Journal of Racial and Ethnic Health Disparities
https://doi.org/10.1007/s40615-024-01945-x

Health Service Utilization of Black Immigrant Women Residing in the United States: A Systematic Review

Jennifer J. Lee[1] · Joyline Chepkorir[1] · Abeer Alharthi[1] · Khadijat K. Adeleye[2] · Nicole E. Warren[1]

Received: 23 August 2023 / Revised: 2 February 2024 / Accepted: 7 February 2024
© W. Montague Cobb-NMA Health Institute 2024

Abstract

Black immigrants constitute a rapidly growing population group in the U.S. A comprehensive understanding of health services used by Black immigrant women is necessary to support the complex needs of this population. We conducted a systematic review to (1) understand the types of health services used by Black immigrant women living in the U.S. and (2) examine barriers and motivators to using health services. Relevant studies were identified in the following databases: PubMed, PsychInfo, CINAHL, and Embase. Articles published until October 2022 were included in the review. From a total of 15,245 records, 47 articles that reported on health service utilization practices of Black immigrant women were included in the review. A variety of different health services were accessed by Black immigrant women, such as hepatitis screening, reproductive health services, cancer screenings, substance abuse treatment, mental health services, HIV services, dental services, genetic testing, cardiovascular risk testing, and general health services/ hospitalizations. Motivators for using health services included possession of health insurance, knowledge of health resources and conditions, and positive experiences with providers. Barriers to using health services included challenges navigating the health system, language barriers, and cultural beliefs. Factors that positively influence health service utilization must be expanded at the institutional, societal, and policy levels to improve access to health services for Black immigrant women.

Keywords Immigrant health · Black immigrant · Health services · Health care access · Health disparities

Introduction

The number of Black immigrants in the U.S. has grown rapidly from 800,000 in 1980 to 4.6 million in 2019 and is projected to reach 9.5 million by 2060 [71]. African immigrants have the fastest growth rate among Black immigrants in the U.S., having grown 246% between 2000 and 2019 [71]. Black immigrants are motivated to move to the U.S. for a myriad of reasons, including pre-migration stressors such as political upheaval, war, gender-based violence, and poverty [21]. For Black immigrants who immigrate to the U.S., challenges with adapting to a new country, such as cultural and linguistic barriers, financial stressors, racism, discrimination, and social isolation add another level of stress and vulnerability that exacerbate previous experiences of trauma and abuse. Moreover, these migration-related stressors have negative implications for both physical and mental health and may aggravate existing mental health problems and/or precipitate new conditions [8, 22, 44, 56].

A comprehensive understanding of different health services used by Black immigrant women is essential to guide efforts that support the intricate needs of this growing population. Most public health efforts with Black immigrants have centered around infectious diseases, but as Black immigrants become long-term residents in the U.S., an emphasis on screening, prevention, and treatment of disease is imperative. Health promotion and treatment of disease is especially important due to the "healthy immigrant effect," or the phenomenon of deterioration in health status among immigrants following extended time in the host country, despite having better health outcomes compared to native populations upon entry [24]. Studies have also shown that immigrants' risk for negative health outcomes increases overtime as their health profiles shift to align more with that of the American population [73]. Taking this into account, the promotion

✉ Jennifer J. Lee
jlee694@jh.edu

[1] Johns Hopkins University School of Nursing, Baltimore, MD, USA

[2] University of Massachusetts Amherst College of Nursing, Amherst, MA, USA

Published online: 28 February 2024

of essential health screenings and other health services is essential to reduce health inequities that occur in immigrant populations over time.

Unfortunately, little is known about health service utilization (HSU) practices of Black immigrant women. Black populations in the U.S., which also include Black immigrant women, have a history of being amalgamated despite existing differences in culture and health needs and outcomes. The health care needs and experiences of Black immigrant populations in the U.S. cannot be assumed to be identical to those of African Americans. However, it is difficult to extricate differences in HSU among immigrant groups because U.S. immigrant health data are rarely stratified by country or region of origin and are often categorized broadly using designations such as "foreign-born" [6]. Moreover, existing research focuses on individual health services such as mental health [7], emergency department [37], and informal support from friends and religious leaders [25], rather than a wide variety of health services.

Purpose

The goal of this review was to gain a comprehensive understanding of the different health services utilized by Black immigrant women in the U.S. and factors influencing decisions to use health services to guide efforts to support the complex health needs of this growing population.

Methods

Theoretical Framework

This review is guided by Yang and Hwang's [75] adapted version of Andersen's Behavior Model of Health Services Use (BMHSU), which seeks to explain health service utilization behavior of immigrants by specifying elements from the original model to fit the immigrant context [75]. Much like Andersen's original model, Yang and Hwang's adapted model proposes that health service utilization is determined by four factors: (1) predisposing factors, (2) enabling factors, (3) need for care, and (4) macrostructural/contextual factors (Fig. 1). All factors influence the health outcomes of perceived health and satisfaction with care services received [10, 75].

Predisposing factors include demographic factors such as age and gender, social factors such as education, occupation, and ethnicity, and health beliefs, which include attitudes, values, and knowledge about health and health services that influence perceptions of the need for health services. Immigrant-specific predisposing factors include immigration status (legal status, human rights, psychological status), assimilation (English proficiency, length of host residency, residential integration, participation in community organizations), and immigrant ethnic culture (norms, values, beliefs, traditions, behaviors, and additional cultural patterns brought to the host country from the homeland of the immigrant).

Enabling factors describe three different types of resources: financial resources (income, means to pay for services and transportation to services), social resources (relationships with friends, family, and the community), and access to health care (availability of health services and health professionals to provide needed services).

Need for care encompasses both perceived (individual feelings about personal health, response to symptoms, and magnitude of health problem) and evaluated needs (judgment by medical professional).

Macrostructural/contextual factors are related to government policy, the health system, and the larger social, economic, and political systems that influence the decision-making process for utilizing health services. Immigrant-specific contextual factors include the context of emigration (leaving the home country), experiences of care in the home

Fig. 1 Adapted Behavior Model of Health Service Use [75]

Factor Level	General Factors	Immigrant-specific Factors
Predisposing Factors	• Demographic factors • Socioeconomic status • Health beliefs • Genetic factors	• Immigration status • Assimilation • Immigrant ethnic culture
Enabling Factors (Resources)	• Financial resources • Social resources • Access to health care	• Homeland-based financial and social resources • Transnational access to healthcare
Need for Health Care	• Self-reported health • Evaluated health	• Immigrant-specific health need/conditions
Macrostructural/ Contextual Factors	• Government policy • Healthcare system • Social, economic, political conditions	• Context of emigration • Context of reception • Health service utilization in the homeland

country prior to moving to the host country, and attitudes of the host society toward new immigrants. This model will be used to guide the data extraction and organization of results for this review.

Search Strategy and Selection Criteria

We followed the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) for this systematic review of health service utilization of Black immigrants residing in the U.S. An informationist was consulted to complete a detailed literature search and a search strategy (Fig. 2) was developed using keywords, synonyms, and controlled vocabularies (Medical Subject Headings [MeSH], Emtree) related to Black immigrants and health service utilization. Four databases were searched: PubMed, PsychInfo, CINAHL, and Embase. Articles published until October 19, 2022 were eligible for inclusion. Ethical approval was not required for this review.

Study Selection and Eligibility

All articles identified using the search strategy were imported to Covidence, a web-based collaboration software platform that streamlines the production of systematic literature reviews [18]. Title and abstract screenings were conducted by three reviewers (JL, JC, AA) on Covidence. Two reviewers independently reviewed each article to determine eligibility for the review and discrepancies that arose from the title and abstract screening processes were resolved

Fig. 2 Search Terms

Search Terms

PubMed:
(("African Continental Ancestry Group"[Mesh:NoExp] OR "african" [tw] OR "Blacks"[Mesh]) AND (("Emigrants and Immigrants"[Mesh]) OR "Emigration and Immigration"[Mesh] OR immigrant* [tw] OR immigrat* [tiab] OR "in-migration" [tw] OR migration [tw])) AND ((("Health Services"[Mesh]) OR "Legal Services"[Mesh]) OR "Social Welfare"[Mesh] OR "social welfare" [tw] OR "social service*" [tw] OR "community service*" [tw] OR "legal service*" [tw] OR "health service" [tw] OR "health care" [tw] OR "healthcare" [tw])

PsychInfo:
(DE "African Cultural Groups" OR "African") AND ((DE "Immigration" OR DE "Migrant Workers" OR DE "Refugees") OR (DE "Expatriates") OR immigrant* OR immigrat* OR "in migration" OR refugee*) AND

[(DE "Health Care Seeking Behavior" OR DE "Professional Referral" OR DE "Self-Referral" OR DE "Health Care Utilization" OR DE "Utilization Reviews") OR

(DE "Health Care Services" OR DE "Behavioral Health Services" OR DE "Continuum of Care" OR DE "Electronic Health Services" OR DE "Health Care Delivery" OR DE "Hospital Programs" OR DE "Long Term Care" OR DE "Mental Health Services" OR DE "Palliative Care" OR DE "Patient Centered Care" OR DE "Prenatal Care" OR DE "Primary Health Care" OR DE "Health Care Seeking Behavior" OR DE "Health Service Needs" OR DE "Quality of Care" OR "health service" OR healthcare OR "health care")]

Cinahl:
((MH "Black Persons") OR African*} AND
((MH "Emigration and Immigration") OR (MH "Immigrants+") OR (MH "Refugees+") OR immigrant* OR immigrat* OR "in migration")
AND
((MH "Health Services+") OR (MH "Health Services Needs and Demand+") OR (MH "Help Seeking Behavior") OR "health service" OR "health services" OR "health care" OR "healthcare")

Embase:
('african'/exp OR 'black person'/de OR african$:ti,ab,kw) AND
('immigrant'/exp OR 'migrant'/exp OR 'immigration'/exp OR 'migration'/exp OR immigrant*:ti,ab,kw OR immigrat*:ti,ab,kw OR 'in migration':ti,ab,kw) AND
('african'/exp OR 'black person'/de OR african$:ti,ab,kw)

through discussion by all three reviewers. All studies from the initial screening were eligible for full-text screening. For full-text review, two primary reviewers determined eligibility and referred to a third reviewer to resolve cases of discrepancies.

