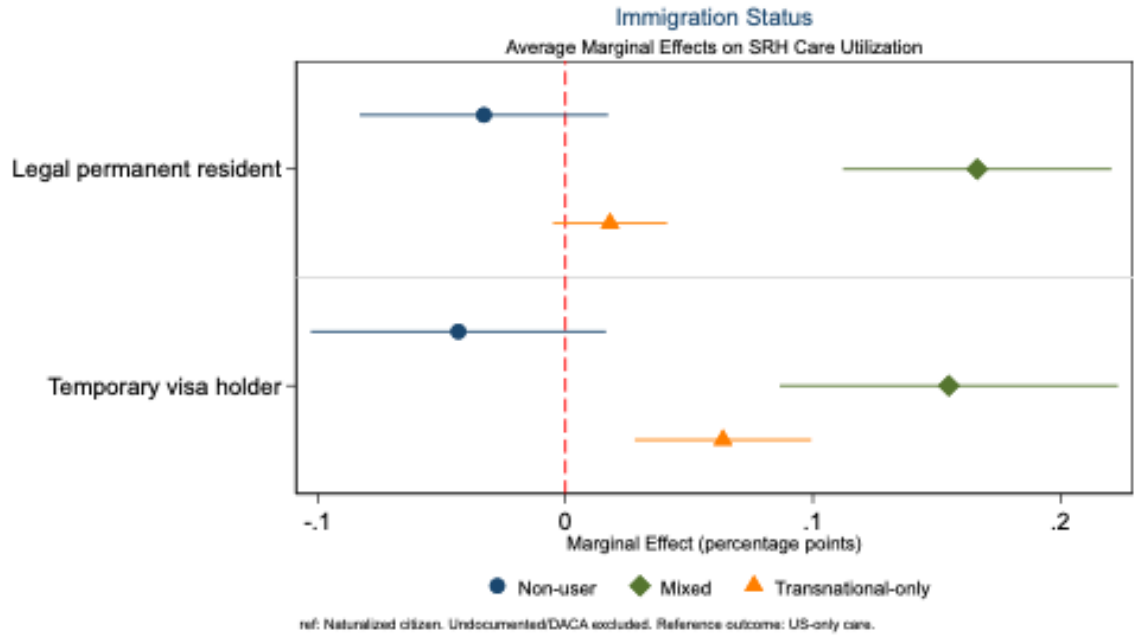


Figure 9. Average Marginal Effects of Years in the US on Sexual and Reproductive Healthcare Utilization Patterns, Adjusted (N=1,751)

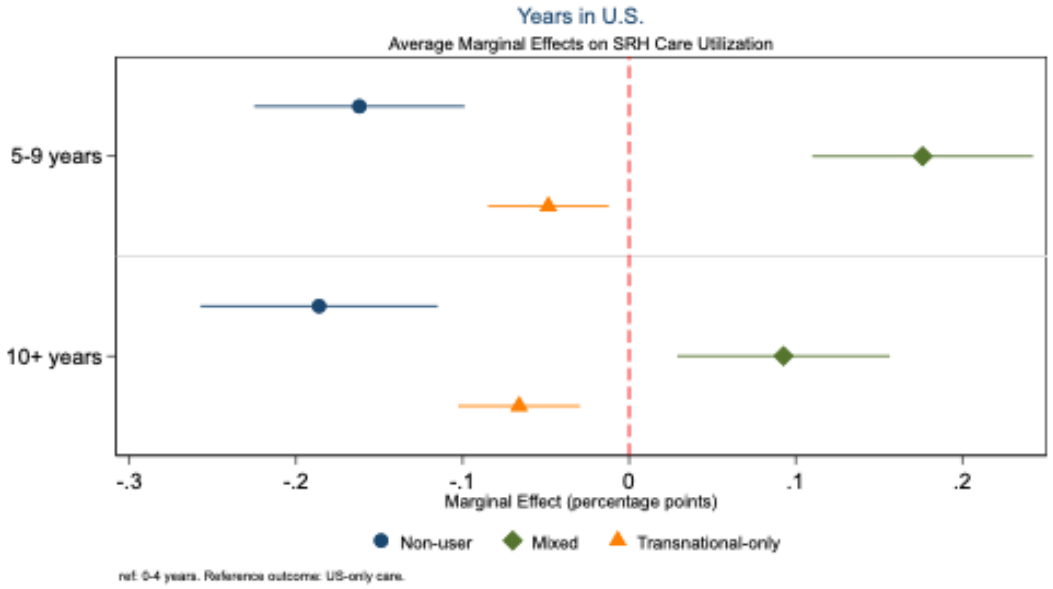


Figure 10. Average Marginal Effects of Ethnicity on Sexual and Reproductive Healthcare Utilization Patterns, Adjusted (N=1,751)

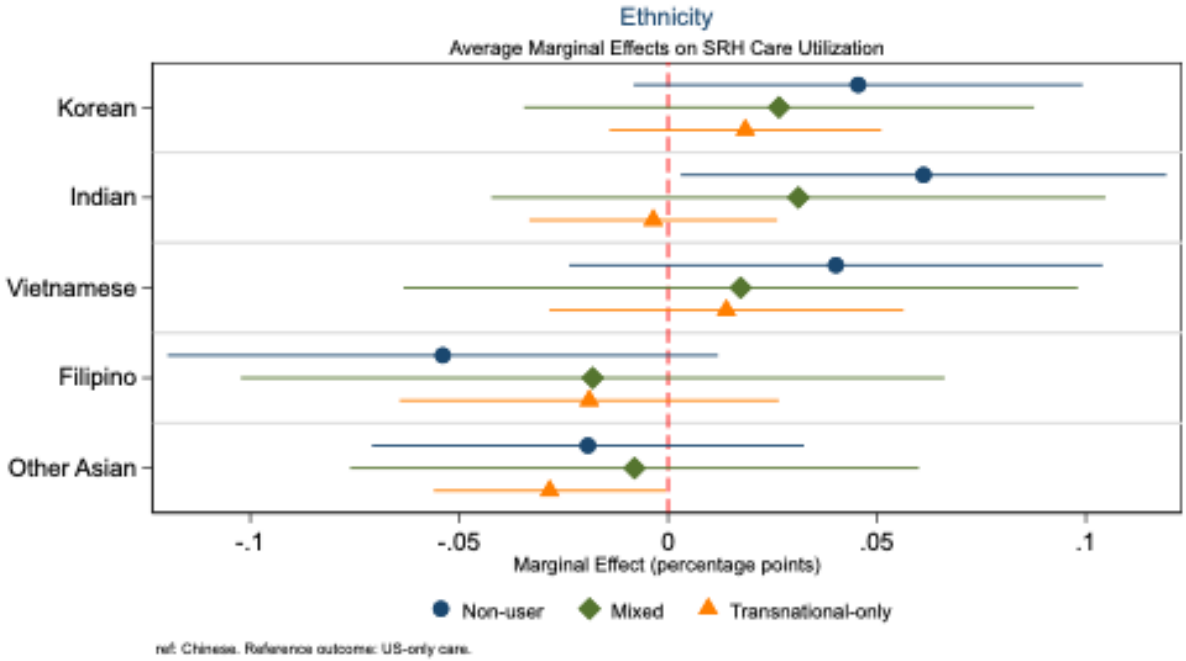
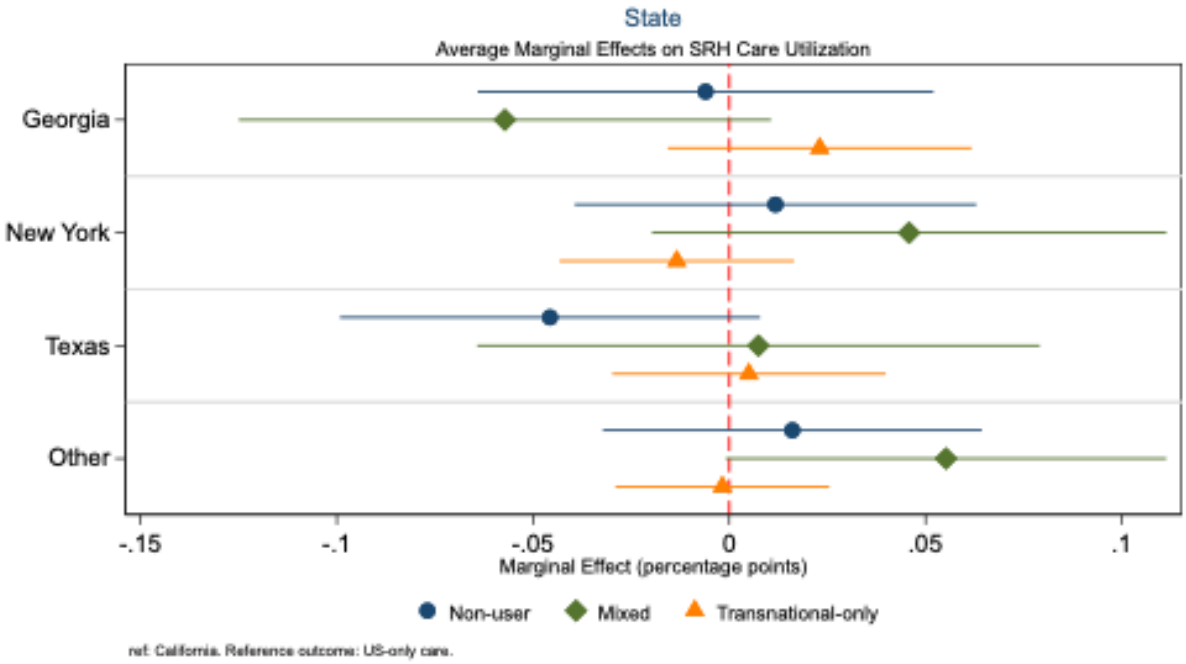


Figure 11. Average Marginal Effects of State on Sexual and Reproductive Healthcare Utilization Patterns, Adjusted (N=1,751)



4.6 Sensitivity Analyses

Several sensitivity analyses were conducted to assess the robustness of the primary multinomial logistic regression findings. First, predicted probability plots and average marginal effect plots were plotted for the unadjusted multinomial logistic regression model and are presented in the Supplemental Tables and Figures (Figures SF1–SF8). The unadjusted models produced patterns largely consistent with the fully adjusted model across all four SRH care type outcomes, with the strong positive association between non-citizen immigration status and mixed care use, the steep decline in non-use with longer U.S. residence, and the elevated transnational-only care use among temporary visa holders all evident prior to covariate adjustment, providing confidence that these associations remained after controlling for these sociodemographic characteristics.

Second, to examine whether findings held under a simpler binary operationalization of transnational care use, binary logistic regression models were estimated comparing women who ever used transnational SRH care (mixed or transnational-only; n=746) to those who never did (non-user or US-only; n=1,284), with results presented in Supplemental Tables 1 and 2. In the base model (Supplemental Table 1, N=1,890), both legal permanent residents (OR=2.28, 95% CI: 1.76–2.96; AME=+18.5 percentage points) and temporary visa holders (OR=2.05, 95% CI: 1.50–2.82; AME=+16.0 percentage points) were significantly more likely to use any transnational SRH care compared to naturalized citizens. Women in the U.S. for 5–9 years were also significantly more likely to use transnational care compared to newly arrived women (OR=1.82; AME=+13.5 percentage points), while the association for 10+ years was not statistically significant.

In the fully adjusted model (Supplemental Table 2, N=1,751), associations for immigration status were strengthened after covariate adjustment — legal permanent residents (AOR=2.41; AME=+18.5 percentage points) and temporary visa holders (AOR=2.82; AME=+22.1 percentage points) — while the pattern for years in U.S. remained consistent. Notably, being uninsured was significantly negatively associated with transnational care use in the adjusted model (AOR=0.50; AME= −15.1 percentage points), suggesting that women without insurance were less likely to use transnational care, possibly reflecting the additional financial barriers women may face in seeking transnational SRH care. Never-married women were also significantly less likely to use transnational care (AOR=0.66; AME=−8.6 percentage points), while higher household income (>$150,000) was positively associated with transnational care use (AOR=1.45; AME=+7.9 percentage points), consistent with transnational care being partially a resource-dependent behavior. Ethnicity and state of residence were not significant predictors of transnational care use in the fully adjusted binary model, consistent with the primary multinomial findings.

Third, to assess whether the exclusion of undocumented/DACA women (n=58) influenced the primary findings, a sensitivity multinomial logistic regression model was estimated including this group (Supplemental Table 3, N=1,947). Findings for immigration status, ethnicity, and years in U.S. were substantively consistent with the primary model. Temporary visa holders remained significantly more likely to use mixed care (RRR=2.07) and transnational-only care (RRR=5.45) relative to US-only care compared to naturalized citizens, and the pattern of declining non-use with longer U.S. residence remained. Undocumented/DACA women did not significantly differ from naturalized citizens on any SRH care type outcome,

though this null finding should be interpreted more carefully given the small cell size (n=58) and resulting limited statistical power to detect differences for this group.

Taken together, these sensitivity analyses support the robustness of the primary findings and suggest that the key associations between immigration legal status, length of U.S. residence, and SRH care utilization patterns, particularly transnational SRH care use are stable across model specifications, analytic samples, and outcome operationalizations.

4. Discussion

This study examined patterns of SRH care utilization among Asian immigrant women in the United States, identifying four distinct care-seeking trajectories — non-use, US-only, mixed transnational and transnational-only and their structural determinants. More than one-third of participants reported obtaining transnational SRH care. Consistent with Andersen's Behavioral Model and the transnational social fields framework, immigration legal status and duration of U.S. residence emerged as the strongest and most consistent predictors of transnational SRH care utilization, whereas ethnic differences and state of residence became substantially attenuated after adjustment for immigration-related and socioeconomic characteristics.

Growing evidence suggests that transnational healthcare is an adaptive strategy through which immigrants navigate barriers encountered within host-country healthcare systems while maintaining healthcare ties to their countries of origin[71]. Previous studies among Latino immigrants have documented transnational healthcare use as a response to insurance ineligibility, language barriers, immigration-related concerns, and limited access to affordable care in the United States[75,171,241]. Similarly, studies among Chinese and Korean immigrants in Canada have shown that perceived quality of care, cultural familiarity, language concordance, and challenges navigating local healthcare systems encourage continued use of healthcare services in countries

of origin[87]. Our findings support this literature while extending it to Asian immigrant women in the United States, a population that has received comparatively little attention in transnational healthcare research despite representing one of the fastest-growing immigrant populations.

The strongest finding of this study was the robust association between immigration legal status and transnational SRH care utilization. Compared with naturalized citizens, legal permanent residents and temporary visa holders were significantly more likely to use mixed care, while temporary visa holders had more than six times the relative risk of transnational-only care, even after socioeconomic adjustment. These findings suggest that immigration legal status influences not only access to SRH care but also where care is obtained, underscoring its role as a key structural determinant of transnational SRH care utilization. The particularly high reliance on transnational care among temporary visa holders further suggests that cross-border SRH care is, at least in part, a structural response to barriers within the U.S. healthcare system rather than solely a reflection of cultural preference or continued attachment to countries of origin. This interpretation is consistent with previous research demonstrating that restrictive immigration policy environments limit access to reproductive healthcare, whereas more inclusive policy environments improve access to reproductive health services among immigrant populations[219,227].

Mixed care was considerably more common than exclusive transnational care, indicating that immigrant women generally supplement rather than replace U.S. healthcare with care in their countries of origin. This finding also provides quantitative support for the transnational social fields framework proposed by Peggy Levitt and Nina Glick Schiller, which argues that immigrants remain simultaneously embedded in institutions across sending and receiving countries rather than transitioning from one system to another[81]. Our findings suggest

that healthcare utilization should similarly be understood as occurring across multiple healthcare systems rather than within a single national context. Duration of U.S. residence further suggested a three-stage integration trajectory, with recent arrivals relying more on transnational care, women with 5–9 years most likely to use mixed care, and longer-term residents increasingly relying on U.S.-based care while maintaining some cross-border healthcare connections.

Rather than supporting a simple one-way process of assimilation, these findings suggest that healthcare integration and transnational use coexist over time as immigrants gradually expand their engagement with the U.S. healthcare system while maintaining healthcare ties abroad. Ethnic differences were substantially attenuated after adjustment, suggesting that structural migration-related factors, particularly immigration status and duration of residence, explain more of the variation in SRH care utilization than ethnicity alone. Likewise, state of residence showed limited independent associations after accounting for individual-level characteristics. Finally, uninsured women were less likely to engage in transnational care, suggesting that obtaining healthcare across borders requires financial and social resources and may not be a feasible strategy for the most economically marginalized immigrants.

Collectively, these findings extend the transnational healthcare literature in three important ways. First, they provide one of the first quantitative examinations of transnational SRH care utilization among Asian immigrant women in the United States. Second, by distinguishing between mixed and transnational-only care, they demonstrate that immigrant women frequently navigate multiple healthcare systems simultaneously rather than substituting one system for another. Third, they identify immigration legal status and duration of residence as strong predictors of transnational SRH care utilization, highlighting the importance of structural migration-related factors in shaping transnational healthcare decisions.