Inclusion and Exclusion Criteria

Full-text articles were included if they were empirical studies, had samples of female immigrants over the age of 18 who identified as Black, African, or of Caribbean-descent, discussed health services delivered by a professional in a health care setting, examined experiences of using health services, were set in the U.S., written in English, and peer-reviewed. Articles were excluded during the full-text screening process if they were gray literature, contained study samples consisting of only men, only discussed opinions of providers and not patient experiences, or only examined patient health beliefs of health services that did not arise from personal experiences. The literature was limited to immigrants living in the U.S. to examine patient experiences within the context of the U.S. health care system, which is distinct from health systems in other countries.

Data Extraction

Following full-text review, data were independently extracted by two reviewers (JL, KA). The data extraction form included information such as first author and publication year, sample size and description, study aim, study design, type of health service used, health professional involved, and factors influencing health service utilization (HSU). The factors influencing HSU were then organized by the categories in the immigrant health service utilization theoretical framework by Yang and Hwang [75]. The first author (JL) cross-checked the extracted data and resolved inconsistencies upon discussion with a second reviewer (KA).

Quality Assessment

Study quality was assessed using the Joanna Briggs Institute Critical Appraisal Tools [42]. For quantitative studies, the following domains were assessed: bias due to study population, setting, outcome measurements, identification and assessment of confounding factors, and statistical analysis method. For qualitative studies, philosophical perspective and methodology congruity, research methodology, cultural location of researcher, researcher influence, ethical approval, and establishment of conclusion were domains that were appraised. Each item was rated either yes, no, unclear, or not applicable. The PRISMA checklist guided transparent reporting [52]. For mixed-methods studies, the Mixed Methods Appraisal Tool [31] was used. The tool contains five items that evaluate both qualitative and quantitative study quality components, as well as how both study methods were integrated and interpreted. All articles were appraised for quality and all studies ($n = 46$) except for one [16] met 60 to 100% of the criteria from the Joanna Briggs Institute Critical Appraisal Tool. All studies were deemed appropriate to include in the review.

Results

A total of 15,245 records were identified from the literature search and 11,468 duplicates were removed (Fig. 3). Title and abstract screening were conducted with the remaining 3777 studies, and 3567 were excluded, leaving 210 studies. During the full-text review, 150 studies were excluded. A more detailed overview of reasons for exclusions is in Fig. 3. After full-text screening, 47 articles were included in the review. Study characteristics and data were summarized in Table 1, and a variety of different health services were accessed by the Black immigrant population (Table 2). These included hepatitis screening ($n = 2$), reproductive health services ($n = 4$), cancer screenings ($n = 18$), substance abuse treatment ($n = 1$), mental health services ($n = 5$), HIV services/testing ($n = 7$), dental services ($n = 1$), genetic testing ($n = 1$), and cardiovascular risk testing ($n = 1$). A few studies ($n = 6$) discussed more than one type of health services.

Factors Affecting Utilization of Health Services

Factors influencing health service usage spanned across all four components of Yang and Hwang's [75] adapted version of Andersen's Behavior Model of Health Services Use and will be discussed in greater detail in the following sections.

Predisposing Factors

Demographic factors, social factors, health beliefs, and health knowledge were predisposing factors that influenced Black immigrants' health service utilization behavior. For some immigrants, country of origin increased their likelihood of facing challenges with utilizing health services; Somali immigrants were less likely to access health services compared to immigrants from other African countries living in Minnesota [29]. Age was another factor that significantly affected health service usage. In two studies assessing HIV screening reception, immigrants younger than 25 years and older than 44 years of age were less likely to obtain health services [49, 50]. Female sex was a factor that increased likelihood of not acquiring health services [70], and older women were also less likely than younger women to get mammography screenings in an immigrant sample of Somali

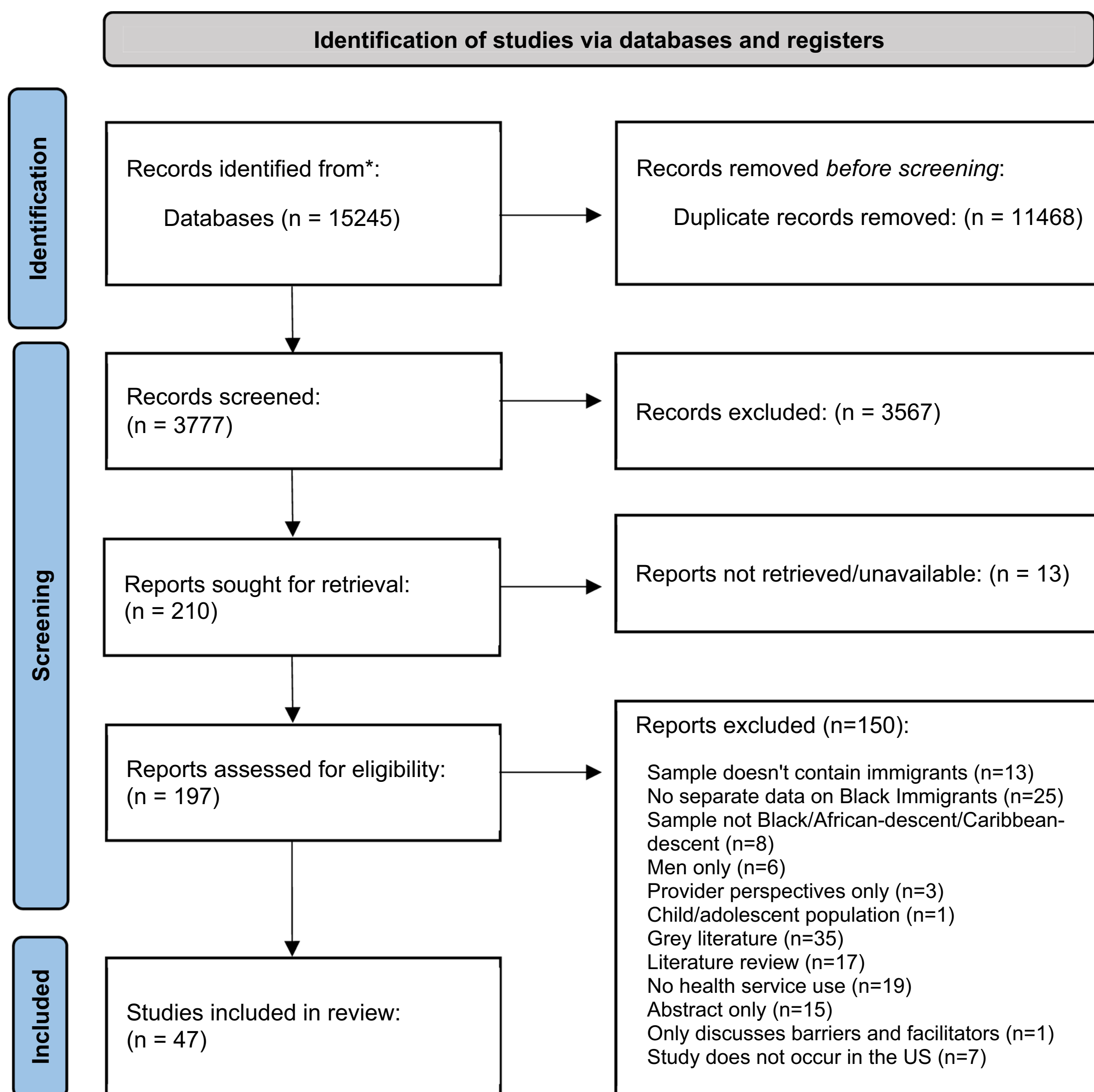

Fig. 3 PRISMA Flow Diagram

and Haitian women [74]. Both single [23] and married status also contributed to decreased use of health services [49]. Higher degrees of acculturation as measured by years resided in the U.S.; English proficiency, social preferences, and personal identity were associated with increased use of health services [12]. Immigrants who identified with a blended sense of cultural attitudes and beliefs were also more likely to report utilization of preventative screening services compared to immigrants who resisted acculturation and did not identify with the new culture [3].

Length of stay in the U.S. was another factor that influenced care reception, but findings were mixed. Several studies concluded that immigrants who had recently arrived in the U.S. [16], resided in the U.S. for less than 5 years [29], or lived part-time in the U.S. and their country of origin [74] were less likely to utilize care services than immigrants who had lived in the U.S. for longer than 5 years. However, other studies found that immigrants residing in the U.S. for longer than 5 years used fewer services compared to immigrants who had newly moved in the past year [19, 50, 51]. For cardiac screening, Black immigrants who lived in the U.S. longer were more likely to get screened [47].

Many studies noted that limited health knowledge inhibited Black immigrant women from navigating and accessing health care systems. Lacking knowledge of health conditions and transmission [48], differing understanding of disease cause and progression [11, 74], and decreased availability of reliable health information [30, 74] were all barriers to using health services for the female Black immigrant population [2, 48, 74]. Confusion about the non-curative nature

Table 1 Studies Examining Health Service Utilization Among Black Immigrant Women

Study ID	Sample size/description	Aim of study	Study design	Health service(s)	Barriers/ Motivators	Findings
Adegboyega 2017	22 sub-Saharan African-born women who were English-speaking, aged 18 years and above, and resided in the United States for more than 1 year	To understand barriers and motivators influencing Pap screening decisions among sub-Saharan African immigrant women	Qualitative study	Cervical cancer screening	Barriers: lack of knowledge, religious/cultural beliefs, fear, communication issues with health care providers, cost Motivators: understanding benefits of pap screening, providers' recommendations, family support/ community enlightenment, health insurance	African immigrant women had low awareness of cervical cancer screening tests. The majority of the women admitted having little knowledge about Pap screening and testing guidelines
Adegboyega 2021	108 sub-Saharan African–born women	To examine the relationship between acculturation strategies and pap screening among SAIs	Cross-sectional study	Cervical cancer screening	Motivators: positive doctor/health care professional experience/ being advised by a doctor; increased acculturation	34.3% of the women reported that they had never been screened or did not know if they had ever been screened
Adegboyega 2022	108 sub-Saharan African women who speak English, and age 21 or older	To examine the relationship between social support and Pap screening in a sample of SAI women	Cross-sectional study	Cervical cancer screening	Motivators: older age, affectionate support, positive social interactions, financial comfort, longer length of stay in US, health insurance	34.3% of the women reported that they had never gotten pap screening or did not know if they had ever been screened
Agbemenu 2019	77,891 women who gave birth to a live infant in Erie County. 789 African refugee women (n = 789), U.S.-born Black women (n = 17,487), and U.S.-born White women (n = 59,615)	To compare prenatal history, prenatal behaviors, and birth outcomes of African refugee women to U.S.-born White and U.S.-born Black women to explore disparities in reproductive health outcomes	Prevalence study	Prenatal care utilization	N/A (focus more on birth outcomes than barriers/ motivators for prenatal care usage	More refugee women delayed initiating prenatal care until the 2nd trimester compared to U.S.-born women. More refugee women received inadequate amounts of prenatal care compared to White women and Black women. Among Black refugee women, labor and birth outcomes were generally better than their U.S.-born White or U.S.-born Black counterparts

Table 1 (continued)

Study ID	Sample size/description	Aim of study	Study design	Health service(s)	Barriers/ Motivators	Findings
Agbemenu 2020	100 African refugee women in Buffalo, NY	To examine African refugee women's family planning attitudes, behaviors, and sociodemographic factors related to family planning behavior	Cross-sectional study	Family planning	Barriers: desire for more children and fear of side effects; limited access to family planning methods	Among the 25.0% of respondents who did not desire pregnancy for at least 2 years, 64% were not currently using contraception. Of the remaining respondents who perceived themselves capable of pregnancy and did not desire future pregnancy, 55.8% did not use contraception
Ahad 2019	165 women (78 African immigrant women, 87 African American women) At least 18 years old who spoke English, Spanish, or Kirundi.	To examine how immigration status, health, barriers to access, and knowledge of the health care system relate to the likelihood of having a regular health care provider	Cross-sectional study	Gender-informed community wellness coaching program	Barriers: immigrant status, lack of insurance, lower levels of health literacy Motivators: having private health insurance; higher health literacy scores; being responsible for gathering information to guide family health care decisions	African immigrant women were 89% less likely to report having a regular health care provider compared with African American women
Amuta-Jimenez 2022	450 women (35 African American and 115 Black immigrant), at least 18 years of age, resided in the US	To examine differences in cervical cancer knowledge, cervical cancer screening behaviors and barriers, family history of cervical cancer, and influence of family and provider advice	Cross-sectional study	Cervical cancer screening	Barriers: lack of access to services; no symptoms or because they feared bad results; Inconvenience (time constraints; a positive doctor/health care professional experience/ being advised by a doctor	Black immigrant women were statistically significantly less likely to visit a gynecologist, well-woman visit, pap smear than African American women

Table 1 (continued)

Study ID	Sample size/description	Aim of study	Study design	Health service(s)	Barriers/ Motivators	Findings
Ayub 2020	12 Liberian refugee women over 18 years of age.	To clarify barriers to health care and health promotion within this population	Qualitative study	Use of general health services (not specified)	Barriers: perception of disease cause, distrust of US medical system, challenges navigating US health systems, lack of employment, educational disparities, perceived discrimination by providers and coworkers based on English proficiency, lack of insurance, bureaucratic, language, cultural barriers when applying for insurance or disability coverage, distrust of medical providers due to the prolonged nature of care of chronic diseases and lack of understanding of why treatment was not curative	Interviewees noted improved access to care and better funding in the US and less reliance on "native" medicine. Adherence to nutrition and exercise practices from Liberia were important to maintaining health. Increase in sugar and fat consumption and an increasingly sedentary lifestyle were noted to contribute to worsening health and weight gain
Bauldry 2017	First- and second- generation immigrants (African immigrants $n = 93$) with mood ($n = 3230$) or anxiety disorders ($n = 4239$) from the National Epidemiological Survey on Alcohol and Related Conditions	To examine of nativity-based disparities in mental health care utilization within groups from five different racial-ethnic origins and analyze the relationship between acculturation and mental health care utilization	Prevalence study	Mental health care	Motivators: higher degree of acculturation with respect to racial/ethnic identity	First-generation immigrants of African and Hispanic origin have lower rates of mental health care utilization than either second-generation immigrants or non-immigrants for mood disorders and second-generation immigrants for anxiety disorders
Blackman 2021	357 US-born, Caribbean-born, and African-born Black adults aged 50–75 years, living in Philadelphia	To assess colorectal cancer screening (CRCS) prevalence and adherence to national screening recommendations and the association of region of birth with CRCS adherence within a diverse Black population	Cross-sectional study	Colorectal cancer colonoscopy	Barriers: lack of health insurance	Caribbean and African immigrants had a higher prevalence and adherence to CRCS when compared to US-born Blacks

Table 1 (continued)

Study ID	Sample size/description	Aim of study	Study design	Health service(s)	Barriers/ Motivators	Findings
Chaumba 2011	362 Ethiopian and Nigerian immigrants	To document the health status, use of health care resources, and treatment strategies of Ethiopian and Nigerian immigrants in the United States and to determine differences between the two groups	Cross-sectional study	Usual source of care, primary care physician, dental care, mammogram, pap smear, prostate exam	Barriers: financial cost, being new to country, perception of having good health	Both Ethiopians and Nigerians reported low use of health care services. Pap smears and seeing a doctor in the last 12 months were the two mostly likely resources to have been used by both groups. 28% of Ethiopians and 35% of Nigerians had a usual source of care while 49% of Ethiopians and 54% of Nigerians did not have any
Consedine 2012	1364 immigrant and non-immigrant women (African American, English Caribbean, Haitian, Dominican, Eastern European, European American) aged 50–70 years living in Brooklyn	To examine the demographic, health care/ health, and psychosocial predictors of patterns of mammogram screening in ethnic subpopulations of women	Cross-sectional study	Breast cancer screening	Barriers: reporting greater worry, speaking a language other than English and Spanish was a barrier to reception of care services for Haitian and Eastern European immigrants Motivators: physician recommendation was as strong predictor of initiation it did not predict maintenance of treatment	Haitian women were more likely than majority women to have never screened, screen yearly, nor be treatment adherent. Haitian and English-speaking Caribbean women were between two to four times likely to screen sub-optimally versus in a guideline-adherent manner. English Caribbean women were more likely to report having a regular physician and annual exam compared to Haitian women

Table 1 (continued)

Study ID	Sample size/description	Aim of study	Study design	Health service(s)	Barriers/ Motivators	Findings
Cruz 2010	1417 foreign-born people (Asian, Hispanic, Black Caribbean), aged 18 to 65 years who were residents of New York City	Examining the determinants of utilization of oral health care among a diverse group of immigrants in New York city	Cross-sectional study	Oral and dental health care services	Barriers: dental insurance, language barrier, regular source of dental care, frequency of flossing for Black Caribbeans; increased years in the United States Motivators: frequency of flossing, level of education, employment, regular source of dental care, more filled teeth, missing and decayed, bleeding sites, and Self-perceived needs	30 percent of participants reported having visited a dentist within the previous year. Black Caribbean immigrants utilized the oral health care system significantly less than did Asian immigrants. Those who flossed more frequently, had dental insurance, had a regular source of care and had more filled teeth were more likely to have visited a dentist during the previous year than were their counterparts
Cudjoe 2021	167 women, between 21 aand 65 years old, self-identified as African immigrants	To examine how sources and types of health information impact health literacy, and how health literacy and cultural and psychosocial factors influence Pap testing behaviors of AI women	Cross-sectional study	Cervical cancer screening	Motivators: health literacy and health information receive and share within their social circles. multiple sources of information; insurance coverage, access to primary care; acculturation; Higher English proficiency scores, higher cultural beliefs/attitude scores, higher health literacy level	71% reported receipt of a Pap test
Forney-Gorman 2016	656 African American and African-born women, ages 21–64 who had not had a hysterectomy	To describe the likelihood of having a current Pap smear for black women in the U.S., distinguishing between African American women and African-born black women	Cohort study	Cervical cancer screening	Barriers: being single and uninsured; high income among African-born women	African American black women were 3.37 times more likely to have a current Pap test, compared to African-born black women even after controlling for health insurance status and marital status

Table 1 (continued)

Study ID	Sample size/description	Aim of study	Study design	Health service(s)	Barriers/ Motivators	Findings
Garbers 2006	300 African American and Caribbean women aged 40 and 79 years, and spoke English living in Brooklyn, NY	To examine patterns of breast cancer screening knowledge and behavior among African American and Caribbean women	Cross-sectional study	Mammogram, breast self-examination, breast cancer screening	Barriers: lack of providers to recommend a mammogram, no motivation, lack of insurance Motivators: having any insurance, having a source of care, provider recommendation, currently married, ever having breastfed, reception of mammogram in the past year	Women with a provider recommendation were 8 times more likely to have mammogram; Caribbean-born women in the US for less than half their lives were significantly more likely to report a doctor could motivate them to get a mammogram
Green 2005	700 women living in four cities in eastern Massachusetts 40 years of age or older, and spoke English, Haitian Creole, or Spanish	To examine self-reported Pap smear screening rates for Haitian immigrant women and compare them to rates for women of other ethnicities	Cross-sectional study	Cervical cancer screening	Barriers: Haitian heritage Motivators: being married or living with a domestic partner, having some form of health insurance, utilizing a single site of health care, and having a female physician	women identified as Haitian had a lower Pap smear rate than women identified as African American, English-speaking Caribbean, or Latina
Gurnah 2011	14 Somali Bantu women between 22 and 45 years of age living in Connecticut	To explore the reproductive health experiences of Somali Bantu women in Connecticut to identify potential barriers to care experienced by marginalized populations	Qualitative study	Reproductive health services	Barriers: lack of cultural fluency between patients and providers; language barriers, passive acceptance of incorrect care (difficultly questioning outcome of health visit/ uncertain if doctor understood concerns), male service providers, cultural discordance in family planning services, financial limitations, unsympathetic service provider	All the women in the study reported having access to reproductive health care services, but they also reported having unmet health needs resulting from barriers to care

Table 1 (continued)