However, several limitations should be considered. First, the cross-sectional study design precludes causal inference regarding the temporal relationships between immigration related experiences and healthcare utilization patterns. Second, although the BRAVE study employed an adapted Starfish Sampling approach specifically designed to recruit structurally marginalized and traditionally 'hard to reach' immigrant women across a broad spectrum of immigration statuses[249], the relatively small number of undocumented participants (n=58) limited our statistical power to examine this particularly vulnerable population separately. Additionally, small sample size for transnational-only users (n=119) limit the precision of estimates for this group and preclude more granular within-group analyses.

Third, transnational SRH healthcare utilization was self-reported and may be subject to recall bias or social desirability bias. Fourth, while the BRAVE survey included an item capturing transnational SRH care use in the past 24 months (Q428), the present analysis used the lifetime measure (Q406) to maximize sample size and analytic power across the four outcome categories. As a result, findings reflect care-seeking behavior at any point since migration rather than current or recent patterns of transnational SRH care use. Fifth, the transnational SRH use (Q406) captured the presence of any transnational SRH care use rather than distinguishing among specific service types, frequency of use, or number of services used transnationally.

Women who used a single transnational SRH service were classified identically to those who used multiple SRH services, potentially obscuring meaningful heterogeneity in the depth and breadth of transnational SRH use. Future research examining service-specific transnational SRH care use including which services women are most likely to seek transnationally and whether the structural predictors of transnational use differ by service type, would provide a

more granular understanding of transnational care-seeking patterns among Asian immigrant women.

Finally, while this study categorized state of residence as a proxy for the broader immigration and reproductive health policy environment, no existing index combines both dimensions into a single composite score applicable to the current study period. The Immigration Policy Climate (IPC) Index, which quantifies and tracks state-level immigration policies along an inclusionary-to-exclusionary continuum, covers only 2009–2019 and could not be applied to the current study period[25]. Similarly, the Institute for Women's Policy Research (IWPR) Reproductive Rights Composite Index, which captures nine indicators of state reproductive rights including abortion access, Medicaid family planning expansions, and mandatory sex education, is available only through 2022 and does not incorporate immigration policy dimensions[250]. The absence of a validated composite index that simultaneously captures both immigration and reproductive health policy restrictiveness at the state level precluded a more nuanced operationalization of state policy context in this study, and the use of state of residence as a proxy variable limits conclusions about the specific policy mechanisms driving geographic variation in SRH care patterns.

Additionally, the heterogeneous 'Other states' category which collapsed 42 states and the District of Columbia due to small and variable cell sizes limits the ability to draw meaningful conclusions about geographic variation beyond the four focal states. Future research should prioritize the application of a combined immigration and reproductive health policy index to more precisely capture the compounding effect of both policies on transnational SRH care use. Finally, while this study identifies important correlates of transnational healthcare utilization, it cannot fully explain the motivations underlying healthcare decisions.

Despite these limitations, the findings from this study have several important implications. First, the strong association between immigration status and transnational care underscores the importance of policies that reduce structural barriers to healthcare access among noncitizen immigrants, including expanding insurance eligibility, improving language access, increasing culturally responsive SRH services, and reducing administrative barriers that discourage healthcare utilization or forego SRH care. Second, the acculturation trajectory identified in this study from high non-use among recent arrivals to mixed care use among mid-tenure women to high US-only care among longer-term residents has direct implications for the timing and targeting of public health interventions.

Third, the significant ethnic variation in care patterns particularly the elevated non-use rates among Vietnamese women and the comparatively lower non-use among Filipino women underscores the importance of recognizing and adequately addressing the heterogeneity of Asian immigrant women in program design, research, and data collection efforts. Public health programs and surveillance systems should consistently disaggregate by specific Asian ethnicity to identify and address meaningful ethnic subgroup differences that can contribute to adverse health outcomes and that are invisible in aggregated Asian data.

Fourth, the finding that uninsured women were over four times more likely to use transnational-only care and more than twice as likely to use no SRH care at all highlights insurance coverage as a significant barrier in SRH care access among Asian immigrant women in the United States. Expanding Medicaid eligibility to immigrant women regardless of documentation status or federal waiting periods, as several states have already done for pregnant women and children, would likely reduce non-use and transnational only SRH use[67].

Fifth, the persistence of immigration status effects on transnational SRH use after full socioeconomic adjustment suggests that clinical and insurance-level interventions alone are insufficient to eliminate disparities in SRH care utilization. Chilling effects due to restrictive immigration policies and public charge rules that penalize benefit use deter Asian immigrant women from seeking SRH care[68,196]. Finally, although this study's categorical state variable captures limited variation in transnational SRH use post-Dobbs, findings such as the elevated mixed and transnational care use observed among women in states with highly exclusionary immigration policy climates and abortion restrictions such as Georgia and Texas[247,248], suggest that the inters[109,110]ection of restrictive immigration and reproductive rights policies may compound barriers to domestic SRH care access in ways not fully captured by categorical state groupings.

In conclusion, transnational SRH care represents an adaptive healthcare strategy that immigrants adopt when faced with structural barriers to SRH care access in the US. Rather than completely adopting one single healthcare system, the patterns documented in this study suggest that Asian immigrant women strategically navigate multiple healthcare systems simultaneously, maintaining transitional ties while incrementally integrating into US-based care as their immigration status, duration of residence, and access to health care evolve over time. While the motivations underlying transnational SRH care-seeking remain to be fully understood and will be the focus of future research examining the specific services sought and reasons for transnational care use among this population, the structural predictors identified in this study strongly suggest that barriers within the US system play a meaningful role in shaping where immigrant women seek care, and that addressing those barriers is a necessary first step toward ensuring equitable SRH access for Asian immigrant women in the United States.

VII. STUDY 3:

1. Introduction

Immigrant women in the United States represent a large and rapidly growing population with diverse sexual and reproductive health (SRH) needs. Their healthcare experiences are shaped by intersecting forces of immigration, acculturation, structural exclusion, and a rapidly shifting policy environment. As of 2020, approximately 45 million immigrants resided in the United States, representing 14% of the total population[2] . Of these, an estimated 27.5% were women of reproductive age, a population whose SRH needs remain critically underserved[2]. Compared to their US-born counterparts, immigrant women face well-documented disparities across multiple dimensions of SRH care: they are less likely to use highly effective contraceptive methods[4,191], less likely to access preventive SRH services including breast and cervical cancer screenings[29,30,192]and have lower prenatal care utilization compared to US-born individuals[193]. These disparities are rooted in and aggravated by intersecting structural barriers including immigration status[40,252], insurance exclusions , language barriers[42], cultural stigma[253], and restrictive immigration[45,48] and reproductive health policies[19] that constrain immigrant women's ability to access and utilize SRH care[47,49].

Importantly, these structural barriers are not experienced uniformly across the United States but are shaped by state policy environments. States differ substantially in Medicaid expansion, immigrant eligibility for publicly funded health insurance, reproductive health policies, investments in safety-net services, and the availability of culturally and linguistically appropriate healthcare providers[157,254]. These policy differences influence the affordability, accessibility, and quality of SRH care available to immigrant women and may contribute to geographic variation in healthcare utilization. Consequently, women residing in more restrictive

policy environments may encounter greater financial and structural barriers to obtaining SRH care in the United States, increasing the likelihood that they seek care transnationally as an adaptive strategy

These structural barriers are particularly prominent among Asian immigrant women, a rapidly growing immigrant population in the United States. Nearly three-quarters of Asian American adults are foreign-born[206]. Despite their demographic significance, Asian immigrants are frequently treated as a homogeneous population despite substantial diversity in ethnicity, migration histories, immigration status, language, and socioeconomic circumstances[207–209]. Language barriers, lack of insurance particularly among temporary visa holders and undocumented immigrants, limited availability of culturally and linguistically concordant SRH providers, and cultural norms around discussing sexual and reproductive health all contribute to significant gaps in SRH care access and utilization among this population[255,256].

Existing research has documented disparities in SRH care access and utilization among Asian immigrant women in the United States, including lower rates of cervical cancer screening, contraceptive use, and prenatal care utilization compared to U.S.-born women[5,29,57,210]. Previous studies have documented important differences in SRH utilization across Asian ethnic groups, years of U.S. residence, and immigration status[50,57,208,210], suggesting that transnational healthcare practices may likewise vary across immigrant subgroups. One adaptive strategy that immigrant women may employ in response to structural barriers in the US healthcare system is transnational healthcare, the practice of seeking medical care in one's country of origin. Transnational healthcare is conceptually distinct from medical tourism: whereas medical tourism is driven by convenience, cost savings, or access to procedures unavailable in the host country, transnational healthcare among immigrants is primarily motivated by cultural familiarity, trust in

home country providers, language concordance, perceived quality of care, and the maintenance of social ties to the country of origin[171,218].

A growing body of literature has documented transnational healthcare practices among immigrant populations globally, including travel to home countries for primary care, dental care, specialist services, and prescription medications . Studies consistently identify several key drivers of transnational healthcare-seeking including cost barriers and lack of insurance in the receiving country, perceived higher quality or greater accessibility of care in the home country, language ease, cultural familiarity with home-country providers, and family and social network influences[71,171]. These drivers map closely onto the push-pull framework of transnational health behavior, which conceptualizes transnational care-seeking as shaped by structural barriers pushing immigrants away from receiving-country healthcare systems and cultural and relational factors pulling them toward origin-country care[155]. Despite growing research on transnational healthcare among immigrant populations, research specifically examining transnational sexual and reproductive healthcare remains extremely limited. The only identified study focused specifically on transnational SRH was a qualitative investigation of pregnancy-related care among Bengali immigrant women in the United States[78]. A systematic review of transnational healthcare research found that most studies have examined general healthcare utilization rather than SRH and have focused predominantly on Mexican and Latino immigrant populations, particularly in U.S. and U.S.–Mexico border regions . Comparatively few studies have involved Asian immigrants, and even fewer have examined Asian immigrant populations in the United States[71]. Consequently, little is known about the prevalence, patterns, types of services, and motivations underlying transnational SRH care among Asian immigrant women in the United States.

The transnationalism framework, which positions immigrants as simultaneously embedded in origin and receiving country social fields, provides a productive theoretical lens for understanding why Asian immigrant women seek SRH care transnationally[82]. Push factors operating within the U.S. healthcare system including the high cost of SRH care, language barriers, lack of cultural concordance between providers and patients, and perceived inadequacy of U.S. care quality or accessibility are theorized to motivate transnational SRH care-seeking by making care within the U.S. system inaccessible, unaffordable, or culturally unwelcoming[5,69,86,89,115,258,259].

Pull factors operating within origin-country healthcare systems including cultural familiarity, trusted and established provider relationships, government-subsidized services not available or affordable in the United States, and family and social network influence are theorized to attract women toward home-country care by making it more accessible, affordable, or desirable than U.S.-based alternatives[71]. A qualitative study of 50 first- and second-generation Mexican immigrants in San Diego, California, found that participants strategically combined healthcare in the United States and Mexico. They sought second opinions from providers in Mexico, valued the emotional support and trust offered by Mexican physicians, accessed specialist services, used different healthcare systems for different health needs, and purchased prescription medications across the border[260].

Transnational healthcare has emerged as an increasingly recognized component of healthcare utilization among immigrant populations, reflecting the ways migrants navigate healthcare across national borders while maintaining enduring social, cultural, and institutional ties to their countries of origin[69,84,261]. In a recent national study of Asian immigrant women, approximately 36% of Asian immigrant women in the BRAVE Study reported any transnational

SRH care use since migrating to the United States, with immigration status and years of U.S. residence among the strongest predictors of transnational care utilization patterns. Yet, to date, there is a critical gap in understanding among women who do seek SRH care transnationally, what specific services do they obtain, and what motivates them to seek care outside the U.S. healthcare system? Understanding these questions is essential for identifying the factors that drive women to seek transnational SRH care.

The present study builds upon prior work examining patterns of transnational SRH care utilization among Asian immigrant women by investigating the types of services obtained, the reasons underlying transnational healthcare utilization, and the broader contexts in which these decisions occur. Guided by Andersen's Behavioral Model[220,262] and the transnational social field perspective, this study examines variation in transnational SRH services and motivations across ethnicity, immigration status, years of residence in the United States, and state of residence. In addition, qualitative analysis of participants' open-text responses provides further insight into contextual influences that are not captured through structured survey measures. Together, these analyses contribute to a more nuanced understanding of transnational SRH care among Asian immigrant women and advance the literature by examining not only the occurrence of transnational healthcare, but also the motivations that shape transnational SRH care utilization.

Research Questions:

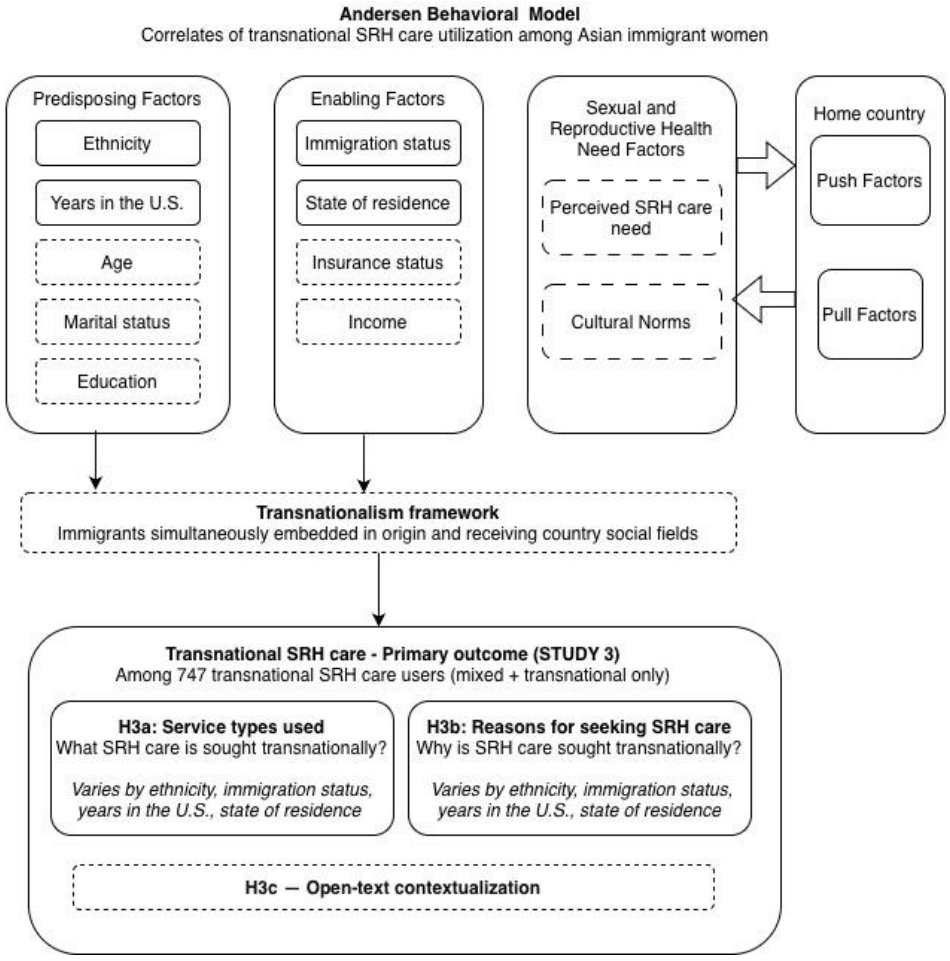
Among the 745 Asian immigrant women who reported using transnational SRH care, what types of SRH services are obtained transnationally, and what reasons do women report for seeking transnational SRH care? How do transnational SRH service types and reasons for care-seeking vary by ethnicity, immigration status, years of U.S. residence, and state of residence?

Hypothesis 3a: The types of transnational SRH services sought will differ significantly by ethnicity, immigration status, years of U.S. residence, and state of residence among Asian immigrant women who engage in transnational SRH care.

Hypothesis 3b: The reasons for seeking transnational SRH care will differ significantly by ethnicity, immigration status, years of U.S. residence, and state of residence.

Hypothesis 3c: Open-text responses will identify additional motivations for transnational SRH care that are not captured by the structured survey response categories.

Figure 12. Analytical Framework



Study 3 builds directly on the integrated theoretical framework applied in Study 2, which combined Andersen's Behavioral Model of Health Services Use with Levitt and Glick

Schiller's transnational social field perspective[82,220]. While Study 2 applied this framework to examine predisposing and enabling correlates of transnational SRH care utilization patterns across the full BRAVE Study analytic sample, Study 3 adapts the framework to examine what happens within transnational SRH care utilization, specifically, what services Asian immigrant women seek outside the U.S. healthcare system and why, among the subset of women who reported any transnational SRH care use (N=745).