Study ID	Sample size/description	Aim of study	Study design	Health service(s)	Barriers/ Motivators	Findings
Harcourt 2014	533 African immigrant women in Minnesota (Breast cancer screening: 112 women 40 years or older; cervical cancer screening: 421 women aged 18 and older)	To determine the rates of participation in breast and cervical cancer screening among age eligible female African immigrants and to examine barriers associated with these cancer screening procedures	Cross-sectional study	Breast and Cervical cancer screening	Barriers: Somali, lived in the US less than 5 years, unemployment, unable to pay health insurance premiums, Invasiveness of the procedure, gender of health care provider as immigrant are culturally to prefer female providers for their gynecologic care. Motivators: Greater than 5 years of residence in the US; English proficiency, health insurance	African immigrant women in Minneapolis and St. Paul have low breast and cervical cancer screening rates. Women with a longer duration of residence in the US were more likely to screen for breast and cervical cancer. Our study showed Somali immigrant women had higher rates of mammogram use but lower rate of Pap testing when compared to other African immigrant women in the study.
Hassan 2021	72 participants	To better understand preventative health care attitudes in these communities	Qualitative study	HIV testing and preventative health care	Barriers: structural racism and discrimination; fear of Western Medicine and last consequences of medical violence; Fear of Being ill; Lack of information and inability to navigate the US health care system; Lack of health insurance; Physical manifestations of illness; language barriers and inadequate health literacy	Cultural beliefs, religious beliefs and attitudes, shared immigrant experiences, and structural barriers related to health systems, collectively constitute significant barriers that prevent individuals from easily accessing or believing in the need for preventative care

Table 1 (continued)

Study ID	Sample size/description	Aim of study	Study design	Health service(s)	Barriers/ Motivators	Findings
Houston 2021	35 Somali young adults ages 18-30 in Minnesota, Massachusetts, and Maine	Examine how Somali refugees understand various forms of discrimination in employment and health care related to their health, utilization of, and engagement with the health care system in the United States	Qualitative study	General health care services in the US	Barriers: demanding work schedules, intersecting forms of discrimination based on racial, gender, and religious identifications; systemic discrimination; income variability/financial barriers/high cost of care/ employment connection Motivators: Employment (provides insurance), discussing positive experiences, medical professionals that share one or more identifications with them such as age, sex, race, or religion	Participants discussed their perceptions of health, discrimination, employment, and experiences or perceptions of the U.S. health care system
Johnson-Agbakwu 2022	879 Somali women and teenage girls in Phoenix and Tucson, Arizona	Understand health concerns of Somali women and teenage girls with FGM/C and uncut counterparts, examine how often health concerns were resolved following health care use and satisfaction with health service, explore differences in cut participants by the severity of their cut status	Cross-sectional study	Reproductive health services, mental health services	Barriers: mental health concerns	Fewer than half of the cut women with sexual dysfunction used services, 29% of cut women experiencing pain with intercourse used health services, 58% of cut participants with infertility used services.
Jones 2020	2242 U.S.-born African American women, 264 U.S.-born Caribbean Black women, and 705 foreign-born Caribbean Black women	Examine differences in the prevalence of psychiatric disorders, their persistence, and unmet treatment needs among Black women in the U.S.	Case report	Mental health service	Barriers: foreign-born Caribbean women with major depressive disorder, any mood disorder, social phobia, or panic attack Motivators: foreign-born Caribbean women with bipolar disorder I/II, agoraphobia, alcohol abuse, or alcohol dependence	Foreign-born Caribbean women had the lowest rates of treatment utilization compared to US-born African American women and US-born Caribbean Black women, whether across the lifetime or within the twelve months prior to the interview

Table 1 (continued)

Study ID	Sample size/description	Aim of study	Study design	Health service(s)	Barriers/ Motivators	Findings
Le 2022	8730 immigrants (born outside the US or any of the US territories)	To assess the relationship between LTC (linkage to care) and sociodemographic factors and factors associated with HBV/HCV LTC	Cross-sectional study	Hep B and Hep C virus screening and follow-up care	Barriers: female gender made linkage to care for Hep C less likely Motivators: not having health insurance, not having access to care	African-born immigrants were less likely to have LTC for HBV infection than Asian-born immigrants
Lum 2010	7345 White, African American, or Hispanic respondents aged 70 or older	Investigate the association of immigrant status among older people with their physical and mental health outcomes, health services utilization, and health insurance coverage	Prevalence study	Doctor visits, hospitalization, outpatient surgery, dentist visits	Barriers: old age (outpatient surgery and dentist visits); poorer self-reported health Motivators: older age (for doctor visits and hospital stays)	Older immigrants were less likely to have outpatient surgery than non-immigrant elders. There was no statistically significant difference in the likelihood of doctor visits, hospital stays, or dentist visits between the two groups after adjusting for demographic characteristics, education, and income
Magai 2004	1364 women (ages 50–70 years) who had no prior history of breast cancer	To identify facilitators and barriers to breast cancer screening in a large urban population	Cross-sectional study	Breast cancer screening	Barriers: single marital status, English Caribbean ethnicity, Haitian ethnicity, or Eastern European ethnicity, misconceptions about cancer, stress, embarrassment about mammograms Motivators: having a regular physician, undergoing annual physical exam, having a discussion on prostate cancer, prostate cancer knowledge, higher education, physician recommendation, insurance, cancer worry and mammogram-caused pain access to facilities	Before including cognitive and socioemotional variables, women from the English-speaking Caribbean territories, Haiti, and Eastern Europe were 55–74% less likely to be screened regularly compared with U.S.-born European Americans. When the cognitive and socioemotional variables were added, the ethnic effects of being English Caribbean or Haitian were no longer significantly associated with lower screening

Table 1 (continued)

Study ID	Sample size/description	Aim of study	Study design	Health service(s)	Barriers/ Motivators	Findings
Morrison 2012	91,557 patients older than 18 years old, including 810 Somali patients with an assigned primary care provider in the primary care internal medicine or family medicine clinic in Mayo Clinic, Rochester, Minnesota	To quantify disparities in preventive health services among Somali patients compared with non-Somali patients in an academic primary care practice	Cross-sectional study	Cervical cancer screening, vaccinations, lipid screening, colorectal cancer screening, mammography	Barriers: lack of insurance, overestimation of the language proficiency by the patient or provider Motivators: Use of medical interpreters and primary care services, medical insurance, emergency department visit	Somali patients had significantly lower completion rates of colorectal cancer screening, mammography, pap smears, and influenza vaccination than non-Somali patients
Murray 2013	40 East African women from San Diego	To describe preliminary efforts at establishing a collaborative relationship with the East African communities of San Diego, identifying salient community health needs, and developing a framework for disseminating information and addressing identified health gaps	Qualitative study	General US health care system and preventative care; preventative screening services	Barriers: Financial cost, lack of education on importance of health services, discomfort during procedures; feeling like a spectacle (e.g., other providers invited to examine the women alongside doctor); modesty concerns, male doctor; lack of trust and comfort with medical system; lack of understanding disease signs and symptoms and navigating the U.S. health care system; language barrier/ lack of interpreter	All the focus groups highlighted their perceptions of the importance of prevention and self-care in warding off ill health, yet they also identified cultural and practical barriers to engaging in preventive services and emphasized the importance of incorporating cultural practices from their homelands into self-care in the US
Nadeem 2007	192 U.S.-born Latinas, 5,153 immigrant Latinas, 7,966 U.S.-born blacks, 913 immigrant Africans, 273 immigrant Caribbeans, and 886 U.S.-born white low-income women	To examine extent to which stigma-related concerns about mental health care account for under use of mental health services	Prevalence study	Mental health services	Barriers: mental health stigma	Immigrant women were most likely to report stigma-related concerns about care, and depressed immigrant women with stigma concerns were least likely to state that they wanted care

Table 1 (continued)

Study ID	Sample size/description	Aim of study	Study design	Health service(s)	Barriers/ Motivators	Findings
Ogungbe 2022	437 African immigrants from Liberia, Ghana, Cameroon, Nigeria, or Sierra Leone and living in the Baltimore–Washington D.C. metropolitan area	To examine the association between length of stay and percent of life spent in the U.S. and cardiovascular disease risk screening among African immigrants in the U.S	Cross-sectional study	Cardiovascular risk screening	Barriers: Older age Motivators: Increased length of stay in the US, having insurance, female sex for BP screening	Compared to African immigrants from Ghana, Nigerian and Liberian immigrants were less likely to be screened for diabetes and Sierra Leonean immigrants had lower odds for blood pressure while Nigerian immigrants had a lower odds of lipid screening
Ogunwobi 2019	71 first-generation African Americans in New York City in 2016	To provide a better understanding of HBV burden to identify risk factors for the implementation of more effective prevention and treatment programs	Cross-sectional study	Hepatitis B virus screening/ monitoring/ treatment	Barriers: Lack of physical symptoms, lack of provider recommendation for HBV tests, no insurance, low HBV transmission knowledge Motivators: having a college degree or higher, having health insurance, and having a regular physician, being married	Only half of first-generation African immigrants reported having received HBV screening and vaccinations. Only 39.13% of participants reported that their doctors had previously recommended HBV vaccination
Ojikutu 2013	1060 Black individuals living in Massachusetts (57% non–U.S.-born)	To determine the rate of HIV testing by self-report among non–U.S.-born blacks and identify barriers to accessing HIV testing in non–U.S.-born Blacks and compare them to the barriers faced by U.S.-born Black individuals	Cross-sectional study	HIV testing	Barriers: Non-U.S.-born individuals who had lived in this country for more than 5 years (compared to 1 year or less), older age (35–49 and 50+), not having seen a health care provider in the past 12 months (compared to having seen a provider)	Non-U.S.-born Blacks had a lower rate of recent HIV testing than U.S.-born Blacks. 54% of non–U.S.-born respondents reported most recent HIV test was obtained as a requirement for current immigration status. More non-U.S.-born respondents reported their last test was 5 or more years ago and had never tested for HIV compared to U.S.-born individuals

Table 1 (continued)

Study ID	Sample size/description	Aim of study	Study design	Health service(s)	Barriers/ Motivators	Findings
Ojikutu 2014	555 immigrants from sub-Saharan African and the Caribbean in Massachusetts	This study focused on the experiences of Black immigrants and barriers to HIV testing	Cross-sectional study	HIV testing	Barriers: primary language other than English, lower education, low income [= below $20K/year], no regular provider, recent immigration (less than 10 years). Barriers due to health care access, privacy, fatalism, and anticipated stigma were greater for recent versus longer term immigrants	The majority of participants had a primary care doctor (72.5%)
Ojikutu 2016	10,397 immigrants (83.9% Hispanic white, 13.1% non-Hispanic black, and 3.0% Hispanic black)	This study was undertaken to determine HIV testing patterns in black and Hispanic US immigrants living with HIV	Cross-sectional study	HIV testing	Barriers: lack of knowledge on where to get tested; HIV avoidance, younger age, older age, not seeing a health provider in the past 12 months, not previous HIV test, no history of HIV, married status Motivators: Male gender, history of STIs, pregnancy status, cohabitation status, higher education	Prior HIV testing was reported by 46.7% of Hispanic white, 70.5% of non-Hispanic black, and 65.8% of Hispanic black immigrants. Black immigrants (Hispanic and non-Hispanic) were significantly more likely to have a prior HIV test than Hispanic white immigrants
Opoku-Dapaah 2013	360 respondents, 58% (208) were men and 42% (152) women from North Carolina, 40 years and older	This study examined the use of cancer screening by African immigrants in North Carolina.	Mixed methods study	Cancer screening (breast, prostate, colon, colorectal cancer)	Barriers: underrated the risk of cancer, negative impressions of US medical institutions' historical mistreatment of Black people, some traditional African beliefs about disease, subcultural values, and misperceptions Motivators: immigration status (legal residence status)	62% of eligible respondents reported having had a colonoscopy. Of those who had not 53% had obtained a BST (blood stool test). 89% of female respondents reported having had mammography since resettlement in the USA, and the response was the same for CBE (clinical breast exams)