As shown in Figure 12, the framework retains the same structural components as Study 2 — predisposing factors, enabling factors, SRH need factors, and home country push and pull forces but reorients their role in the analytic model. In Study 2, these factors served as correlates of who uses transnational SRH care. However, in Study 3, they serve as explanatory factors for heterogeneity in service types and reasons across subgroups of transnational SRH care users, consistent with the sub-aim examining variation by ethnicity, immigration status, years of U.S. residence, and state of residence.

Predisposing factors- ethnicity and years in the U.S. are hypothesized to shape which SRH services women seek transnationally and which reasons they cite, reflecting how cultural background and length of U.S. residence influence health beliefs, care preferences, and degree of integration into the U.S. healthcare system. Enabling factors - immigration status and state of residence are hypothesized to shape structural reasons for transnational care-seeking, including affordability and language ease, which are expected to be more prevalent among women with more precarious immigration statuses (e.g., visa holders; undocumented) and those residing in states with more restrictive reproductive health policy environments[9,121,156].

Consistent with the transnationalism framework, the push and pull forces operating within immigrants' transnational social fields are theorized as the primary drivers of transnational SRH care-seeking. Push factors such as structural barriers within the U.S. healthcare system encompass perceived affordability barriers, language barriers, lack of culturally concordant providers, and perceptions of lower care quality or accessibility[69,71]. These push factors are hypothesized to explain the structured reasons of affordability, language ease, higher quality, and cultural competence. Pull factors such as attractions of home-country healthcare systems — encompass cultural familiarity, existing trusted provider relationships, government-subsidized or otherwise inaccessible services, and family and social network influences[69,71]. These pull factors are hypothesized to explain both structured reasons (cultural competence, family request) and novel contextual factors emerging from open-text responses, including opportunistic care-seeking during home visits, trusted provider continuity, and structural service unavailability in the U.S.

The transnationalism framework[181,263] which positions migrants as simultaneously embedded in origin and receiving country social fields, serves as links between the predisposing, enabling, and need factors and the primary Study 3 outcomes. The primary outcomes consist of three interconnected components: H3a examines the types of SRH services sought transnationally (what care is obtained outside the U.S.); H3b examines the reasons for transnational care-seeking (why care is sought outside the U.S.); and H3c uses open-text narrative responses to contextualize and extend the structured findings by identifying additional factors not captured by the five structured reason categories. Together, H3a, H3b, and H3c provide a comprehensive descriptive analysis of transnational SRH care-seeking among Asian immigrant women through the BRAVE study.

2. Methods

2.1. Study Design and Data Source:

The present study draws on data from the BRAVE (Building Community, Raising All immigrant Voices for health Equity) study, a national study with multi-site, cross-sectional survey, conducted in Atlanta, Houston, Los Angeles, and New York City. The BRAVE study is designed using an exploratory sequential mixed-methods framework that aimed to study the association between immigration status and SRH among Asian immigrant women in the United States .

The BRAVE study was conducted in two phases: Phase I consisted of qualitative interviews with Asian immigrant women and community experts, whose findings directly informed the design, measures, and recruitment strategies of the Phase II quantitative survey. The present analysis draws exclusively on Phase II quantitative survey data and employs a quantitative descriptive design with supplemental open-text contextualization to examine the types of SRH services sought transnationally and the reasons for transnational SRH care-seeking among Asian immigrant women who reported any transnational SRH care use since migrating to the United States. While Study 2 examined sociodemographic and immigration-related correlates of transnational SRH care utilization patterns across the full analytic sample, Study 3 focuses specifically on transnational care experience itself, describing what services women seek outside the U.S. healthcare system and why among the subset of women who reported any transnational SRH care use.

2.2. Sampling and Data Collection:

The study population consists of individuals who were assigned female at birth, aged 18-49 years, self-identified as Asian, were born outside the United States, currently resided in the

United States, and were able to complete the survey in English, Chinese (Mandarin and Cantonese), Hindi, Korean, or Vietnamese. Consistent with the study's focus on reaching invisibilised and structurally marginalized populations, participants were eligible across the full spectrum of immigration statuses, including undocumented individuals, Deferred Action for Childhood Arrivals (DACA) recipients, temporary visa holders, lawful permanent residents, and naturalized citizens[166]. Data collection began in January 2025 across Atlanta, Houston, Los Angeles, and New York City. These sites were selected because they are located in states with large Asian immigrant populations and represent diverse reproductive rights environments and immigrant policy contexts .

Participants were recruited using an adapted Starfish Sampling methodology- a novel hybrid approach combining random time-location sampling (TLS) and respondent-driven sampling (RDS), developed specifically to reach populations that are often excluded from traditional survey frames[165]. In the TLS component, trained multilingual field officers recruited participants at randomly selected venue–date–time combinations across venues frequented by Asian immigrant women, including grocery stores, religious centers, community-based organizations, and restaurants. In the RDS component, each recruited participant could refer up to three peers from their social networks, extending reach into harder-to-reach segments of the population including women with undocumented or liminal immigration status .

The study was conducted within a Community-Based Participatory Research (CBPR) framework, with community partner organizations co-directing all research activities, providing feedback on sampling procedures and survey instruments, hiring and training multilingual field officers, and conducting recruitment events at their respective sites. The BRAVE Community Advisory Board (CAB), composed of immigrant-led and reproductive justice organizations,

additionally reviewed survey instruments and evaluated cultural appropriateness of measures and translations[166].

Recruited participants completed a 40-minute survey in their preferred language in person at recruitment venues, by phone, or online through Qualtrics, a HIPAA-compliant survey platform. Upon survey completion, participants received a $40 gift card and were invited to refer up to three peers from their social networks, receiving an additional $10 gift card for each peer who completed the survey[166]. All study team members, including field officers at each site, completed CITI Human Subjects Research Training and HIPAA training and the study protocol received IRB approval from the University of California, Los Angeles[166].

The full BRAVE Study analytic sample comprised 2,030 Asian immigrant women after exclusion of 29 participants (1.4%) with missing data on transnational SRH care use. However, the present study focuses specifically on Asian immigrant women who reported any transnational SRH care use since migrating to the United States. Transnational SRH care use was defined as explicit endorsement of at least one specific SRH service used outside the United States since migration. Participants who responded affirmatively were then asked reasons for using SRH services outside of the U.S. Women who selected only "I have never used SRH care outside the United States since moving here" were classified as non-transnational users.

Participants who left the transnational service use question unanswered (n = 67) or had missing data for all those items (n = 28) were excluded because their transnational SRH care status could not be determined. This yielded a final analytic sample of N=745 transnational SRH care users, representing 36.3% of the full BRAVE Study analytic sample. Women who selected "prefer not to answer" on reasons for transnational SRH care (n=26) were additionally excluded, producing an analytic sample of N=719. Additionally, consistent with study 2,

undocumented/DACA women (n=14, 1.9%) were excluded from all subgroup analyses due to small cell sizes that preclude stable statistical estimates. This yielded a final analytic sample of N=731 transnational SRH care users for service type analyses (H3a).

For reasons analyses (H3b), women who selected "prefer not to answer" on Q92 (n=26) were additionally excluded, yielding a final reasons analytic sample of N=705. Women with missing immigration status data (n=14) were also excluded from all analyses. For open-text analyses, all valid open-text responses to reasons were analyzed and recoded to existing structured reasons categories and those that could not be mapped onto existing categories were analyzed using inductive content analysis to identify new themes not captured by the five structured reason categories.

2.3. Study Measures:

Transnational SRH service types (H3a). The primary outcome for H3a was derived from Q406, which asked: "While you have lived in the U.S., which of these sexual and reproductive healthcare services have you used outside the U.S.?" Response options included five structured categories: birth control counseling or method, abortion or termination of pregnancy, prenatal and pregnancy care, general women's health care, and other (with open-text specification). Each service type was operationalized as a separate binary variable (1=endorsed, 0=not endorsed).

Prior to analysis, open-text responses to the other category (Q406_5) were reviewed and recoded into existing structured service categories where substantively appropriate: responses describing gynecological examinations, PAP (Papanicolaou) smears, Polycystic Ovary Syndrome management, Sexually Transmitted Infection testing, Urinary Tract Infection treatment, pelvic imaging, and breast ultrasound were recoded into general women's health; birth control counseling was recoded into contraception; and pregnancy testing was recoded into

prenatal and pregnancy care. Responses describing fertility-related services including egg freezing, IVF, and infertility treatment were retained in the other category as they represent a distinct service type not captured by existing structured categories. Non-use responses (e.g., "none," "none of the above") were set to zero. Following recoding, the other category (n=13) reflected fertility-related services exclusively. Since women could select multiple service categories simultaneously, the percentages therefore represent the proportion of the 731 transnational users endorsing each service type and do not sum to 100%.

Reasons for transnational SRH care-seeking (H3b). Participants who reported transnational SRH care use were asked: "What are the main reasons you have used sexual and reproductive health services outside the U.S.? Please select all that apply." Response options included five structured categories: more affordable health care, higher quality health care, more culturally competent health care, ease in understanding language, and my family asked me to, with an open-text other option. As with service types, each reason was operationalized as a separate binary variable (1= endorsed, 0=not endorsed). Of the 731 transnational users, 705 responded to Q92 (excluding 26 who selected prefer not to answer), yielding a reasons analytic sample of N=705.

Open-text responses (H3c). Prior to analysis, open-text responses to the other category of Q92 were reviewed and, where appropriate, recoded into existing structured reason categories. Responses indicating affordability (e.g., "cheaper," "free healthcare in my home country") were recoded into the affordability category; responses indicating perceived quality or efficiency (e.g., "faster," "easier to get appointments," "more accessible") were recoded into the higher quality category; and responses indicating cultural familiarity (e.g., "more comfortable," "feels familiar") were recoded into the cultural competence category. Responses that did not map to existing categories were retained as other and subjected to qualitative content analysis for H3c.

Non-substantive responses (e.g., "did not use," "none," "N/A") and responses indicating care was obtained before migration or while living outside the U.S. were excluded from the analytic sample. Valid open-text responses remaining after the recoding process described above were subjected to inductive content analysis to identify additional contextual factors not captured by the five structured reason categories. Responses were read in full, and recurring themes were identified inductively and organized into thematic categories.

Key correlates. Consistent with Study 2, four variables constituted the primary correlates of interest for the sub-aim examining variation in service types and reasons across subgroups: ethnicity (Chinese/Taiwanese [reference], Korean, Indian, Vietnamese, Filipino, Other Asian), immigration status (naturalized citizen [reference], legal permanent resident, temporary visa holder), years of U.S. residence (0–4 years [reference], 5–9 years, 10+ years), and state of residence (California [reference], Georgia, New York, Texas, Other states).

2.4. Statistical Analysis

All statistical analyses were conducted using Stata 19. Analyses were conducted in three stages based on the three study hypotheses. For H3a, descriptive statistics first characterized the overall distribution of transnational SRH service types among the 731 transnational users, including frequencies and percentages for each service type. The number of service types simultaneously endorsed was described to characterize the multiplicity of transnational care engagement. Bivariate associations between each service type and the four key correlates were then examined using Pearson chi-square tests, treating each service type as a separate binary outcome. Fisher's exact tests were substituted for service types with small cell sizes, specifically abortion (n=31) and other services (n=13) where expected cell counts fell below five in one or more cells.

For H3b, descriptive statistics characterized the overall distribution of reasons for transnational SRH care-seeking among the 705 respondents, including frequencies and percentages for each reason. The number of reasons simultaneously endorsed was described to characterize the multiplicity of motivations for transnational care-seeking. Bivariate associations between each reason and the four key correlates were examined using Pearson chi-square tests, treating each reason as a separate binary outcome. These bivariate analyses constituted the primary tests of H3a and H3b. All tests were two-tailed with a significance threshold of $p<0.05$.

For H3c, valid open-text responses (n=113) were analyzed using inductive content analysis following the two-stage process described above. Responses were read in full and coded into thematic categories based on recurring patterns in the data. Theme frequencies were quantified and representative quotes are presented to illustrate each emergent theme. Open-text findings are presented alongside and integrated with the structured quantitative findings to provide a more complete account of the motivations underlying transnational SRH care-seeking than structured survey categories alone can capture, consistent with a sequential mixed-methods integration approach. Since women could select multiple service types and reasons simultaneously, all percentages represent the proportion of the analytic sample endorsing each item and do not sum to 100%.

3. Results

A. Overall distribution of Transnational SRH Service Types:

Figure 13 presents the overall distribution of transnational SRH service types among the 731 transnational users included in the analytic sample. Undocumented/DACA women (n=14) were excluded from all analyses due to small cell sizes, consistent with Study 2. All percentages in Figure 13 are calculated using the 731 transnational SRH care users as the denominator.

Because participants could report more than one service type, the categories are not mutually exclusive, and percentages do not sum to 100%.

The most commonly reported transnational SRH service was general women's health care (n=557, 77%), followed by contraception (n=215, 30%), prenatal and pregnancy care (n=112, 16%), abortion (n=28, 4%), and other services — consisting exclusively of fertility-related treatments including egg freezing, in vitro fertilization (IVF), and infertility treatment (n=13, 2%). As shown in Figure 14, women reported using a mean of 1.3 service types simultaneously (SD=0.6). Most women (77.0%) reported using exactly one type of transnational SRH service, 18.7% reported using two service types, 3.7% reported using three service types, and 0.5% reported using four service types, indicating that most women sought one primary type of SRH care transnationally.

Figure 13. Types of Transnational SRH Services used Among Asian Immigrant Women (N=731)

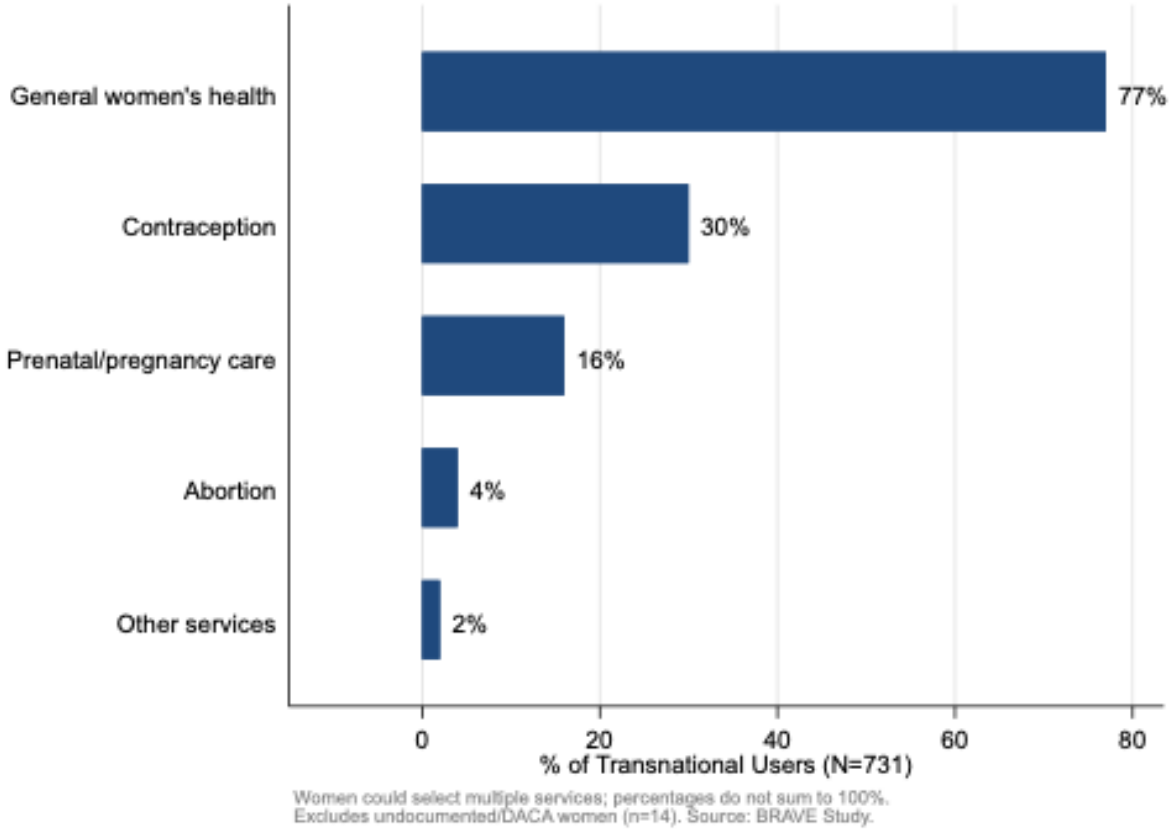
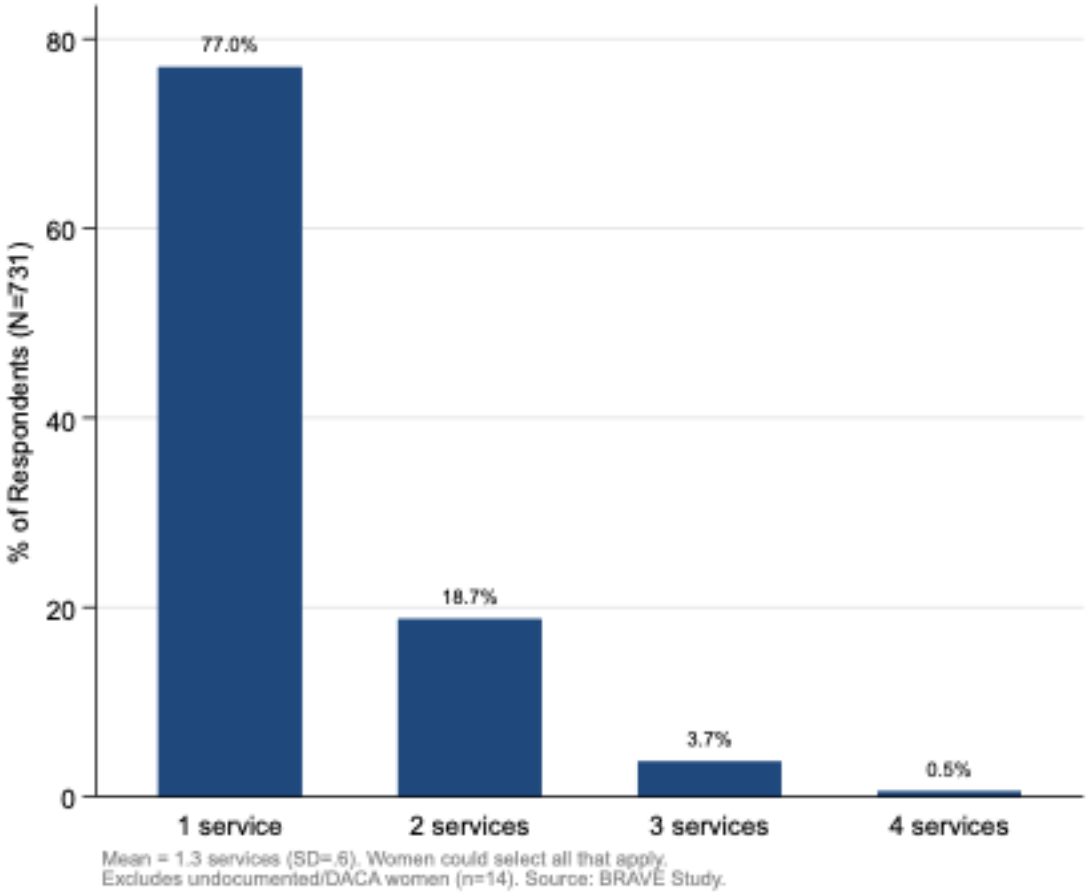


Figure 14. Number of Transnational SRH Services used Among Asian Immigrant Women (N=731)



B. Transnational SRH Service Types Variation by key correlates.

Patterns of transnational SRH service utilization differed across several sociodemographic characteristics, although the extent of variation depended on the type of service (Table 6). Undocumented/DACA women (n=14) were excluded from immigration status analyses due to small cell sizes, consistent with Study 2.

Use of transnational general women's health services varied significantly by ethnicity ($p=0.047$), years of U.S. residence ($p=0.018$), and state of residence ($p=0.049$), but not by

immigration status (p=0.515). Specifically, Korean (81%), Indian (80%), and Other Asian (80%) women were more likely than Chinese (69%) and Vietnamese (70%) women to report obtaining general women's health care outside the United States. Women who had lived in the United States for 0–4 years reported the highest utilization (85%), compared with those residing in the United States for 5–9 years (74%) and 10 or more years (73%). By state, utilization ranged from 71% among Texas residents to 84% among women residing in other states.

Transnational contraception services also differed significantly by ethnicity (p=0.021) and state of residence (p<0.001), but not by immigration status (p=0.621) or years of U.S. residence (p=0.464). Vietnamese women reported the highest prevalence of obtaining contraception abroad (43%), whereas Korean women reported the lowest (23%). Across states, utilization ranged from 18% among women residing in other states to 37% among Texas residents.

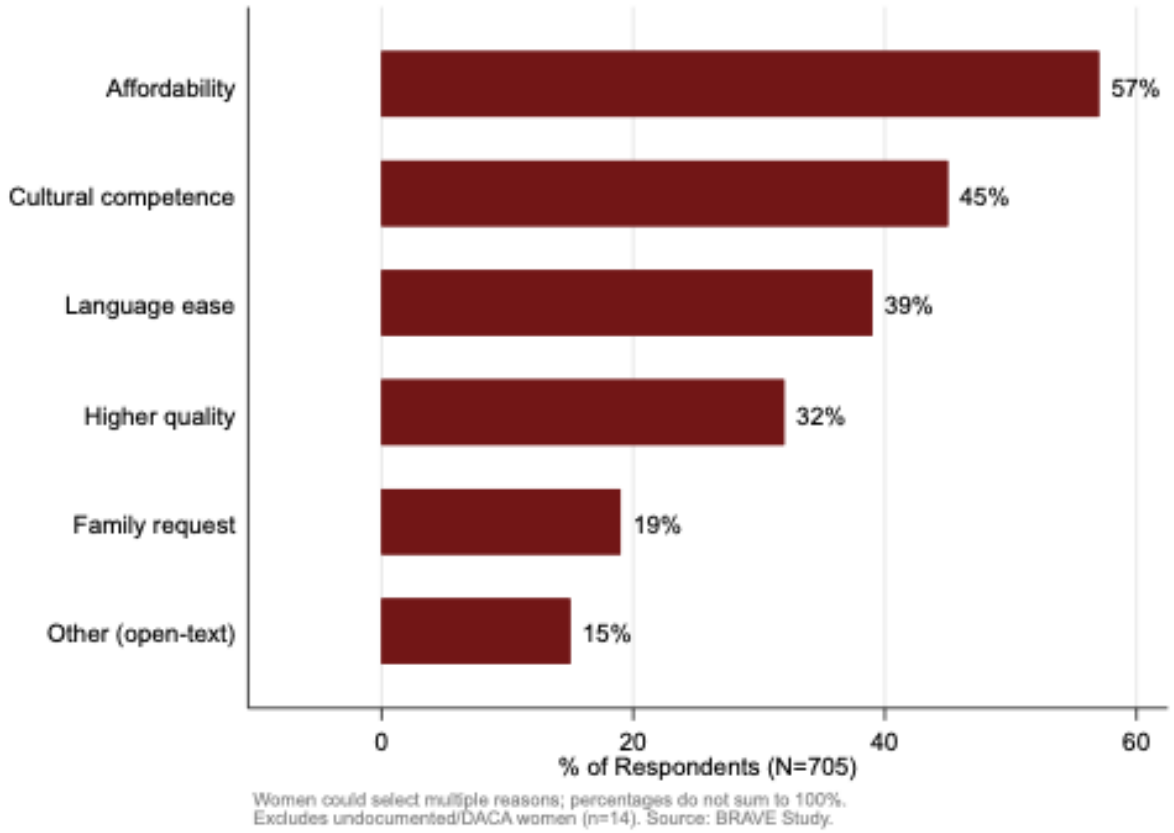
Prenatal and pregnancy-related care demonstrated the greatest heterogeneity across participant characteristics. Use differed significantly by ethnicity (p=0.038), immigration status (p<0.001), and years of U.S. residence (p=0.002), but not by state of residence (p=0.999). Korean (23%) and Filipino (18%) women reported higher utilization than Chinese (12%) and Indian (10%) women. Among the three immigration status groups, legal permanent residents (21%) and naturalized citizens (19%) were substantially more likely than temporary visa holders (7%) to report receiving prenatal or pregnancy-related care transnationally. In addition, utilization increased with duration of U.S. residence, from 9% among women residing in the United States for 0–4 years to 20% among those residing in the United States for 10 or more years.

Use of transnational abortion services differed significantly only by immigration status (Fisher's exact test, p=0.021), with legal permanent residents (5%) reporting higher utilization than naturalized citizens (3%) and temporary visa holders (3%). No statistically significant differences were observed for abortion by ethnicity (p=0.068), years of U.S. residence (p=0.453), or state of residence (p=0.751). No statistically significant differences were observed for other transnational SRH services — reflecting fertility-related treatments — across ethnicity, immigration status, years of U.S. residence, or state of residence (all p>0.05).

C. Overall distribution of Reasons for Transnational SRH Care-Seeking:

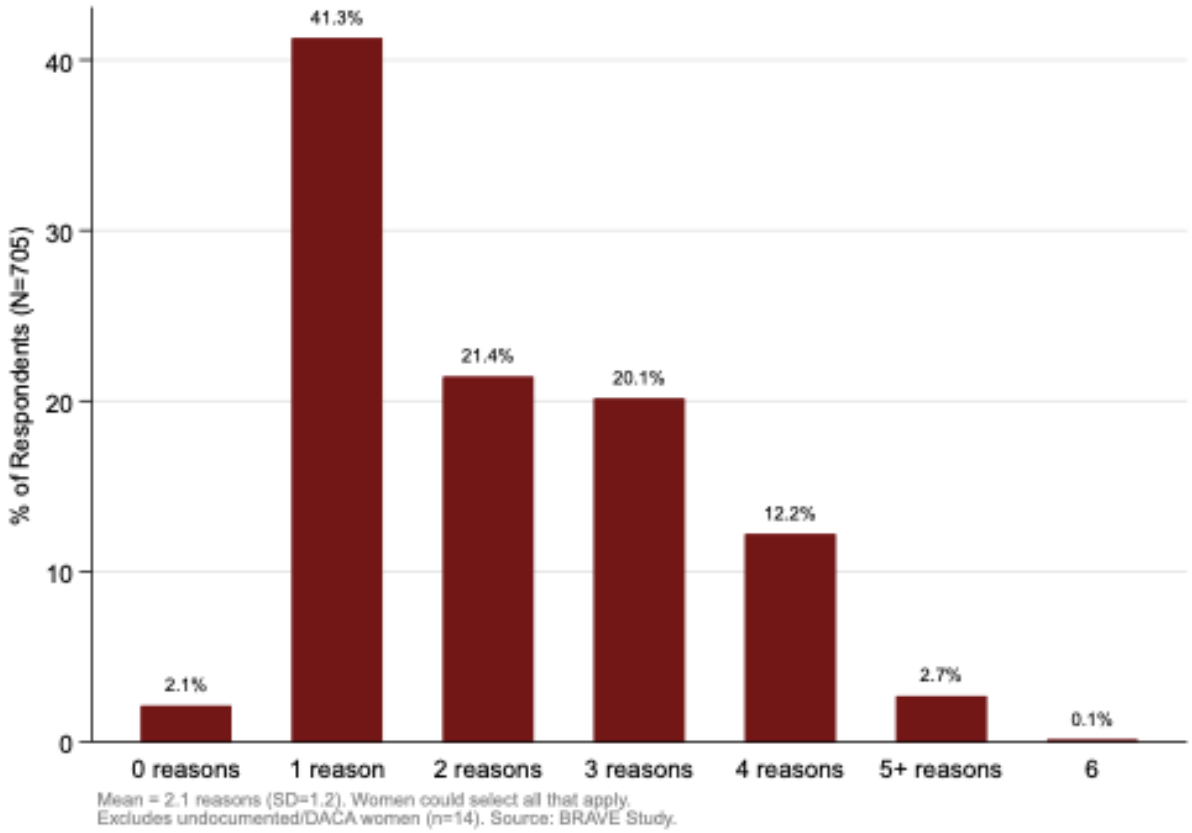
Figure 15 presents the overall distribution of reasons for transnational SRH care seeking among the 719 respondents. Affordability was the most commonly cited reason (n=396, 57%), followed by cultural competence (n=310, 45%), language ease (n=271, 39%), higher quality (n=228, 32%), family request (n=138, 19%), and other reasons captured through open-text analysis (n=107, 15%).

Figure 15. Reasons for Transnational SRH Care-Seeking Among Asian Immigrant Women (N=705)



Women endorsed a mean of 2.1 reasons (SD = 1.2), indicating that motivations for seeking transnational SRH care were often multifactorial. Although 41.3% of women reported a single reason, 56.5% endorsed two or more reasons, including 20.1% who selected three reasons and 15% who selected four or more reasons (Figure 16).

Figure 16. Number of Reasons Cited for Transnational SRH Care Among Asian Immigrant Women (N=705)



D. Reasons for Transnational SRH Care-Seeking by key correlates:

Patterns of reasons for seeking transnational SRH care varied across participant characteristics, with five of the six structured reasons differing significantly by at least one key correlate (Table 7). Undocumented/DACA women (n=14) were excluded from immigration status analyses due to small cell sizes, consistent with Study 2.

Affordability, the most endorsed reason for obtaining SRH care outside the United States (56%), differed significantly by ethnicity ($p<0.001$), immigration status ($p=0.012$), and state of residence ($p=0.049$), but not by years of U.S. residence ($p=0.392$). Korean women reported the highest prevalence of affordability as a motivation (72%), whereas women identifying as Other Asian reported the lowest (49%). Among the three immigration status groups, temporary visa holders (65%) were more likely than naturalized citizens (50%) and legal permanent residents

(56%) to cite affordability as a reason for transnational care-seeking. Across states, affordability was most frequently reported among women residing in Texas (67%) and Georgia (66%) and least frequently among those residing in New York (50%).

Cultural competence, reported by 44% of respondents, varied significantly by ethnicity ($p=0.001$), years of U.S. residence ($p=0.041$), and state of residence ($p<0.001$), but not by immigration status ($p=0.496$). Korean (57%) and Other Asian (51%) women were more likely to cite cultural competence than Chinese (37%), Indian (38%), and Filipino (33%) women. Women residing in the United States for 5–9 years reported the highest prevalence (52%), compared with those residing for 10 or more years (40%), suggesting a curvilinear rather than linear acculturation pattern. By state, cultural competence as a reason for seeking care ranged from 33% among New York residents to 63% among women residing in other states.

Language ease was endorsed by 38% of respondents and differed significantly by ethnicity ($p<0.001$), immigration status ($p<0.001$), and years of U.S. residence ($p=0.009$), but not by state of residence ($p=0.488$). Korean women reported the highest prevalence (61%), whereas Indian women reported the lowest (18%). Legal permanent residents (46%) and temporary visa holders (41%) were more likely than naturalized citizens (27%) to identify language ease as a motivation for seeking care abroad, consistent with the expectation that citizenship acquisition reflects greater English language proficiency and integration into the U.S. healthcare system. Women residing in the United States for 0–4 years (44%) and 5–9 years (44%) were more likely than those residing for 10 or more years (33%) to report language as a motivating factor, consistent with English language acquisition over time.

Perceived higher quality of care, endorsed by 32% of respondents, varied significantly by ethnicity ($p<0.001$), immigration status ($p=0.001$), and state of residence ($p=0.002$), but not by

years of U.S. residence (p=0.309). Korean (52%) and Vietnamese (36%) women were more likely to report higher quality as a reason for seeking transnational care than Chinese (25%), Indian (19%), and Filipino (21%) women. Among immigration status groups, legal permanent residents reported the highest prevalence (42%), while temporary visa holders (27%) and naturalized citizens (28%) reported lower prevalence. Across states, women residing in Georgia (43%) and other states (40%) reported the highest prevalence, compared with New York residents (23%).

Family request was endorsed by 20% of respondents and differed significantly by ethnicity ($p<0.001$) and state of residence (p=0.005), but not by immigration status (p=0.580) or years of U.S. residence (p=0.479). Women identifying as Other Asian (35%) and Vietnamese (28%) were more likely than Korean (11%) and Chinese (16%) women to report family influence as a reason for obtaining transnational SRH care. Across states, family request was most frequently reported among women residing in other states (28%) and least frequently among Texas residents (11%).

Other reasons captured through open-text analysis (15%) differed significantly by state of residence (p=0.026), with women in California (19%) and New York (20%) more likely to report other reasons than women in Texas (11%) or other states (10%). No statistically significant differences were observed in endorsement of other open-text reasons across ethnicity (p=0.618), immigration status (p=0.783), or years of U.S. residence (p=0.882).

E. Open-Text Contextualization

To complement the structured survey responses, inductive content analysis was conducted on 113 valid open-text responses to the "Other" reason for seeking transnational SRH care (Q92_6). Analysis was conducted in two stages. First, responses that were conceptually

consistent with existing structured categories were recoded into those categories. Second, the remaining responses were analyzed inductively to identify additional contextual factors not captured by the structured survey items.

Recoding into existing structured categories.