Table 1 (continued)

Study ID	Sample size/description	Aim of study	Study design	Health service(s)	Barriers/ Motivators	Findings
Power 1998	15 active charts (5 men, 3 women, 7 children) of patients who were confirmed to be Sudanese refugees.	This research characterizes the health care utilization of a small sample of southern Sudanese refugees resettled in Minnesota and describes their health histories.	Prevalence study	General health service utilization	Barriers: language barrier, lack of documents, transportation, language barrier, inadequate familiarity of the system; and in the case of the HIV infected, stigma and discrimination, lack of formal education, less social support/ poor networking	Anglophone Africans had better access to health services than Francophone Africans. FPs had poorer access than APs and this difference was based on language proficiency, a lack of formal education, and less social support or poor networking
Raymond 2014	29 Somali women living in Minnesota	To assess Somali immigrant's knowledge of cancer, acceptability of mammogram and pap smear as screening modalities, and age-based differences in attitudes toward screening to create a culturally relevant intervention	Qualitative study	Breast and cervical cancer screening	Barriers: mistrust of the health care system based on reports by friend or relatives, language barriers, preference for female providers with the same religious background, embarrassment/ modesty, cancer stigma, misperceptions/ lack of knowledge of breast and cervical cancer, accepting the will of God as the cause of health problems Motivators: Staying healthy for childbearing, the importance of women in the Somali culture, religion	Both older and younger Somali women expressed openness to the idea of getting checkups thought they were more likely to see a doctor if they faced problems such as pain or challenges getting pregnant

Table 1 (continued)

Study ID	Sample size/description	Aim of study	Study design	Health service(s)	Barriers/ Motivators	Findings
Remien 2015	80 HIV-positive people of 4 groups: African immigrants, previously incarcerated, young men who have sex with men, and transgender women	To conduct a qualitative study exploring system, social, and individual barriers to and facilitators of engagement in HIV care among HIV-positive African immigrants, previously incarcerated adults, YMSM, and TGW.	Qualitative study	HIV care	Barriers: Immigration status (fear of deportation); health care providers (good communication, caring attitudes, trust), HIV stigma; life stressors/ urgent daily problems requiring immediate attention (feeding young children, finding transportation to work, housing); disrespectful health care providers Motivators: Community-based social service organizations, housing (HIV/AIDS Service Administration (HASA), housing support), good relationship with health care providers; social support, parent or grandparent status	Stigma and discrimination, lack of health insurance, unemployment, social and economic marginalization, mental illness, substance use, unstable housing, and mistrust of the medical system were documented as barriers to HIV care engagement in our study as well in studies by others
Ross 2019	14 participants	To better understand individual, social, and structural factors influencing HIV testing and linkage to HIV care among undocumented African immigrants in NYC.	Qualitative study	HIV testing and care	Barriers: fear of immigration-related consequences of accessing health care, uncertainty about health service eligibility due to immigration status, lack of health insurance, uncertainty about navigating obtaining health insurance, social isolation, HIV stigma, anticipation of social isolation from family, employers, friends Motivators: Connection to service providers, health care providers, social workers, and community-based organizations	Undocumented Africans living with HIV reported barriers to HIV testing and linkage to care within multiple domains, including fear of deportation and uncertainty about eligibility for health services, difficulties obtaining health insurance, and anticipated and experienced social isolation. After diagnosis, social and health services providers were able to address some of these barriers, facilitating access to HIV care

Table 1 (continued)

Study ID	Sample size/description	Aim of study	Study design	Health service(s)	Barriers/ Motivators	Findings
Saasa 2021	323 first- or second-generation immigrants from African countries residing in the US	This study seeks to expand the current knowledge base on mental health service utilization among first- and second-generation African immigrants.	Cross-sectional study	Mental health services	Barriers: discrimination, employment issues, financial strain, acculturative stress, personal beliefs (i.e., self-healing), economic, lack of insurance, and cost Motivators: English language proficiency, increased age, increased religiosity, acculturative stress, neighborhood risk, work-productivity loss from mental health concerns.	63% of participants had used mental health services in the past year. The most frequently sought mental health services were psychiatric services (19.6%), general practitioner/doctor's office (16.7%), hospital therapist (16.2%), and pharmacist support (15.7%). Counseling from clergy was used most often (37%), followed by prescribed medication treatment (21.8%) and psychotherapy from trained mental health specialists (21.3%)
Schuster 2019	15 participants	To characterize Somali Bantu and Karen's experiences with cancer and cancer screenings prior to and subsequent to resettlement in Buffalo, NY	Qualitative study	Cancer screening	Barriers: decreased access to cancer care service, cost of transportation; trust and communication barriers with health care providers, language barriers, male physicians for Somali Bantu and Karen women, lack of insurance Motivators: cancer awareness and education, provider referrals, Medicaid coverage, transportation, interpretation availability	This qualitative study characterized the experiences with and perspectives on cancer and cancer screenings among resettled Somali Bantu and Karen refugees in Buffalo, NY

Table 1 (continued)

Study ID	Sample size/description	Aim of study	Study design	Health service(s)	Barriers/ Motivators	Findings
Simbiri 2009	Phase 1: 9 Anglophone (AP) and 9 Francophone (FP) community members/leaders Phase 2: 239 participants (125 AP and 114 FP) Phase 3: 15 participants (10AP and 5FP)	To describe the social and cultural differences faced by Anglophone and Francophone African immigrants trying to access health and human services in Philadelphia, Pennsylvania	Cross-sectional study	HIV social support service	Barriers: language barriers, lack of knowledge of US health care system, lack of documentation, insensitivity of immigrant cultures by host country, insensitivity of host culture by immigrant population, transportation, discrimination, HIV/AIDS stigma, decreased decision-making for women	Francophone Africans demonstrated less acculturation, education, English fluency, and more legal documentation problems, and thus face greater challenges accessing health care. Anglophone Africans had a higher level of acculturation, fewer language problems, and perceived fewer barriers in accessing health care than Francophone Africans
Sussner2009	146 women of African descent living in New York City	To examine the relationship between acculturation and breast cancer-specific distress with perceived barriers to genetic testing among a diverse sample of women of African descent at increased risk of hereditary breast and ovarian cancer	Cross-sectional study	Genetic testing	Barriers: confidentiality concerns, family-related guilt, anticipated negative emotional reactions related to genetic testing, high avoidance symptoms	Foreign-born women of African descent reported more anticipation of negative emotional reactions about genetic testing compared with US-born women of African descent. Women who avoided thinking about breast cancer more often reported more confidentiality concerns and family-related guilt related to genetic testing
Szaflarski 2019	Data on African, European, Asian/Pacific Islander, Mexican, Puerto Rican, and other Hispanic/Latino households from the National Epidemiological Survey on Alcohol and Related Conditions (NESARC)	To describe variations in alcohol use/abuse and treatment-seeking among immigrants based on their racial-ethnic background while accounting for the known explanatory factors	Cross-sectional study	Alcohol use/abuse and treatment-	Barriers: being female, having a college degree, and having a mental disability Motivators: Alcohol use disorder, cohabiting, stressful life events, and perceived social stress over control	For both men and women, immigrants were less likely to drink, drink in a risky manner, have an alcohol disorder, or seek treatment than non-immigrants. Refugee status was not particularly important for women, but male refugees tended to drink less and were less likely to seek treatment than non-refugee immigrants

Table 1 (continued)

Study ID	Sample size/description	Aim of study	Study design	Health service(s)	Barriers/ Motivators	Findings
Tapales 2018	4696 Non-Hispanic Black female respondents (*n* = 23,573) from the National Survey of Family Growth (both US-born and foreign-born)	To explore the sexual and reproductive health (SRH) behaviors, health insurance coverage and use of SRH services of women in the United States by nativity, disaggregated by race and ethnicity	Prevalence study	Sexual and reproductive health service	Barriers: immigration status; demographics only by ethnicity—not on HSU	Foreign-born Black women were less likely than U.S.-born women to have used a contraceptive method in past month. Foreign-born women were less likely to pay for SRH services with private insurance than U.S.-born women. NH white and NH black foreign-born women were less likely to use highly effective contraceptive methods than their U.S.-born counterparts
Wallace 2014	51 women self-identifying as Hispanic/Latina (*n* = 20), Portuguese speaking (*n* = 9), Somali (n = 10), and Haitian (*n* = 12) living in Massachusetts	To describe the unique perceptions about mammography screening and accessing breast health services among ethnic immigrant women and to describe health system barriers to mammography screening and accessing health care from the perspective of health care providers	Qualitative study	Mammography screening and breast health services	Barriers: undocumented status; women who live part-time in the United States and country of origin, older women living in rural MA; no health insurance; lack of reliable health information; breast pain, lack of experience with health care system, fear of finding cancer, modesty concerns, limited English proficiency, lack of interpreter, transportation challenges Motivators: language-concordant health information	Compared with all participants, Somali women were less comfortable with getting a mammogram. Only three Somali women reported having conducted an SBE (self-breast exam). When women were asked if they would recommend getting a mammogram to a female friend, many said that they would recommend breast screening for female peers
White 2015	64 patients in a Somali primary care clinic	To explore willingness to engage in psychotherapy after a mental health referral from primary care and the effect of engagement in psychotherapy on health-care utilization	Non-randomized experimental study	Psycho-therapy, primary health appointment after mental health referral	NA	Women willing to engage in psychotherapy after a mental health referral from primary care had higher likelihood of PCP visits