There were 16 open-text responses that reflected reasons already represented in the structured questionnaire and were therefore recoded prior to analysis. Three responses describing free or government-subsidized care (e.g., *"Before came to U.S. Free healthcare," "My country provided free HPV vaccine,"* and *"cheaper"*) were recoded as affordability. Ten responses emphasizing the efficiency, speed, or accessibility of care (e.g., *"Easier and quicker to see the doctor," "Fast, accurate and efficient care system,"* and *"Get in and get result in the same morning"*) were recoded as higher quality. Three responses describing greater comfort or familiarity with clinicians (e.g., *"Felt more comfortable doing such an intimate procedure in my home country"* and *"Friendly clinicians"*) were recoded as cultural competence. These responses represented alternative expressions of the structured categories rather than substantively new motivations for transnational care-seeking.

Emergent Contextual Themes

Analysis of the remaining responses identified three major contextual themes. The most frequently identified category was circumstantial or opportunistic care-seeking (n=25), capturing instances in which transnational SRH care was obtained not through deliberate cross-border healthcare decisions but because women were outside the United States when care was needed or convenient. This category encompassed two related patterns. The first and more prevalent pattern

was opportunistic care-seeking during return visits to the country of origin (n=20), in which women described receiving SRH services while already visiting their home country for family visits, vacations, or other purposes rather than traveling abroad specifically to obtain healthcare. Representative responses included: *"Convenient to do a check up along the way," "Regular checkup when visiting my home country," "Needed contraceptive pills because I was traveling and forgot to pack them," "convenient as I traveled back for summer vacation,"* and *"I needed to buy contraceptives at that time and I was in Vietnam."*

The second pattern reflected circumstantial necessity (n=5), in which women reported obtaining SRH care because they urgently needed care while outside the United States and had no alternative source of care available. Representative responses included: *"No choice," "Necessary at the time," "Urgent need," "Health need while living outside the U.S.,"* and *"Time and location dictated the availability."* While both patterns share the characteristic of transnational care being incidental rather than intentional, they differ in an important way — opportunistic care involves women actively choosing to obtain care during a home visit, whereas circumstantial necessity reflects care obtained under conditions of constraint with no alternative available. Together these responses suggest that a meaningful proportion of transnational SRH care use in this sample was shaped by the circumstances of transnational mobility rather than by deliberate healthcare-seeking decisions.

A second theme reflected continuity with trusted healthcare providers in the country of origin ($n = 3$). Participants described maintaining long-standing relationships with clinicians they knew and trusted, including *"Have my physician in my home country," "Better relationship with my doctor back home than the ones here,"* and *"My annual preventive care with my former*

doctor." These responses highlight the importance of relationship with home country providers playing a role in transnational healthcare.

A third theme highlighted structural differences between healthcare systems ($n = 3$). Participants described seeking services that were unavailable, uncommon, or government subsidized in their countries of origin, including Korean government-supported IVF treatment, routine preconception screening, and services unavailable in the U.S. healthcare system. One respondent explained, *"In Korea, we do the pre-pregnancy test as a routine before trying to conceive, but none of the U.S. healthcare I visited provides it."* These responses suggest that transnational care was motivated not only by affordability but also by structural differences in healthcare delivery and service availability across countries. This aligns with the findings from the BRAVE life history interviews where participants mentioned universal or government subsidized healthcare system in home countries as a pull factor in seeking transnational SRH care.

Measurement Consideration

Thirty-nine open-text responses described SRH care received before migration or while participants were living outside the United States rather than transnational care obtained after migration. Examples included *"Born in Vietnam," "Still in China at that time," "I was physically outside the U.S.—graduate student exchange program,"* and *"I gave birth before I moved to the U.S."* These responses suggest that a subset of participants interpreted the survey item as referring to lifetime SRH care received outside the United States rather than care sought transnationally after migration. This potential measurement issue will be discussed further in the Limitations section. Overall, the open-text responses expanded the structured

survey findings by identifying contextual influences not captured by the predefined response options. Most notably, the dominant theme of opportunistic care during return visits suggests that a substantial proportion of transnational SRH care may be embedded within routine transnational mobility rather than representing intentional medical travel.

Table 6. Transnational SRH Service Types by Key Correlates Among Asian Immigrant Women (N=731)

		Ethnicity							Immigration Status				Years in U.S.					State of Residence				
Service / Reason	**N (%)**	**Chinese**	**Korean**	**Indian**	**Vietnamese**	**Filipino**	**Other Asian**	**p-value**	**Naturalized citizen**	**Legal perm. resident**	**Temp. visa holder**	**p-value**	**0–4 years**	**5–9 years**	**10+ years**	**p-value**	**California**	**Georgia**	**New York**	**Texas**	**Other states**	**p-value**
General women's health	557(76%)	69%	81%	80%	70%	79%	80%	**0.047**	74%	76%	80%	0.515	85%	74%	73%	**0.018**	72%	79%	75%	71%	84%	**0.049**
Contraception	215(33%)	33%	23%	27%	43%	27%	28%	**0.021**	33%	29%	28%	0.621	27%	32%	30%	0.464	35%	29%	35%	37%	18%	**0.000**
Prenatal/ pregnancy care	112(15%)	12%	23%	10%	13%	18%	16%	**0.038**	19%	21%	7%	**0.000**	9%	14%	20%	**0.002**	15%	14%	15%	15%	16%	0.999
Abortion	28 (4%)	8%	4%	4%	3%	0%	1%	0.068†	3%	5%	3%	**0.021**†	3%	4%	5%	0.453†	5%	5%	3%	2%	4%	0.751†
Other services	13(2%)	0%	1%	3%	1%	2%	3%	0.113†	1%	2%	3%	0.469†	2%	1%	2%	0.817†	0%	1%	2%	2%	3%	0.164†

N = number of women using each service (out of 731 transnational users). Excludes undocumented/DACA women (n=14) due to small cell sizes, consistent with Study 2. Column percentages shown within each correlate category.
Open-text responses to the other category (Q406_5) were reviewed and recoded into existing structured categories where applicable prior to analysis. Remaining Other responses reflect SRH services not captured by existing structured categories.
p-values from Pearson chi-square tests unless noted. † Fisher's exact test used due to small cell sizes. Significant p-values (p<0.05) highlighted in yellow.
Women could select multiple services simultaneously; percentages do not sum to 100%. %. LPR = Legal permanent resident. Source: BRAVE Study.

Table 7. Reasons for Transnational SRH Care Use by Key Correlates Among Asian Immigrant Women (N=705)

		Ethnicity							Immigration Status				Years in U.S.					State of Residence				
Service / Reason	**N (%)**	**Chinese**	**Korean**	**Indian**	**Vietnamese**	**Filipino**	**Other Asian**	**p-value**	**Naturalized**	**LPR**	**Temp. visa holder**	**p-value**	**0–4 years**	**5–9 years**	**10+ years**	**p-value**	**California**	**Georgia**	**New York**	**Texas**	**Other states**	**p-value**
Affordability	396 (56%)	51%	72%	52%	57%	54%	49%	**0.000**	50%	56%	65%	**0.012**	60%	59%	54%	0.392	53%	66%	50%	67%	57%	**0.049**
Cultural competence	310(44%)	37%	57%	38%	45%	33%	51%	**0.001**	40%	45%	48%	0.496	46%	52%	40%	**0.041**	35%	49%	33%	42%	63%	**0.000**
Language ease	271(38%)	37%	61%	18%	42%	22%	30%	**0.000**	27%	46%	41%	**0.000**	44%	44%	33%	**0.009**	35%	34%	42%	40%	43%	0.488

Higher quality	228 (32%)	25%	52%	19%	36%	21%	29%	**0.000**	28%	42%	27%	**0.001**	30%	37%	32%	0.309	28%	43%	23%	32%	40%	**0.002**
Family request	138 (20%)	16%	11%	20%	28%	20%	35%	**0.000**	22%	17%	19%	0.580	19%	17%	21%	0.479	17%	20%	16%	11%	28%	**0.005**
Other (open-text)	107 (15%)	19%	12%	13%	13%	15%	16%	0.618	16%	16%	14%	0.783	16%	14%	15%	0.882	19%	13%	20%	11%	10%	0.026

N = number of women endorsing each reason (out of 705 respondents who answered Q92). Excludes undocumented/DACA women (n=14) and 26 who selected prefer not to answer on Q92, consistent with Study 2. Column percentages shown within each correlate category.
Women could select multiple reasons simultaneously; percentages represent the proportion endorsing each reason and do not sum to 100%.
p-values from Pearson chi-square tests. Significant p-values (p<0.05) highlighted in yellow.
LPR = Legal permanent resident.

Other (open text): valid responses (n=113) analyzed using inductive content analysis; 16 recoded into existing categories; 32 retained as new themes (H3c); 39 described pre-migration care (measurement limitation). Source: BRAVE Study.

4. Discussion

The present study extends previous study on transnational SRH care by moving beyond whether Asian immigrant women engage in transnational sexual and reproductive healthcare (SRH) to examine the types of transnational SRH services obtained, the reasons underlying transnational care-seeking, and the contextual factors shaping these decisions. Among women who reported obtaining SRH care outside the United States, general women's health services were the most sought transnational SRH services, while affordability, cultural competence, language ease, and perceived healthcare quality emerged as the primary motivations. Importantly, both service utilization and reasons for transnational care varied substantially across ethnicity, immigration status, years of residence in the United States, and state of residence, suggesting that transnational SRH care is not a homogeneous behavior but one that reflects diverse migration experiences and structural contexts.

Consistent with Andersen's Behavioral Model, predisposing characteristics such as ethnicity and years of residence, together with enabling factors including immigration status and state of residence, were associated with variation in both the types of SRH services sought and the reasons for obtaining care outside the United States. At the same time, the findings also support the transnational social field perspective, suggesting that healthcare decisions are influenced not only by barriers within the U.S. healthcare system but also by continuing social, cultural, and institutional ties to countries of origin.

Affordability was the most frequently reported reason for seeking care abroad, particularly among temporary visa holders and undocumented or DACA participants. This finding is consistent with previous literature demonstrating that immigration-related restrictions

on insurance eligibility and healthcare access continue to create financial barriers to reproductive healthcare in the United States . However, the present findings also demonstrate that transnational SRH care cannot be understood solely as a response to financial constraints. Nearly half of participants also cited cultural competence, language ease, or perceived healthcare quality as motivating factors, and more than half reported multiple reasons for seeking care abroad. These findings suggest that transnational healthcare decisions are multifaceted and reflect the interaction of economic, cultural, linguistic, and healthcare system factors rather than any single motivating factor.

The open-text analysis further enhanced the understanding of transnational care by identifying contextual influences that were not fully captured through the structured survey responses. Most notably, the dominant theme of opportunistic care-seeking during return visits to participants' countries of origin suggests that a proportion of transnational SRH care may occur not because women intentionally travel abroad for healthcare but because healthcare is incorporated into routine family visits, vacations, or other forms of transnational mobility. This finding suggests that transnational healthcare is often integrated into regular travel between countries rather than occurring as separate medical trips. Similarly, the emergence of themes related to trusted provider relationships and structural differences between healthcare systems illustrates that women often maintain enduring healthcare connections across borders and continue to utilize healthcare resources available in their countries of origin. Together, these findings reinforce the transnational perspective that migrants remain simultaneously embedded within multiple healthcare systems rather than transitioning completely from one national system to another.

The finding that service types and reasons differed across ethnic groups, immigration statuses, and geographic contexts further underscores the importance of avoiding a monolithic understanding of Asian immigrant women's healthcare experiences. The considerable heterogeneity observed across subgroups suggests that structural position within the immigration system, cultural context, and local healthcare environments influence both what services women obtain abroad and why they choose to do so. These findings reinforce the importance within immigrant health research to disaggregate Asian populations and to recognize the diversity of migration experiences that shape healthcare access and utilization.

The findings also have implications for future research on immigrant healthcare. Much of the existing literature conceptualizes transnational healthcare as travel undertaken specifically to obtain medical services. However, the present findings suggest that transnational healthcare may instead be integrated into routine patterns of cross-border mobility and shaped by migrants' continued engagement with healthcare systems in their countries of origin. Future research should adopt longitudinal approaches to better understand how transnational healthcare practices evolve over the migration life course and how healthcare utilization across multiple national contexts influences continuity of care and health outcomes. The heterogeneity observed across ethnic groups, immigration statuses, and geographic contexts suggests that interventions designed to improve reproductive healthcare access should avoid monolithic approaches. Instead, interventions should account for the diverse structural, cultural, and migration-related experiences that shape SRH care utilization among Asian immigrant populations.

Several limitations should be considered when interpreting these findings. First, the cross-sectional design precludes conclusions regarding causal relationships between participant

characteristics and transnational SRH care-seeking behaviors. Second, all measures relied on self-report and may be subject to recall error or social desirability bias, particularly for sensitive reproductive health experiences. Third, although the BRAVE Study recruited a large and diverse sample of Asian immigrant women across multiple U.S. cities using community-engaged sampling methods, the findings may not be generalizable to all Asian immigrant populations. Fourth, the analyses were descriptive and bivariate in nature and therefore do not account for potential confounding between participant characteristics. Finally, the open-text responses identified a measurement issue whereby some participants appeared to interpret the survey item as referring to lifetime SRH care received outside the United States, including care obtained before migration, rather than transnational healthcare received after immigrating to the United States. Although these responses were excluded from the thematic analysis, they suggest that future studies may benefit from collecting more detailed information on the timing of healthcare utilization relative to migration.

Despite these limitations, this study makes several important contributions to the literature. It is among the first to provide a comprehensive description of both the types of transnational SRH services utilized and the motivations underlying transnational SRH care among a large, multiethnic sample of Asian immigrant women in the United States. By integrating quantitative survey findings with qualitative contextualization, the study demonstrates that transnational SRH care represents a multifaceted healthcare strategy shaped by structural barriers, cultural and linguistic preferences, enduring ties to healthcare systems in countries of origin, and routine patterns of transnational mobility. These findings advance understanding of transnational healthcare beyond questions of access alone and underscore the importance of viewing immigrant healthcare utilization through a transnational

lens that recognizes migrants' continued engagement with multiple healthcare systems across national borders.

VIII. DISCUSSION

Overview

This dissertation examined transnational sexual and reproductive healthcare utilization among Asian immigrant women in the United States using an integrated mixed-methods approach. Across three complementary studies, the findings demonstrate that transnational SRH care represents a strategic and adaptive healthcare practice through which immigrant women navigate structural barriers within the U.S. healthcare system while maintaining healthcare relationships with their countries of origin. By integrating qualitative interviews with quantitative survey analyses, this dissertation moves beyond documenting whether immigrant women engage in transnational healthcare to explain how women make healthcare decisions, what services they obtain, what motivates them, and why they selectively utilize healthcare across national borders.

Taken together, the findings support the conceptualization of transnational healthcare as a form of healthcare navigation occurring across interconnected social fields rather than within a single national healthcare system. Rather than viewing healthcare in the United States and countries of origin as mutually exclusive, Asian immigrant women selectively engaged with both systems, drawing on the relative advantages of each to meet their sexual and reproductive healthcare needs. Across all three studies, transnational healthcare emerged not as an exceptional response to isolated barriers but as an ongoing strategy through which women negotiated multiple healthcare systems in ways that maximized affordability, accessibility, cultural concordance and trust, and continuity of care.

Transnational healthcare as a strategic healthcare practice

A central contribution of this dissertation is the demonstration that transnational SRH care is not simply healthcare obtained outside the United States but a deliberate and strategic

form of healthcare utilization. Previous research has largely described transnational healthcare in terms of cross-border healthcare use or medical travel. In contrast, the findings presented here illustrate that immigrant women actively compare healthcare options across countries and make selective decisions regarding where to obtain different types of SRH services based on the characteristics of each healthcare system and based on their circumstances in which they receive transnational care.

Qualitative findings showed that women actively compared healthcare options available in the United States and their countries of origin, selecting healthcare settings according to affordability, provider expertise, accessibility, cultural familiarity, and continuity of care. Quantitative findings similarly demonstrated that more than one-third of participants (36.3%) reported transnational SRH care, suggesting that healthcare utilization across national borders represents an important component of healthcare utilization among Asian immigrant women rather than an uncommon or temporary practice.

Structural barriers shape transnational healthcare utilization

Across all three studies, structural barriers within the U.S. healthcare system consistently emerged as major determinants of transnational SRH care utilization. While affordability was one of the most frequently cited reasons for obtaining care abroad, the findings demonstrate that financial considerations alone cannot explain transnational healthcare behaviors. Instead, women's decisions reflected the cumulative effects of multiple structural barriers, including insurance instability, immigration-related eligibility restrictions, language barriers, limited access to culturally concordant providers, discrimination, and variation in state reproductive health policy environments.

These findings extend previous research by demonstrating that transnational healthcare is fundamentally shaped by broader systems of structural exclusion rather than solely by individual healthcare preferences. Immigration status, insurance eligibility, and state policy contexts influenced not only whether women sought care outside the United States but also the types of services obtained and the reasons underlying those decisions. Particularly in the context of changing reproductive health policies following *Dobbs v. Jackson Women's Health Organization*[227], the findings suggest that transnational healthcare may increasingly represent one strategy through which immigrant women navigate evolving legal and institutional barriers to sexual and reproductive healthcare.