Table 2 Types of Health Services Examined by Studies

health service	*n*=47
Breast cancer screening/mammogram (*n* = 5)	Consedine 2012 Garbers 2006 Harcourt 2014 Magai 2004 Wallace 2014
Cardiovascular risk screening (*n* = 1)	Ogungbe 2022
Cervical cancer screening pap smear (*n* = 7)	Adegboyega 2017 Adegboyega 2021 Adegboyega 2022 Amuta-Jimenez 2022 Cudjoe 2021 Forney-Gorman 2016 Green 2005
Colon/ colorectal cancer screening (*n* = 1)	Blackman 2021
Dental services (*n* = 1)	Cruz 2010
General cancer screening (*n* = 1)	Schuster 2019
General health services/hospitalizations (not specified) (*n* = 5)	Ahad 2019 Ayub 2020 Houston 2021 Murray 2013 Power 1998
Genetic testing (*n* = 1)	Sussner 2009
Hepatitis screening (*n* = 2)	Le 2022 Ogunwobi 2019
HIV screening/treatment (*n* = 7)	Hassan 2021 Ojikutu 2013 Ojikutu 2014 Ojikutu 2016 Remien 2015 Ross 2019 Simbiri 2009
Mental health services (*n* = 5)	Bauldry 2017 Jones 2020 Nadeem 2007 Saasa 2021 White 2015
Multiple types of health services (*n* = 6)	Chaumba 2011 (Mental health, mammogram, dental services, primary care physician, prostate exam) Morrison 2012 (colorectal cancer screening, mammograms, pap smear, vaccinations) Johnson-Agbakwu 2022 (reproductive and mental health services) Lum 2010 (doctor visits, hospitalizations, outpatient surgery, dental services) Opoku-Dapaah 2013 (breast, prostate, colon, colorectal cancer) Raymond 2014 (breast and cervical cancer screening)
Reproductive health services (*n* = 4)	Agbemenu 2019 Agbemenu 2020 Gurnah 2011 Tapales 2018
Substance abuse treatment (*n* = 1)	Szaflarski 2019

of chronic disease treatment also led to distrust of the U.S. medical system and health providers among Liberian refugee women in Virginia [11].

Challenges navigating the U.S. health care system also stemmed from unfamiliarity with the U.S. health care system [11, 30, 67], lack of awareness of local health facilities

[49], and lower levels of health literacy [6, 30]. Immigrant populations that were knowledgeable about available health services were more likely to use health services compared to immigrant populations that were unaware of existing services and how to access them [20, 35, 39, 51]. Low education in consequence of disparities in education also decreased health service utilization [11, 51]. Although higher level of education (college education or higher) was associated with increased use of HIV services [49] and hepatitis B testing [48], college education was negatively associated with seeking treatment for alcohol use disorders for immigrant women compared to immigrant men [70].

Fear related to intrusiveness and discomfort with hospital procedures [2, 29, 40], treatment side effects [5, 30], and confirmed medical diagnoses, particularly for breast and cervical cancer due to the linked fear that diagnoses could lead to death, were additional reasons for Black immigrant women to not seek health services [9, 74]. Fear of public and self-directed stigma towards certain mental health [46] and sexual health diagnoses including HIV/AIDs [51, 58, 67] were additional obstacles to obtaining necessary health care services. Personal inclinations to avoid thinking about certain health conditions such as HIV also diminished attempts to use health care services by immigrants [49, 68]. Some African immigrant women disclosed that they were averse to genetic screening because they anticipated feelings of guilt related to passing down cancer genes to members of their family if they tested positive for breast cancer susceptibility genes [68].

In addition to fears concerning stigma and health implications from diagnoses of negative health conditions, legal factors such as immigrant status and cultural challenges related to language barriers played a large role in influencing Black immigrant women's decision to use health services. At the legal level, immigrant status [6, 58, 65] and fear of deportation as consequence of lacking documentation [67, 74] were reasons for Black immigrant women to refuse health services. At the cultural level, language barriers restricted Black immigrants from effectively communicating and building trusting relationships with health care providers [66]. Immigrants also disclosed that communication challenges with providers decreased their willingness to use health services [2, 17, 19, 28, 30, 51, 66]. Even with translators present, immigrants expressed that they were concerned that translators would mistranslate their words or the physician's words [28]. Overestimations of English language proficiency by both providers and the patients also decreased care satisfaction [43]. Black immigrant patients also shared that they experienced discrimination based on English fluency by health care providers and staff assisting with insurance and disability coverage [11].

Distrust of western medicine and health care providers, which often arose from language and communication barriers, further impeded utilization of health services by Black immigrant [66]. Encounters with providers that were perceived as unsympathetic by patients [28], medical violence [30], and challenges with building trusting relationships due to communication barriers caused Black immigrant women to be weary of western providers and medicine, which contributed to decreased levels of health service usage.

In contrast, positive past experiences and relationships with health care providers motivated participants to continue seeking health services [3, 9, 58]. Physician recommendations of certain treatments and tests strongly indicated initiation of health services, although it did not predict treatment maintenance over time [17]. Having access to regular care providers [26, 48] and previous experiences of using health services [26, 43] also made immigrant populations more likely to use health services.

Variations in cultural beliefs and expectations created challenges to accessing health services for Black immigrant women. Discomfort related to having male physicians as care providers was a deterrent to care reception for Somali Bantu women [28, 66] as well as other immigrant women from African countries [29]. Lack of cultural fluency between patients and providers also led to passive acceptance of incorrect care, hesitancy with questioning health visit outcomes, uncertainty about physician understanding of patient concerns, and decreased decision-making in medical settings [28, 40, 67]. A wide range of cultural beliefs created additional barriers to using health services. Fatalism, the belief in a lack of personal power to control destiny or fate, led to an understanding among African immigrants that talking about illness invites illness into people's lives, which impeded participation and perceptions about need to use health services [40, 51]. Religious beliefs, which served as protective measures for disease decreased immigrant women's usage of health services [2]. Concerns with privacy and confidentiality, especially concerning sexual and reproductive information, were barriers to care reception [2, 51, 68, 74]. Another barrier to health services related to personal and cultural beliefs was the desire to resolve psychological distress and health-related issues independently without assistance from others [62].

Enabling Factors

According to the adapted Andersen's Behavior Model of Health Services Use (BMHSU), enabling factors encompass three general types of resources: financial, social, and access to health care [75]. Financial barriers to using health services described in the studies included high cost of care [2, 16, 28, 62], unemployment [11, 29, 32, 61], and low income [32, 51]. As such, financial comfort [1] and steady

employment [19, 32] were two main reasons that increased likelihood of Black immigrant populations using health services. Having health insurance also increased the likelihood of using health services among immigrants compared to those without health insurance [1, 6, 20, 26, 29, 32, 35, 43, 48].

For social resources, positive social interactions with people and affectionate support from family and significant others that generated feelings of love, care, and value created conducive environments that encouraged preventative health behaviors and increased likelihood of having Pap screening services for Black immigrant women [1]. In addition to motivating health service utilization, support from family and friends buffered the negative consequences of stigma and uncomfortable exchanges with the U.S. health system [58]. Barriers to accessing health services were many: not having transportation to health services [66, 67, 74], challenges with scheduling and identifying health facilities [51, 66], and decreased availability of health care providers [9, 19, 48–50].

Need for Care

Barriers to health care services that fall under the "Need for Care" category in the BMHSU comprise of both perceived needs such as individual feelings about personal health, symptom responses, and magnitude of health issues, as well as evaluated needs ascertained by medical professionals [75]. In this review, the two main reasons that prevented Black immigrant populations from freely accessing health services consisted of ambiguities about the necessity of care and prioritization of other schedules and daily tasks over health needs. Individually perceived sense of good health [16] and lack of physical symptoms [30, 48] were cited as reasons for not seeking care services. Health service acquisition was also seen as inconvenient due to busy work schedules that did not leave room for frequenting health appointments [9, 32]. Life stressors requiring immediate attention, such as feeding young children, finding transportation to work, and challenges acquiring housing also took precedence over HIV health care needs for African immigrants who were inconsistently engaged in HIV medical care [58]. However, perceived need for oral health care services and provider-determined needs such as decayed teeth and bleeding increased the likelihood of Black immigrant women using dental services [19].

Macrostructural/Contextual Factors

Macrostructural and contextual factors that impeded of Black immigrant populations' access to care services encompassed experiences of structural racism and discrimination. East African immigrants in Virginia specifically described instances of being subjected to unequal treatment in health care settings based on their appearance and need for interpreters [30]. Moreover, Black immigrants experienced discrimination in intersecting forms related to race, gender, and religious identification, which further discouraged them from accessing health services [32, 62].

Health Service Utilization Findings

Findings related to the frequency of health service utilization behavior among Black immigrant populations remain mixed. Studies with Black immigrants reported that a higher percentage of Black immigrants utilized health services than expected [20, 51, 62]. Specifically, 63% of first- and second-generation African immigrants utilized mental health services [62] and Black immigrants were significantly more likely to have received HIV tests compared to Hispanic white immigrants [49]. Studies that compared the behaviors of multiple immigrant groups described that Black immigrants were more likely to use health services compared to other immigrant populations [14, 49]. Black immigrant populations utilized more colorectal cancer screening services compared to U.S.-born Black populations [14] and more than 70% of Black immigrants utilized Papanicolaou testing [20] and had a primary care provider [51].

While some studies found high usage of health services by Black immigrant women, more studies reported low usage of health services. A study with Somali women found that fewer than half of the sample used reproductive health services [33]. In particular, fewer than half of the people who reported sexual dysfunction and only 30% of women with female genital cutting who experienced pain from intercourse reported that they used available health services, although those who used health services stated that their problems were mostly resolved following service reception [33]. Black immigrant women were also less likely to seek gynecologists, well-woman services, family planning services, and contraceptive services compared to African American women [5, 9].

Black immigrant women were also less likely to have had a recent HIV test compared to U.S.-born Black populations [50]. A study with Francophone and Anglophone African immigrants found that Francophone Africans were less likely to utilize HIV health services compared to Anglophone African immigrants [67]. Many immigrants also disclosed overall low utilization of cervical cancer screenings [1, 2]. Compared to U.S.-born Black citizens or other immigrant groups, Black immigrants were less likely to screen for breast cancer [16, 17, 43, 68, 74], cervical cancer [9, 23, 26, 43], colorectal cancer [43], and prostate cancer [16].

Black immigrant populations also noted fewer use of mental health services compared to U.S.-born Black women [12, 34]. Only 40% of Somalians reported use of mental

health services despite experiencing feelings of sadness [33] and Black immigrants were more likely to have low rates of hepatitis screenings [48] compared to Asian immigrants [35]. Rates of having a regular health care provider or a usual source of care [6, 16], seeking alcohol disorder treatments [69], and using outpatient care services such as dental care, surgery, and hospital visits were also lower in comparison to U.S.-born Black populations [16, 38]. Dental care was also used less frequently by Black Caribbean immigrants compared to Asian immigrants [19].

While many quantitative studies included in this review discussed frequency or usage patterns of health services, the qualitative studies focused on participant experiences of using health services and factors influencing decisions to engage in health care [2, 11, 19, 28, 30, 32, 45, 57, 58, 60, 65, 66, 74]. There were also conflicting results within the same study or among different studies. Black immigrants were more likely to attend doctor visits and have hospital stays compared to white immigrants, yet attended fewer dental appointments [38].

A study with Francophone African immigrants and Anglophone African immigrants in Philadelphia found that the health needs of most Anglophone African immigrants were met by their primary care physicians while Francophone African immigrants used traditional care and ordered medicines from their country of origin [67]. Furthermore, more Anglophone African immigrants received their first health care at the emergency room compared to Francophone African immigrants. Francophone African immigrants described that they avoided health care centers due to lacking immigration documentation and used the emergency room when in crisis [67].

Discussion

A total of 47 articles were reviewed to understand the patterns of health service utilization among Black immigrant women residing in the U.S. The most common study designs were cross-sectional studies ($n = 26$), followed by qualitative studies ($n = 11$), and prevalence studies ($n = 6$). Due to the heterogenetic nature of the study samples, the findings of this review must be considered with caution when making a general estimation for all immigrant groups in the U.S.

The study samples of the articles were highly variant. Study populations included women from countries in Africa, the Caribbean, and Latin America. The studies also differed in their inclusion of different demographic factors that influenced health service utilization. Many studies measured demographic information such as age, education level, income, employment status, marital status, and length of stay in the U.S. These variables were included in the multivariable models to account for their effect on health service utilization but the influence of these variables across immigrant populations remain indefinite.

A limitation of the studies in the review is that the majority of data on health service utilization were self-reported and are therefore subject to recall and reporting bias. Moreover, variables that may significantly affect health service utilization such as years lived in the U.S., health literacy, existing health conditions necessitating health services, and perceptions of personal health and need for medical care were not always measured. To obtain a comprehensive understanding of factors that influence health service utilization among this population, there is a critical need for studies that explore the association of these variables with health service use among immigrant populations.

We used Yang and Hwang's adapted version of Andersen's Behavior Model of Health Services Use (BMHSU) as an organizational framework. In accordance with the theoretical framework, predisposing, enabling, and need factors were commonly associated with HSU. Based on the current review, several factors were identified to increase likelihood of HSU among Black immigrant women. These factors include older age [49, 50, 62], longer length of stay in the U.S. [1, 29, 47], higher levels of acculturation [3, 12, 20], knowledge of health resources and conditions [2, 6, 20, 66, 74], English proficiency [6, 20, 29, 62], previous positive experiences with providers [3, 9, 17, 32, 58], history of health conditions [19, 30, 49, 69], married or cohabiting status [26, 48, 49, 69], having insurance ([1, 6, 20, 26, 29, 32, 35, 43, 48]), and having access to primary care services [20, 35, 39, 51].

The studies included in the review described a plethora of factors that influence health service utilization behaviors of Black immigrant women. While some factors could be clearly categorized as either barriers or motivators, others were less distinct and simultaneously prompted and hindered the utilization of health services. Length of time spent in the U.S. was a particular factor that had contradictory effects on Black immigrant women's behavior of using health services. A study in the review reported that recent immigrants to the U.S. had a lower odds of having a source of care relative to those who immigrated 10 or more years ago to the U.S. [36]. This phenomenon of increased health service utilization among immigrants who have resided in the U.S. for longer than 10 years could be explained in part by the increased knowledge and familiarity of the U.S. health care system, as well as improved English proficiency that often follow extended time spent in the U.S. [29]. Yet, other studies have shown that extended stay in the U.S. can deter utilization of the health system due to encounters with stigma, mistrust of the American health care system, and extensive hospital bills [59]. Another factor that may impact the relationship between length of time in the U.S. and usage of health services is the motive behind the pursuit of using health

services. A study on HIV testing practices among immigrant populations found that more than half of the non-U.S.-born sample had received HIV testing as a requirement of obtaining immigrant status, rather than due to their own perceived risk for infection [50]. Thus, more immigrants who had lived in the U.S. for less than 1 year had undergone HIV testing in the past year compared to those who had resided in the U.S. for longer than 5 years [50]. As such, it is possible that extended length of stay in the U.S. can both prevent and promote health service utilization among immigrant populations.

Age was another factor that significantly affected health service usage among Black immigrant populations. Studies that assessed HIV screening reception reported that immigrants younger than 25 years and older than 35 years of age were less likely to get tested for HIV [49, 50]. Older age also increased the likelihood of using mental health services among first- and second-generation African immigrants [62]. Improved knowledge of available health services over time and increased need for more health services with age due to deterioration in health may explain this association [4]. Further research is needed to delineate how social experiences across the lifespan influence health behavior patterns of seeking necessary health services among immigrant populations [62].

Another factor that caused bilateral effects on health service utilization was education. Low levels of education resulted in decreased use of health services while those with higher education levels used more HIV [49] and hepatitis B testing services [48]. Differences in education level can contribute to inequalities in health. Low education levels are associated with decreased health literacy, which results in sub-optimal health care use [13]. Studies with Black immigrants have found associations between higher education and fewer hospitalizations [11], as well as increased use of recommended screening services such as HIV screening [49] and hepatitis B testing [48] compared to Black immigrants with lower levels of education. As such, it is possible that populations with lower levels of education have decreased health literacy, which could hinder efforts to access health care services.

Language barriers were another deterrent to care that was mentioned by participants in several studies [2, 17, 19, 28, 30, 51, 66]. Even when translation services were available, some language line services did not offer interpretations in the languages spoken by Black immigrant populations [28]. While there are many benefits to working with interpreters, especially for patients who are not fluent in English, there are also many challenges. These include dynamics of trust, control, and power between patients, interpreters, and practitioners, as well as within health care institutions at large. Establishing an alliance of trust regarding information that is shared, controlling the accuracy and validity of dialogues, and maintaining power balances when they are offset by institutional constraints such as time limitations, cost of interpretation services, and continuity of same interpreter services are essential to create an ideal environment for patients, providers, and interpreters [15]. Moreover, it is important to remember that language line interpreters may be unable to act as cultural liaisons because they only serve to translate brief conversations without having the cultural context of the people they were interpreting for [28]. Ad-hoc interpreters, who are untrained in interpretation work, can exercise control by omitting, modifying, or condensing content that is shared during a meeting between a care provider and patient [15].

However, not all transformation by interpreters has negative effects; interpreters may also temper language used by practitioners to make communication less confrontational or abrupt, provide emotional support, and clarify medical jargon [54]. To ensure health care quality, speech transformations must be monitored, transformations must be completed in an overt manner, and trained, professional interpreters must be used as much as possible [54]. The reliability of interpreters and the help they provide in strengthening communication between patients and providers should also be emphasized to patients.

This review corroborates previous studies that have determined that immigrants use fewer health services compared to U.S.-born adults. A previous literature reviews on health service utilization practices of immigrants living in North America found that immigrants were less likely to use health services compared to native populations [22, 64] including mental health services [41, 63].

To improve access to health services for immigrant populations, health care models must prioritize participatory approaches that focus on communication and meaningful dialogue to account for language barriers, marginalization, and unfamiliarity of the U.S. health care system among immigrants. The incorporation of community health workers into health care teams may assist with improving access to using health services among immigrant populations. Community health workers serve as a bridge between communities and the health care system by providing culturally appropriate health education and information to members of underserved communities [27]. In a national study of community health workers, 49% of community health workers responded that they served immigrant populations [72]. Moreover, community health workers are involved in existing programs that serve immigrants and have contributed to increasing access to health care services, improving the frequency of health screenings, expanding adherence to health recommendations, and decreasing the need for emergency and specialty services [72]. As community health workers consist of lay members from the community, those who practice as community health workers also gain entry-level

employment experiences by working closely with clinicians, organizations, counselors, and other health professionals. Thus, the broader inclusion of community health workers into health care teams may not only improve access to health services and resources for immigrant members of the community, but also create space for immigrant advocacy and participation within the U.S. health system.

Existing weaknesses in the health system such as high cost of health services and availability of health insurance must also be addressed to decrease the burden of decreased access and availability of health services to this population. It is critical to leverage the health system and state level policy to increase access to health services for Black immigrant women. One of the most frequently mentioned deterrents to using health services were high health care expenses and lack of insurance. Although Medicaid and the Affordable Care Act has improved access to health insurance for many people, disparities remain and must be improved. Currently, foreign-born individuals who do not meet the 5-year residency requirement are ineligible for Medicaid. While they are eligible for health insurance exchange subsidies, exchange plans are not as comprehensive as Medicaid, and unfamiliarity with private health insurance creates challenges to navigating the health care system [53]. Systems-level changes at the policy level that provide financial support to immigrants before they complete their 5-year waiting period is essential. As of September 2023, five states (California, Colorado, Illinois, Oregon, and New York) and Washington DC provide state-funded coverage or subsidies to immigrant adults regardless of immigrant status. However, greater advocacy is critical to increase access to health services for immigrants across all of the states in the U.S.

While insurance coverage by private or public health plans is the first step to increasing access to health care systems, coverage does not automatically translate into using health services. Immigrants must become knowledgeable of the differences in care quality, prices, payment methods, and patient–physician relationship expectations that may be a stark contrast to the health system approach from their home country. Programs that educate immigrants on the overall U.S. health care system structure and how to navigate it are paramount.