Healthcare decisions occur across transnational social fields

This dissertation also provides empirical support for transnational social field theory by demonstrating that healthcare decision-making occurs within ongoing social, cultural, and institutional relationships spanning both countries of origin and residence. Rather than conceptualizing migration as a one-way transition from one healthcare system to another, participants described maintaining enduring relationships with healthcare providers, family members, and healthcare institutions across national borders (Mixed SRH care).

Family members frequently facilitated access to healthcare by recommending providers, arranging appointments, providing transportation, or sharing healthcare information. Established provider relationships, familiarity with healthcare systems, and confidence in providers also influenced women's willingness to seek care abroad. These findings suggest that transnational healthcare is embedded within broader networks of social relationships and resources that extend across national boundaries and continue to shape healthcare utilization long after migration.

Importantly, the findings also highlight the importance of considering both push and pull factors simultaneously. While barriers within the United States encouraged women to seek alternatives, characteristics of healthcare systems in their countries of origin—including trusted provider relationships, cultural familiarity, language concordance, shorter wait times, continuity of care, and perceived quality actively attracted women to seek care abroad. Together, these findings demonstrate that transnational healthcare is shaped not only by dissatisfaction with healthcare in the country of residence but also by the continuing value of healthcare resources maintained through immigrants' transnational social fields.

Contributions to theory

This dissertation makes few important theoretical contributions.

First, it extends Andersen's Behavioral Model of Health Services Use by demonstrating that healthcare utilization among immigrants may occur across multiple healthcare systems rather than exclusively within the healthcare system of the country of residence. Predisposing characteristics, enabling resources, and healthcare needs influenced not only whether women accessed care but also where care was obtained, suggesting that healthcare utilization models should explicitly account for transnational healthcare opportunities.

Second, this dissertation advances applications of transnationalism within health research by illustrating how immigrants' transnational social fields shape healthcare decision-making throughout the reproductive life course. Rather than treating transnational healthcare as episodic medical travel, the findings conceptualize healthcare utilization as an ongoing process occurring across interconnected healthcare systems, social relationships, and institutional contexts.

Third, by integrating qualitative and quantitative evidence, this dissertation addresses an important methodological gap in the transnational healthcare literature. The qualitative findings explain the mechanisms underlying healthcare decision-making, while the quantitative analyses demonstrate the correlates and variation of transnational SRH care across a large, multi-state sample of Asian immigrant women. Together, these complementary approaches provide a more comprehensive understanding of transnational healthcare than either method could achieve independently.

Implications for policy and practice

These findings have important implications for healthcare policy, clinical practice, and immigrant health research. Although expanding health insurance coverage remains essential, improving healthcare access for immigrant women requires addressing broader structural barriers that extend beyond insurance alone. Policies that improve language access, expand culturally responsive care, increase the availability of culturally concordant providers, strengthen patient navigation services, and reduce immigration-related barriers to healthcare may decrease unmet sexual and reproductive healthcare needs. Healthcare providers should also recognize that transnational healthcare is not necessarily indicative of dissatisfaction with U.S. healthcare but may represent a rational strategy through which immigrant women meet sexual and reproductive healthcare needs that are unmet domestically. Therefore, recognizing these transnational sexual and reproductive healthcare practices may facilitate more patient-centered SRH care and improve continuity of SRH care across borders.

Strengths and limitations

This dissertation has several important strengths. First, it addresses a significant gap in the literature by examining transnational sexual and reproductive healthcare (SRH) among Asian

immigrant women, a population that remains substantially underrepresented in both the transnational healthcare and SRH literature. To date, only few studies have examined the intersection of transnational healthcare and SRH, and even fewer have focused specifically on Asian immigrant women. Moreover, much of the existing research has treated Asian immigrants as a homogeneous population, with limited attention to heterogeneity across ethnic groups and immigration statuses. By leveraging data from the BRAVE Study, this dissertation provides one of the first comprehensive examinations of transnational SRH care among Chinese, Filipino, Indian, and Korean immigrant women and investigates how transnational healthcare utilization varies by ethnicity, immigration status, years of U.S. residence, and state policy context.

Second, this dissertation employs a rigorous sequential mixed-methods design that integrates qualitative life history interviews with quantitative survey analyses. Combining these complementary approaches enabled a more comprehensive understanding of transnational SRH care than either method alone could provide. The qualitative findings illuminated the decision-making processes and mechanisms underlying transnational healthcare utilization, while the quantitative analyses quantified the patterns and correlates of transnational SRH care across a large, multi-site sample. Together, these approaches generated a richer understanding of both the "how" and the "why" of transnational SRH care-seeking among Asian immigrant women.

Third, this dissertation is guided by an integrated conceptual framework that brings together Andersen's Behavioral Model of Health Services Use and the transnational social field perspective. By applying these frameworks to sexual and reproductive healthcare, this research extends existing conceptualizations of healthcare utilization beyond a single national healthcare

system and demonstrates how immigrant women strategically navigate healthcare across interconnected social, cultural, and institutional contexts.

Several limitations should also be acknowledged. The cross-sectional nature of the survey data precludes causal inference regarding the determinants of transnational SRH care. All measures relied on self-reported information and may therefore be subject to recall and social desirability bias. Although the BRAVE Study includes one of the largest and most diverse samples of Asian immigrant women available for SRH research, the findings may not be generalizable to other Asian ethnic groups, immigrant populations, or geographic settings. Finally, while the survey captured multiple dimensions of transnational SRH utilization, it was not designed to fully capture the complexity of informal cross-border healthcare practices or changes in healthcare utilization over time because of its cross-sectional design.

Future directions

Future research should examine transnational healthcare longitudinally, evaluate how changing immigration and reproductive health policies influence transnational healthcare utilization, and explore transnational SRH care among other immigrant populations. Greater attention should also be given to the role of digital health technologies (telehealth), virtual cross-border consultations, and evolving transnational healthcare practices as healthcare systems become increasingly interconnected.

Conclusion

This dissertation provides one of the first comprehensive examinations of transnational sexual and reproductive healthcare among Asian immigrant women in the United States. By integrating qualitative and quantitative evidence, it demonstrates that transnational healthcare is not simply healthcare obtained outside the United States but rather an adaptive strategy through

which immigrant women navigate multiple healthcare systems in response to structural barriers and opportunities. These findings expand understanding of immigrant healthcare utilization beyond national borders and underscore the importance of developing equitable, culturally inclusive, and accessible sexual and reproductive healthcare systems that recognize the increasingly barriers immigrants face in accessing sexual and reproductive health services.

IX. APPENDICES

Appendix 1. BRAVE study Life History Interview Field Guide

Participant ID: Interviewer:

Date of interview: Language of interview:

Reviewed information sheet: Yes No

Answered questions regarding consent: Yes No

Mode of interview: Phone Zoom In-person

Consent to audio record: Yes No

Consent to video record (if applicable): Yes No

Recording Mode #1: Mode #2:

Time interview started:

Introduction

- **Content Awareness:** We may cover some sensitive topics today, including immigration history, sexual encounters, intimate relationships, and healthcare experiences. If at any point you want to take a break, stop the interview, or skip any questions, just let me know.
- Before we start, I want to assure you that I am in a private and secure environment here and no one will hear our conversation since I am wearing headphones. How about for you? Do you feel you are in a safe, private, and quiet environment where we can talk about these topics? [ASK ABOUT MOVING LOCATION; USING HEADPHONES, IF NEEDED]
- If at any point you wish to take a quick break, just let me know.
- In the event we are interrupted or someone is able to overhear you, please feel free to change the subject until we can again ensure privacy. Other participants have chosen to switch to talking about an everyday topic, such as work/school or their last shopping experience.

[Permission to begin recording and verbal consent process occurred prior to the administering the demographic form]
Can I get your verbal consent to participate in the interview?

Construction of life history timelines:

Directions to Interviewer: Use this space to draw out the life history interview timeline and use this throughout the interview. Insert information from participant's Screener and Demographic Survey (including immigration history) on the timeline below prior to the interview. Print this out BEFORE your interview:

Information to include on the timeline –populate ahead of time if they turned it in prior to interview:

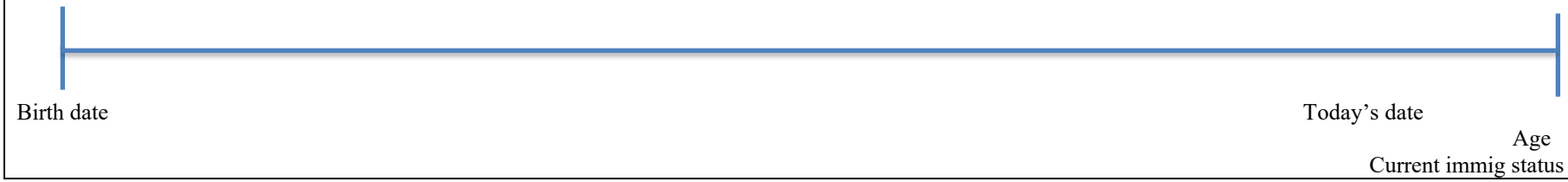
- Current age and current documentation status (Screener)
- Probe on timing of participant's education, current/past relationship status, and number of children (Demographic Survey)
- Where did they live before coming to the US
- Date/age of first arrival to US to live permanently- immigration status
- Date/age of any changes in immigration statuses

Information to include from interviews – populate while you are conducting the life history interview:

- Age of first sex
- Any major/memorable sexual or reproductive health experiences, including if they had romantic partnerships, experiences of sexual coercion, had children, abortions, miscarriages, experiences with SRH providers that they were memorable
- Dates/periods where they had access to health insurance

Script: We are interested in hearing your story as an immigrant in the US. Throughout our discussion today, I will construct a timeline with stories that you tell me today. The purpose of this timeline is to help me situate major life events that you have experienced so I can get a comprehensive understanding of your life.

First, can you tell me when you were born? [then move on to immigration questions]



Interview Part 1 — Key life events

Immigration History
Thank you so much. I wanted to start by learning more about you and your immigration story.

1. Can you tell me about your life before moving to the US?
    a. Financial situation of their family; neighborhood and living situation; schooling; work/parent's work; closeness to family; support through government programs

2. What do you remember about when you or your family first decided to stay in US long-term?

    PROBE:
    - Where did you move from/to?
    - When was this? [CONFIRM DATE ON IMMIGRATION GRID]
    - Why did you/your family decide to stay in US?
    - Who moved with you?
    - Who was involved in this process? Who helped you?

3. What was your life like after moving to the US?
    a. Financial situation of their family; neighborhood and living situation; schooling; work/parent's work; closeness to family; support through government programs

4. [If participant moved to the US at a young age] What was your life like growing up in the US?
   [If participant moved to the US at a later date] What was your life like growing up in your country of origin?
    a. Who were you living with? Tell me a bit about your household and neighborhood(s) where you grew up.
    b. If you feel comfortable sharing, could you please describe the general financial situation or household income level while you were growing up?"
    c. How has your or your family's immigration status affected your social/economic/education opportunities? (e.g., *Opportunities: travel, leisure, education, etc.)*

5. What was it like for you being a (ethnicity) in the US?
    a. Can you tell me about the neighborhoods you have lived in?
    b. Can you tell me about any family, cultural institutions or community supports that you use or can go to? And that provide a place or ways to connect with others from your cultural background?
    c. PROBE: Language services; community centers; cultural events; extended family in the area; role of religion

d. Tell me about your experience with:
    i. Connecting and interacting with people around you?
    ii. Making friends and finding a community here in the US?
    iii. Experiences with discrimination or prejudice in your interactions with others in your community

[PROCEED THROUGH IMMIGRATION HISTORY/ ASKING THE FOLLOWING QUESTIONS ABOUT EACH CHANGE IN STATUS]

We are interested in learning about each of these points in time when your immigration status changed. Could you walk me through the changes in immigration status(es) since you moved to the US? [REFER TO DEMOGRAPHIC FORM]

[CONFIRM DATE OF NEXT STATUS CHANGE WITH IMMIGRATION GRID]

6. Can you tell me about the process of adjusting your status [visa/green card/naturalization] in [DATE/AGE]?
    a. Who was involved in the process of adjusting your status?
        i. Probe: Family member, friends, employer, partner, lawyer, sponsor, institution, etc.

7. Did you ever feel like someone might take advantage of you during, or as a result of your change in immigration status? Can you tell me about that? Were there other times in your life when this happened?
    a. When was this? [CONFIRM DATE ON IMMIGRATION GRID]

8. Can you tell me a bit about what your life was like during this time [AROUND CHANGE IN STATUS]? How did your immigration status affect you and your family with respect to:
    a. Reasons for change of status (e.g., change in school; work; marriage, etc.)
    b. Access to health insurance and health care
    c. How about your housing or living situation?
    d. Your or your family's language ability/comfort in speaking English
    e. Work situation? Income to support you (and your family)?
    f. Access to social services (e.g. food or financial assistance) and education (e.g., language; legal; etc.)
    g. The level of fear, stigma, or discrimination that you experienced at that time?

Interview Part 2 — Relationships and sexual histories

[CONSTRUCT SRH HISTORIES]: We are interested in learning about ways to improve women's healthcare. We would like to improve services that are specific to sex and having

children. We know these services may be difficult to access and harder for people to get. First, we would like to learn a bit more about your past or current relationships.

9. To what extent, if at all, do you think your, or your partner's immigration status influences/d your relationship?
    a. Probe: Have you ever felt pressured to stay in a relationship because of your immigration status?
10. To what extent, if at all, do you think your, or your partner's, immigration status influences/d your decision about having children?
    a. Have you experienced pressure to have or not have any children?
        i. Probe: Fertility, economic reasons, social and cultural reasons, parenthood, COVID

Next, I would like to hear about any significant sexual or reproductive experiences in your life? Significant experiences might be sexual encounters, partnerships or relationships, or any health care services that might be particularly memorable for any reason. Please think freely first and then I can follow up.

For many women, before or around the time at first sex marks the point at which she may be thinking about or needing specific health services, such as a pelvic exam or contraception.

11. Since every person is different and may define sex in different ways -- What does 'sex' mean to you? How do you define sex? Would you say that you have had sex?
    a. [If yes] Based on that definition, can you share with me a bit about the first time you had sex?
    a. How did you first learn about sex? From whom?

12. How about now - Do you talk to anyone about sex, sexual and reproductive health, or other related matters?
    a. Probe: Partners, family, friends, professionals?
    b. What makes them trustworthy? How do you choose who to talk to about these things?

[PROBE ON OTHER EXPERIENCES MENTIONED BY PARTICIPANT] Can you tell me about other significant experiences related to sexual and reproductive health?

[FOR EACH TIMELINE EVENT, WE WILL NEED THE FOLLOWING INFORMATION]

13. Can you recall when this happened – at what age or year if you could recall?

[Other potential probes if SRH experiences are limited]:

14. Can you tell me about any memorable services you received related to sex, any infections, contraception, pregnancy, or pregnancy loss?

15. Why was that event particularly memorable for you?

[PROBE AND FILL IN SEXUAL HISTORY, MAKING SURE TO ASK ABOUT EACH EVENT IN RELATION TO SERVICES AT EACH EVENT AND THEIR IMMIGRATION HISTORY]

16. For each of these points, can you tell me about the SRH services that you have received around that time?
    a. Tell me about your experiences.
    b. Where did you go?
    c. Tell me about your interactions with the health care providers there. How did the provider(s) treat you? What did they do that made you feel that way (respected or not respected)?
    d. How did you pay for your visit? What kind of insurance did you have?
    e. To what extent do you feel that your immigration status at that time affected your sexual and reproductive healthcare?

[PROBE ON ANY SRH SERVICES MENTIONED IN THE SRH GRID]
Now, going back to this list of services, I am interested in the SRH services you weren't able to access.

Transnational healthcare experiences

17. Have you ever received any of the services we were discussing – meaning those related to sexual or reproductive healthcare - outside of the US?
    a. Can you tell me about your experiences?
    b. What types of services have you received specifically?
    c. What led you to seek services outside the US?
        i. Probe: costs too high, more familiar with other healthcare systems, someone recommended, etc.
    d. What was that experience like for you?
    e. Would you recommend this to someone you know? Why or why not? Probe quality of care or perceived safety here

Thank you so much for sharing. Next, I am going to ask you questions about any unwanted sexual encounters or experiences. I know it may be somewhat uncomfortable to talk about this, so I just want to remind you again that you are also in control of our conversation and if at any point, you want to discuss something else, pause, or stop the interview, please just let me know.

18. Have you ever experienced any unwanted sexual activity or encounter?
    a. At what age(s)?

b. To the extent that you feel comfortable, can you tell me what happened at that time? What happened after? Did you feel comfortable talking to anyone? Can you tell me about that?
c. How did you feel after this happened? And about any support you may – or may not – have received?

Administrative Burden and Immigrants' SRH care

As a part of this study we are interested in the how policy impacts the ability of Asian immigrant women to access sexual and reproductive health care. For example, these policies may be related to one's immigration status, access to health insurance, or financial assistance for services.

19. Speaking from your experience, or of other Asian immigrant women you know, are there any policies or programs that make sexual and reproductive health care services easier or harder to get? Can you tell me what you know about these policies or programs?
    PROBES:
    a. How did you learn about this? To what extent do you feel you were able to get accurate, reliable information?
    b. What have your experiences been like in using this program/accessing this policy? Or what you have heard about others' experiences?
        i. Barriers: e.g. time; language services; complexity; paperwork
        ii. Facilitators: people or systems that may have helped them learn about or navigate access
20. Can you tell me about your experiences interacting with these policies or programs? What has it been like for you in actually using these services?
    a. [If none] Do you know anyone else who has interacted with these policies or programs? What has it been like for them in using these services?

In this country, some states now protect access to abortion services, while others have restricted the availability of abortion or have banned it altogether. We know that people have a range of views on abortion, but are curious to hear your views.

21. How familiar are you with the laws regarding abortion in [COUNTRY OF ORIGIN]?
22. To what extent do you feel that the laws in [COUNTRY OF ORIGIN] affect how you view abortion now?
23. If a friend or family member was in the situation where they wanted or needed an abortion in the US, how difficult do you think it would be for them?
24. To what extent do you think these recent legal changes may affect your family or community if they needed an abortion?
25. How do you think these laws will affect immigrants in general?

Immigration enforcement experiences

26. Thinking about our conversations about abortion and your past immigration experiences, how are immigrants treated by police or law enforcement in the US?
27. Have you ever had any encounters or experiences with law enforcement, such as local police or with ICE?

    PROBE:
    - experiences with USCIS, restrictions on travel, limiting your movement because of fear of immigration enforcement, immigration raids, traffic stops, airport security, surveillance of your status when you are seeking employment, or going to get healthcare.
28. Have USCIS, border patrol, or local/federal police ever affected your ability to get health care?

Interview Part 3 — Resilience

Thank you for sharing your life history with me. We wanted to conclude with just two questions on how we can improve healthcare for immigrants in this country.

29. What factors helped you overcome difficult or challenging times that you have faced? [INTERVIEWERS CAN REFER BACK TO EXAMPLES FROM PARTICIPANT'S INTERVIEW]
30. When you think of those you are close to - in your family and the larger Asian immigrant community – what would you describe as their superpowers?
31. What can be done to help improve healthcare for immigrants?

Interview Part 5 — Conclusion and Feedback

That concludes our interview. Do you have any requests or suggestions for our study or study team?

32. Is there anything in particular you would like to see come out of the study?

Thank you so much for your participation in your study and sharing your stories with me. You can expect to receive you $50 e-gift card for your participation within 1-3 days. Please feel free to reach out to us in the future if you have any questions, concerns, or comments.

Do you have others who might be eligible for this study? Can you connect us to this person?

Time interview ended: 6:00PM

Preferred mode of receipt of compensation: Email

Text? Confirm phone number: _____

Email? Confirm email:

Appendix 2: Study 2

BRAVE National Survey (Block: SRH service utilization outside the US)

Q406. *We are now going to ask about your sexual and reproductive health service use outside the U.S.* While you have lived in the U.S., which of these sexual and reproductive healthcare services have you used outside the U.S.?

- Birth control counseling or method
- Abortion or termination of pregnancy
- Prenatal, pregnancy and birth, or postpartum care
- General women's health
- Other (please specify)
- ⊗ I have never used SRH care outside the United States since moving here
- ⊗ Prefer not to answer

Q87. We are now going to ask you questions about the use of sexual and reproductive health care. By this, we mean services such as contraception, pap test, pelvic exam, testing and counseling for sexually transmitted infections and services related to pregnancy such as pregnancy tests, prenatal and postpartum care, and abortion care. Which of these sexual and reproductive healthcare services have you ever used in the U.S.?

- Birth control counseling or method ?
- Pap smear (PAP test) ?
- A pelvic exam ?
- Human Papilloma Virus (HPV) vaccine to prevent cervical cancer (Cervarix, Gardasil)
- Counseling for, or been tested or treated for a sexually transmitted infection and/or HIV/AIDS
- Breast cancer screening, mammogram, clinical breast exam, and/or MRI tests ?
- Menstrual period services for irregular periods, missing periods, menstrual pain, etc.
- Polycystic ovary syndrome (PCOS) ?
- Pregnancy test
- Prenatal care ?
- Abortion or termination of pregnancy ?
- Labor and delivery care
- Postpartum or post-pregnancy care
- Pregnancy and postpartum mental healthcare ?
- Fertility and/or infertility treatment
- Treatment following a miscarriage
- Other service(s) - 1 (please specify):
- Other service(s) - 2 (please specify):
- ⊗I have not heard of any of these services
- ⊗None of the above
- ⊗Prefer not to answer

SUPPLEMENTAL TABLES FOR SENSITIVITY ANALYSES:

Table 8. Binary Logistic Regression — Base Model: Correlates of Any Transnational SRH Care Use Among Asian Immigrant Women (Supplemental Table)

Outcome: Ever transnational use (Mixed + Transnational-only, n=746) vs. Never transnational use (Non-user + US-only, n=1,284)

N=1,890 | Pseudo R^2=0.041 | Overall p<0.001 | AIC=2,428.0

Variable	OR	95% CI	AME	95% CI	Joint p
Immigration Status (ref: Naturalized citizen)					
Legal permanent resident	2.28***	1.76–2.96	+0.185***	0.128–0.243	<0.001
Temporary visa holder	2.05***	1.50–2.82	+0.160***	0.089–0.230	
Ethnicity (ref: Chinese/Taiwanese)					
Korean	1.40*	1.06–1.84	+0.076*	0.014–0.138	0.124
Indian	1.21	0.87–1.68	+0.042	−0.032–0.116	
Vietnamese	0.92	0.64–1.30	−0.019	−0.094–0.056	
Filipino	1.00	0.67–1.50	+0.000	−0.088–0.089	
Other Asian	1.09	0.79–1.49	+0.018	−0.051–0.088	
Years in U.S. (ref: 0–4 years)					
5–9 years	1.82***	1.35–2.44	+0.135***	0.069–0.200	0.0002
10+ years	1.23	0.91–1.67	+0.045	−0.019–0.110	
State of Residence (ref: California)					
Georgia	0.82	0.59–1.14	−0.043	−0.113–0.027	0.039
New York	1.18	0.87–1.58	+0.037	−0.031–0.104	

Texas	0.90	0.65–1.24	−0.023	−0.093–0.046
Other states	1.30*	1.00–1.69	+0.060*	0.000–0.119

OR = Odds Ratio. AME = Average Marginal Effect (percentage points). Robust standard errors. Undocumented/DACA excluded from regression (n=58); included in descriptive analyses.
* p<0.05 ** p<0.01 *** p<0.001. Joint p-values from Wald chi-square tests. Source: BRAVE Study.

Table 9. Binary Logistic Regression — Full Model: Correlates of Any Transnational SRH Care Use Among Asian Immigrant Women (Supplemental Table)

Outcome: Ever transnational use (Mixed + Transnational-only, n=746) vs. Never transnational use (Non-user + US-only, n=1,284)

N=1,751 | Pseudo R^2=0.079 | Overall p<0.001 | AIC=2,184.0

Variable	AOR	95% CI	AME	95% CI	Joint p
Immigration Status (ref: Naturalized citizen)					
Legal permanent resident	2.41***	1.83–3.17	+0.185***	0.128–0.241	<0.001
Temporary visa holder	2.82***	2.00–3.99	+0.221***	0.149–0.292	
Ethnicity (ref: Chinese/Taiwanese)					
Korean	1.21	0.90–1.63	+0.041	−0.023–0.106	0.347
Indian	1.08	0.76–1.54	+0.017	−0.058–0.092	
Vietnamese	1.13	0.77–1.66	+0.026	−0.056–0.109	
Filipino	0.83	0.54–1.26	−0.040	−0.126–0.047	
Other Asian	0.87	0.62–1.22	−0.030	−0.100–0.041	
Years in U.S. (ref: 0–4 years)					
5–9 years	1.87***	1.35–2.58	+0.135***	0.066–0.205	0.0002
10+ years	1.15	0.83–1.61	+0.030	−0.039–0.099	
State of Residence (ref: California)					

Georgia	0.84	0.59–1.19	−0.036	−0.108–0.035	0.160
New York	1.17	0.85–1.61	+0.033	−0.035–0.102	
Texas	1.03	0.73–1.47	+0.007	−0.067–0.081	
Other states	1.28	0.98–1.69	+0.054	−0.005–0.112	
Covariates					
Age (continuous)	1.02*	1.00–1.04	+0.004*	0.001–0.007	0.022
Insurance Status (ref: Insured)					
Uninsured	0.50***	0.39–0.65	−0.151***	−0.207–−0.095	<0.001
Marital Status (ref: Married/partnered)					
Widowed/sep/div	1.33	0.82–2.15	+0.064	−0.044–0.172	0.003
Never married	0.66**	0.51–0.86	−0.086**	−0.142–−0.031	
Household Income (ref: $30,000–$79,999)					
Less than $30,000	1.07	0.78–1.47	+0.014	−0.051–0.079	0.107
$80,000–$149,999	1.30	0.99–1.72	+0.056	−0.003–0.114	
More than $150,000	1.45*	1.06–1.99	+0.079*	0.012–0.146	
Education (ref: College or higher)					
High school or less	0.60*	0.39–0.91	−0.104*	−0.184–−0.025	0.017

OR = Odds Ratio. AME = Average Marginal Effect (percentage points). Robust standard errors.
Insurance collapsed to binary: Insured (Private/Other + Public) vs. Uninsured.
Undocumented/DACA excluded from regression (n=58); included in descriptive analyses.
* p<0.05 ** p<0.01 *** p<0.001. Joint p-values from Wald chi-square tests. ns = not significant. Source: BRAVE Study.

Table 10. Multinomial Logistic Regression — Base Model Including Undocumented/DACA

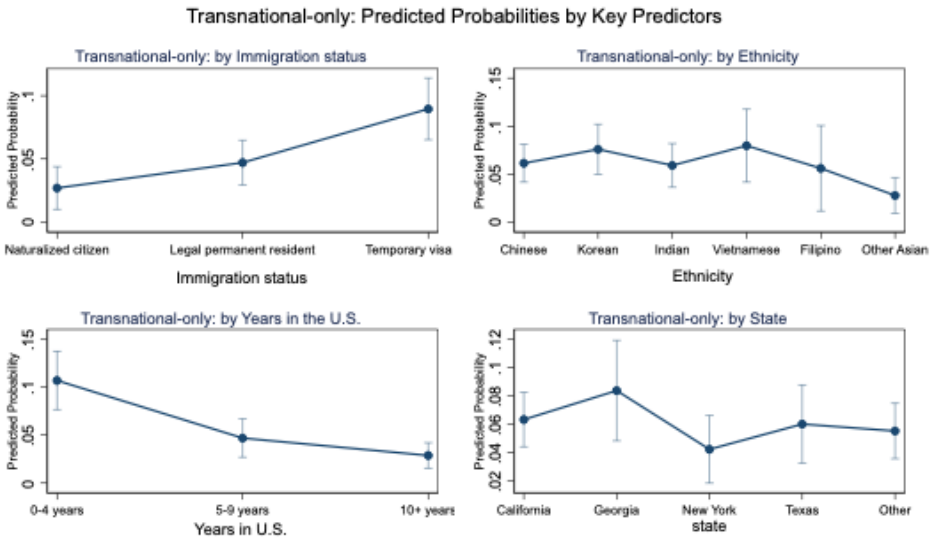
(Supplemental Table)

Full sample including undocumented/DACA (n=58). Outcome: Non-user / US-only (ref) / Mixed / Transnational-only.
N=1,947 | Pseudo R^2=0.092 | AIC=4,401.8

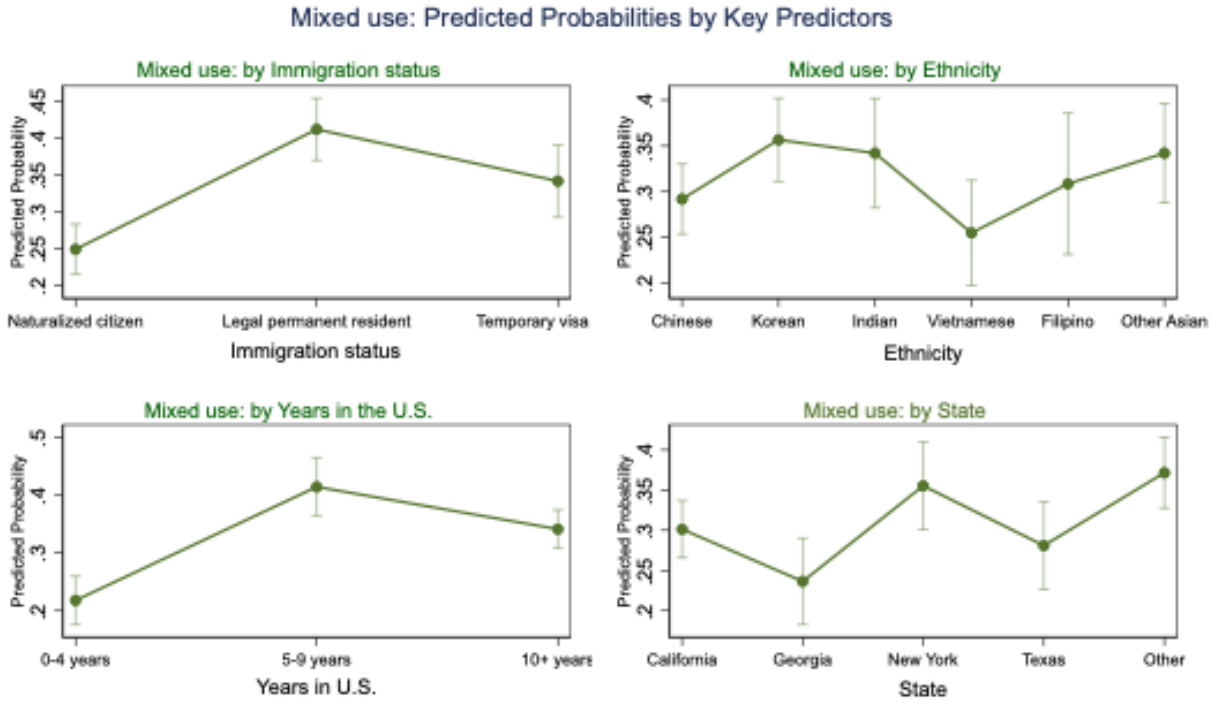
Variable	Non-user vs US-only (RRR)	95% CI	Mixed vs US-only (RRR)	95% CI	Transnat-only vs US-only (RRR)
Immigration Status (ref: Naturalized citizen)					
Legal permanent resident	1.33	0.93–1.92	2.49***	1.87–3.31	2.68*
Temporary visa holder	1.65*	1.08–2.52	2.07***	1.45–2.96	5.45***
Undocumented/DACA	0.68	0.30–1.56	0.78	0.40–1.52	0.81 ns
Ethnicity (ref: Chinese/Taiwanese)					
Korean	1.21	0.84–1.75	1.45*	1.06–1.99	1.55
Indian	1.68*	1.12–2.54	1.57*	1.06–2.32	1.42
Vietnamese	2.08**	1.35–3.19	1.15	0.77–1.72	1.91
Filipino	0.49*	0.26–0.92	0.85	0.55–1.31	0.68
Other Asian	0.66	0.42–1.04	1.05	0.74–1.48	0.37*
Years in U.S. (ref: 0–4 years)					
5–9 years	0.43***	0.29–0.64	1.70**	1.17–2.46	0.37**
10+ years	0.24***	0.16–0.36	0.98	0.68–1.41	0.16***
State of Residence (ref: California)					
Georgia	0.91	0.60–1.40	0.70	0.48–1.03	1.17
New York	1.22	0.83–1.79	1.38	0.99–1.93	0.74
Texas	0.93	0.61–1.42	0.90	0.62–1.29	0.86
Other states	1.41	0.99–2.00	1.62**	1.20–2.19	1.09

SUPPLEMENTAL FIGURES:

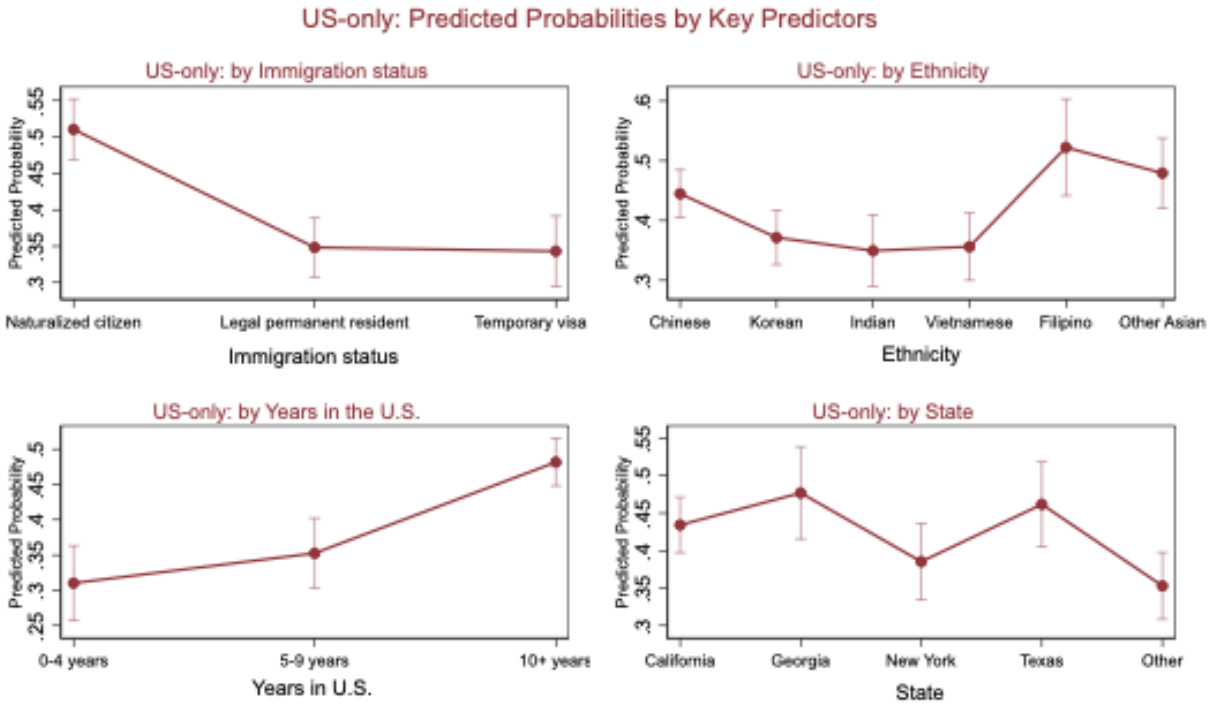
Supplemental Figure 17. Predicted Probabilities (Unadjusted) of Transnational-only SRH Care Use by Key Correlates Among Asian Immigrant Women, BRAVE Study (N=1,890)



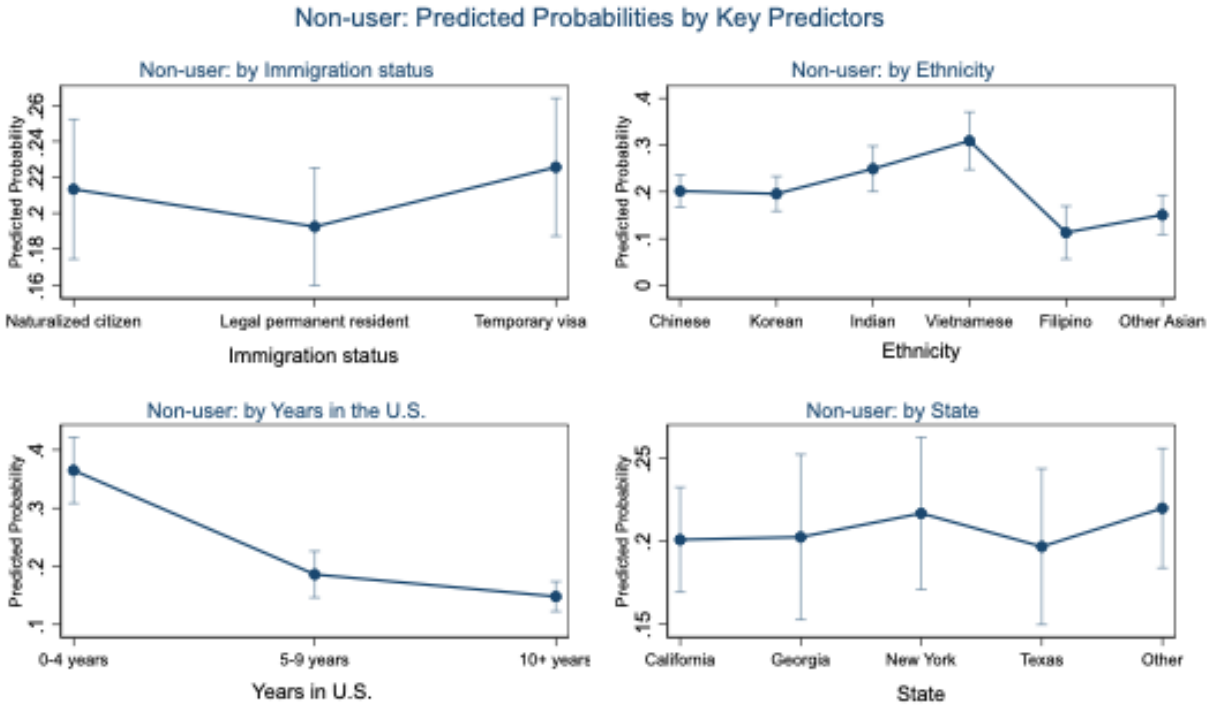
Supplemental Figure 18. Predicted Probabilities (Unadjusted) of Mixed SRH Care Use by Key Correlates Among Asian Immigrant Women, BRAVE Study (N=1,890)



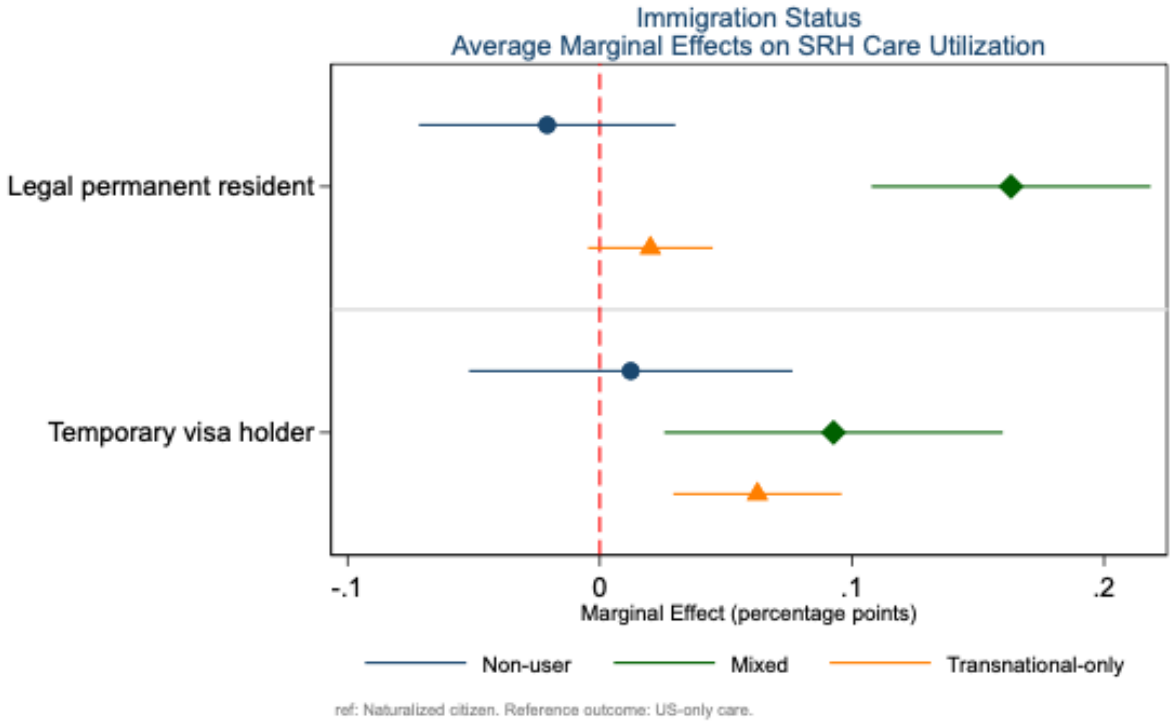
Supplemental Figure 19. Predicted Probabilities (Unadjusted) of US-only SRH Care Use by Key Correlates Among Asian Immigrant Women, BRAVE Study (N=1,890)



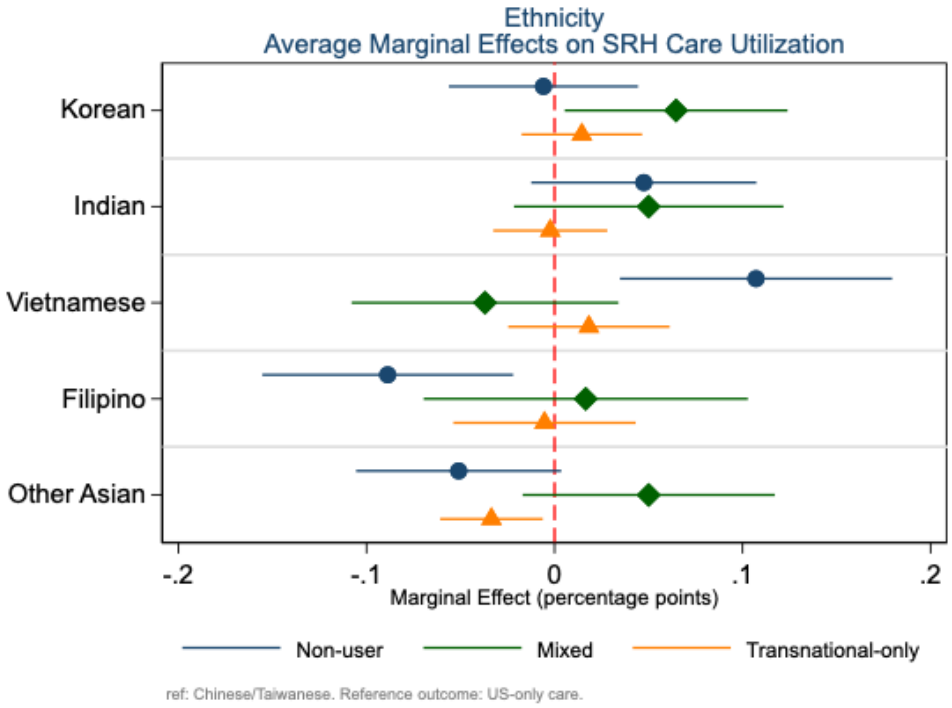
Supplemental Figure 20. Predicted Probabilities (Unadjusted) of Non-use of SRH Care by Key Correlates Among Asian Immigrant Women, BRAVE Study (N=1,890)



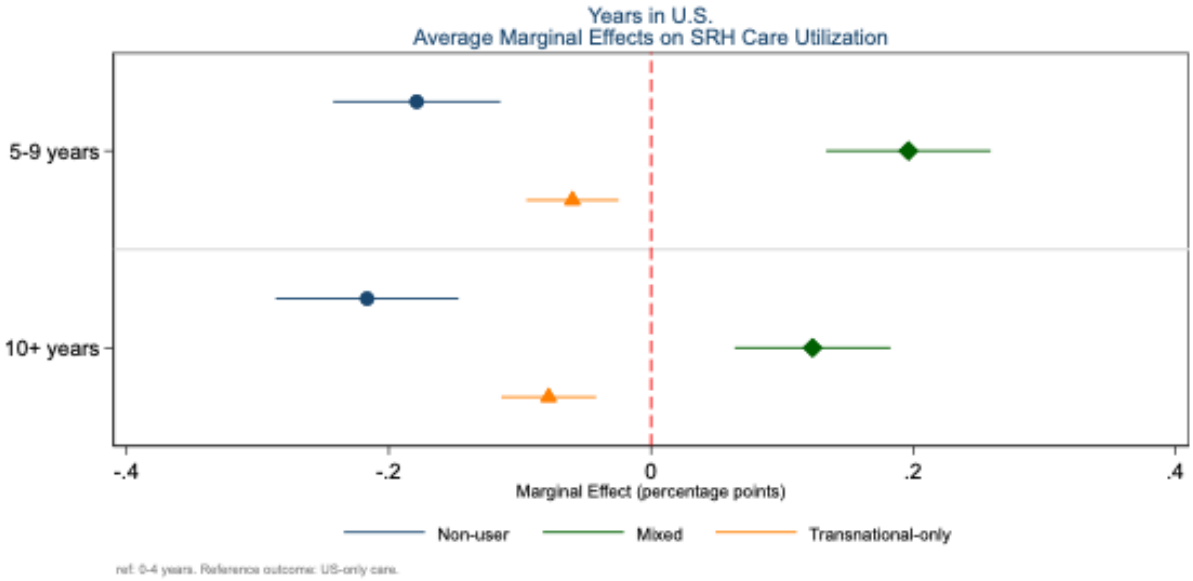
Supplemental Figure 21. Average Marginal Effects of Immigration Status on SRH Care Utilization Pattern, Unadjusted Base Model (Sensitivity Analysis)



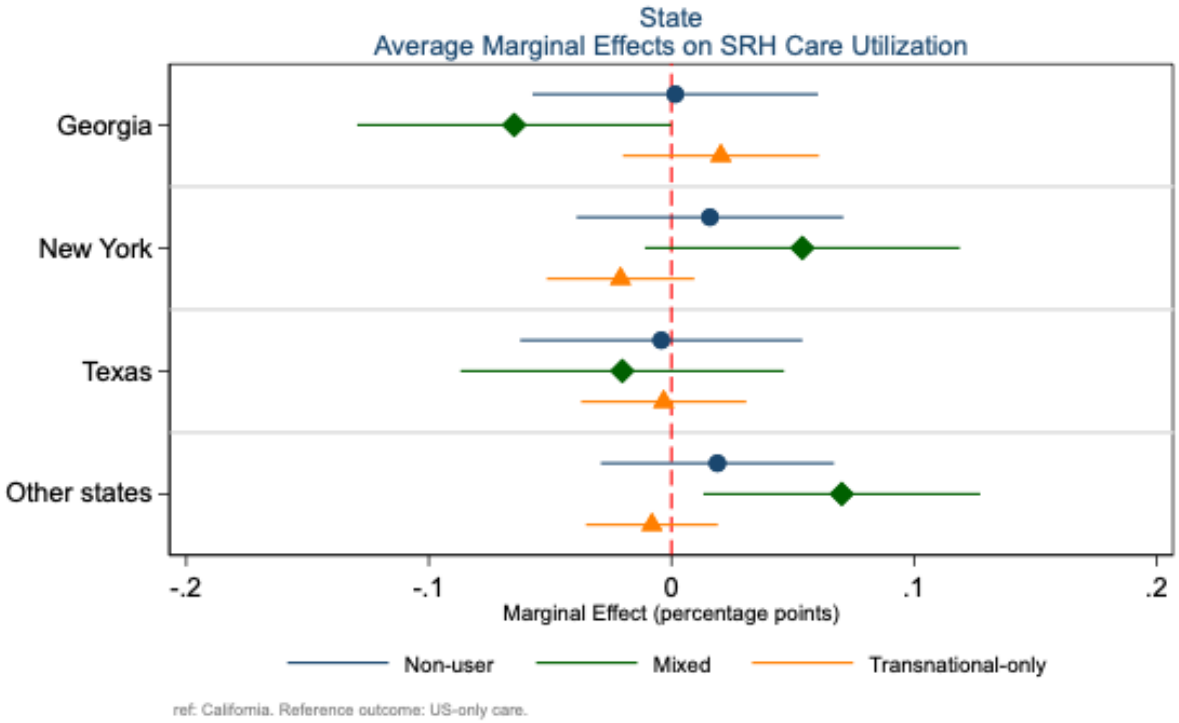
Supplemental Figure 22. Average Marginal Effects of Ethnicity on SRH Care Utilization Pattern, Unadjusted Base Model (Sensitivity Analysis)



Supplemental Figure 23. Average Marginal Effects of Years in the US on SRH Care Utilization Pattern, Unadjusted Base Model (Sensitivity Analysis)



Supplemental Figure 24. Average Marginal Effects of State of residence on SRH Care Utilization Pattern, Unadjusted Base Model (Sensitivity Analysis)



Appendix 3: Study 3

BRAVE National Survey (Block: SRH service utilization outside the US)

Q406. *We are now going to ask about your sexual and reproductive health service use outside the U.S.* While you have lived in the U.S., which of these sexual and reproductive healthcare services have you used outside the U.S.?

- Birth control counseling or method
- Abortion or termination of pregnancy
- Prenatal, pregnancy and birth, or postpartum care
- General women's health
- Other (please specify) _____
- ⊗ I have never used SRH care outside the United States since moving here
- ⊗ Prefer not to answer

Q92. What are the main reasons you have used sexual and reproductive health services outside the U.S.? Please select all that apply.

☐ More affordable health care
☐ Higher quality health care
☐ More culturally competent health care (e.g. familiar, trustworthy)
☐ Ease in understanding language
☐ My family asked me to (e.g., husband, parents, etc.)

☐ Other (Please specify) ____

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