This review has some limitations. As the purpose of the literature review was to understand the types of health services utilized by Black immigrant women in the U.S., studies that contained aggregated data on the health practices of immigrant populations without reporting data that was specific to Black immigrants were excluded. Further, studies with only male immigrants or without separate data for female immigrants were excluded. This was done to obtain data specific to Black immigrants and not assume all immigrant groups as homogenous. Articles were also not limited by publication year to include as many articles as possible. This resulted in including an article that was published in 1998, which may be unrepresentative of current African immigrant health behaviors [55]. However, the article was judged as valuable because it included health practices of a lesser known population of Sudanese immigrants residing in Minnesota. The review also expands existing literature on health service use practices of Black immigrant populations. To our knowledge, this is the first systematic review to specifically look at overall health service utilization behavior of Black immigrants in the U.S. The review also undertook a comprehensive search of multiple electronic databases and appraised the quality of each article to ascertain study validity. Moreover, the review found that there was no clear pattern of care utilization among the Black immigrant population. Thus, it highlights the need for patient-centered care that individualizes care plans to meet the needs of each patient. Even among Black immigrations, there was much heterogeneity of care needs and perceptions of health services offered in the U.S.

Conclusion

This systematic review was conducted to understand health service utilization patterns among Black immigrant women residing in the U.S. Several different types of health services spanning from preventative to acute health services were reported to have been used by Black immigrant populations living in the U.S. The most common type of health service utilized in the studies were cancer screenings and HIV tests and treatment. Factors that increased use of health services included possession of health insurance, being knowledgeable about resources and detrimental health conditions, and positive experiences with providers. Barriers to utilizing health services included challenges with navigating the U.S. health care system, language barriers/health literacy, and cultural beliefs against health service utilization. The findings of this review inform future research by identifying factors that motivate and encourage Black immigrants to use health services in the U.S. However, these must be considered with caution, as the health needs of Black immigrants varied greatly on the individual. Many predisposing, enabling, need, and contextual factors could both encourage or deter use of health services depending on the circumstances of each person. It is critical that care providers listen to the health needs and goals of each individual and refrain from assuming that all immigrants have similar health needs. Factors that positively influence health service utilization behavior must be expanded at the institutional, societal, and policy levels to improve access to health services, especially for immigrant populations that face compounded health risks compared to their U.S.-born counterparts.

Data availability Data sharing is not applicable to this article as no new data were created or analyzed in this study.

Declarations

Competing Interests The authors declare no competing interests.

References

1. Adegboyega A, Aroh A, Williams LB, Mudd-Martin G. Social support and cervical cancer screening among sub-Saharan African immigrant (SAI) women. Cancer Causes Control. 2022;33(6):823–30. https://doi.org/10.1007/s10552-022-01577-8.
2. Adegboyega A, Hatcher J. Factors Influencing pap screening use among African immigrant women. J Transcult Nurs. 2017;28(5):479–87. https://doi.org/10.1177/1043659616661612.
3. Adegboyega A, Wu J-R, Mudd-Martin G. Acculturation strategies and pap screening uptake among sub-Saharan African immigrants (SAIs). Int J Environ Res Public Health. 2021;18(24):13204. https://doi.org/10.3390/ijerph182413204.
4. Adekeye O, Kimbrough J, Obafemi B, Strack RW. Health literacy from the perspective of african immigrant youth and elderly: a photovoice project. J Health Care Poor Underserved. 2014;25(4):1730–47. https://doi.org/10.1353/hpu.2014.0183.
5. Agbemenu K, Auerbach S, Ely GE, Aduloji-Ajijola N, Wang H. Family planning trends among community-dwelling African refugee women. Public Health Nurs. 2020;37(4):478–86. https://doi.org/10.1111/phn.12725.
6. Ahad FB, Zick CD, Simonsen SE, Mukundente V, Davis FA, Digre K. Assessing the likelihood of having a regular health care provider among African American and African immigrant women. Ethn Dis. 2019;29(2):253–60. https://doi.org/10.18865/ed.29.2.253.
7. Ahmed A, McCaw B. Mental health services utilization among women experiencing intimate partner violence. Am J Manag Care. 2010;16(10):731–8.
8. Akinsulure-Smith AM, Chu T, Keatley E, Rasmussen A. Intimate partner violence among West African immigrants. J Aggress Maltreat Trauma. 2013;22(1):109–29. https://doi.org/10.1080/10926771.2013.719592.
9. Amuta-Jimenez AO, Smith GPA, Brown KK. Patterns and correlates of cervical cancer prevention among Black immigrant and African American women in the USA: the role of ethnicity and culture. J Cancer Educ. 2022;37(3):798–805. https://doi.org/10.1007/s13187-020-01884-1.
10. Andersen RM. Revisiting the behavioral model and access to medical care: does it matter? J Health Soc Behav. 1995;36(1):1. https://doi.org/10.2307/2137284.
11. Ayub S, Marsh V, Reed S. An exploration of chronic disease perception, management, and barriers to care in Liberian refugees resettled in Charlottesville, Virginia. J Natl Med Assoc. 2020;112(6):654–67. https://doi.org/10.1016/j.jnma.2020.06.013.
12. Bauldry S, Szaflarski M. Immigrant-based disparities in mental health care utilization. Socius: Sociol Res Dynamic. 2017;3:237802311668571. https://doi.org/10.1177/2378023116685718.
13. Berkman ND, Sheridan SL, Donahue KE, Halpern DJ, Crotty K. Low health literacy and health outcomes: an updated systematic review. Ann Intern Med. 2011;155(2):97–107. https://doi.org/10.7326/0003-4819-155-2-201107190-00005.
14. Blackman EL, Ragin C, Jones RM. Colorectal cancer screening prevalence and adherence for the Cancer Prevention Project of Philadelphia (CAP3) participants who self-identify as Black. Front Oncol. 2021;11:690718. https://doi.org/10.3389/fonc.2021.690718.
15. Brisset C, Leanza Y, Laforest K. Working with interpreters in health care: a systematic review and meta-ethnography of qualitative studies. Patient Educ Couns. 2013;91(2):131–40. https://doi.org/10.1016/j.pec.2012.11.008.
16. Chaumba J. Health status, use of health care resources, and treatment strategies of Ethiopian and Nigerian immigrants in the United States. Soc Work Health Care. 2011;50(6):466–81. https://doi.org/10.1080/00981389.2011.581999.
17. Consedine NS. The demographic, system, and psychosocial origins of mammographic screening disparities: prediction of initiation versus maintenance screening among immigrant and non-immigrant women. J Immigr Minor Health. 2012;14(4):570–82. https://doi.org/10.1007/s10903-011-9524-z.
18. Covidence systematic review software, (n.d.). Veritas health innovation. www.covidence.org
19. Cruz GD, Chen Y, Salazar CR, Karloopia R, LeGeros RZ. Determinants of oral health care utilization among diverse groups of immigrants in New York City. The J Am Dental Assoc. 2010;141(7):871–8. https://doi.org/10.14219/jada.archive.2010.0286.
20. Cudjoe J, Budhathoki C, Roter D, Gallo JJ, Sharps P, Han H-R. Exploring health literacy and the correlates of pap testing among african immigrant women: findings from the AfroPap study. J Cancer Educ. 2021;36(3):441–51. https://doi.org/10.1007/s13187-020-01755-9.
21. Delara M. Social determinants of immigrant women's mental health. Adv Public Health. 2016;2016:1–11. https://doi.org/10.1155/2016/9730162.
22. Derr AS. Mental health service use among immigrants in the United States: a systematic review. Psychiatr Serv. 2016;67:265–74. https://doi.org/10.1176/appi.ps.201500004.
23. Forney-Gorman A, Kozhimannil KB. Differences in cervical cancer screening between African-American versus African-born Black women in the United States. J Immigr Minor Health. 2016;18(6):1371–7. https://doi.org/10.1007/s10903-015-0267-0.
24. Gee EM, Kobayashi KM, Prus SG. Examining the healthy immigrant effect in mid- to later life: findings from the Canadian Community Health Survey. Canadian journal on aging = La revue canadienne du vieillissement, 2024;23(Suppl 1):S61–9.
25. Gondolf EW, Fisher E, McFerron JR. Racial differences among shelter residents: a comparison of Anglo, Black, and Hispanic battered. J Fam Violence. 1988;3(1):39–51. https://doi.org/10.1007/BF00994665.
26. Green EH, Freund KM, Posner MA, David MM. Pap smear rates among Haitian immigrant women in eastern Massachusetts. Public Health Rep. 2005;120(2):133–9. https://doi.org/10.1177/003335490512000206.
27. The Guide to Community Preventive Services. (2021, June 17). Community health workers https://www.thecommunityguide.org/pages/community-health-workers.html
28. Gurnah K, Khoshnood K, Bradley E, Yuan C. Lost in translation: reproductive health care experiences of Somali Bantu women in Hartford, Connecticut. J Midwifery Womens Health. 2011;56(4):340–6. https://doi.org/10.1111/j.1542-2011.2011.00028.x.
29. Harcourt N, Ghebre RG, Whembolua G-L, Zhang Y, Warfa Osman S, Okuyemi KS. Factors associated with breast and cervical cancer screening behavior among African Immigrant women in Minnesota. J Immigr Minor Health. 2014;16(3):450–6. https://doi.org/10.1007/s10903-012-9766-4.
30. Hassan SA, Mohamed F, Sheikh N, Basualdo G, Daniel NA, Schwartz R, Gebreselassie BT, Beyene YK, Gabreselassie L,

Bayru K, Tadesse B, Libneh HA, Shidane M, Benalfew S, Ali A, Rao D, Patel RC, Kerani RP. "They wait until the disease has taking over you and the doctors cannot do anything about it": qualitative insights from Harambee! 2.0. Int J Environ Res Public Health. 2021;18(23):12706. https://doi.org/10.3390/ijerph182312706.

31. Hong QN, Fàbregues S, Bartlett G, Boardman F, Cargo M, Dagenais P, Gagnon M-P, Griffiths F, Nicolau B, O'Cathain A, Rousseau M-C, Vedel I, Pluye P. The Mixed Methods Appraisal Tool (MMAT) version 2018 for information professionals and researchers. Educ Inf. 2018;34:1–7. https://doi.org/10.3233/EFI-180221.
32. Houston AR, Lincoln A, Gillespie S, Da Fonseca T, Issa O, Ellis H, Salhi C. You Have to pay to live: Somali young adult experiences with the U.S. health care system. Qual Health Res. 2021;31(10):1875–89. https://doi.org/10.1177/10497323211010159.
33. Johnson-Agbakwu CE, Fox KA, Banke-Thomas A, Michlig GJ. Influence of female genital mutilation/cutting on health morbidity, health service utilization and satisfaction with care among Somali women and teenage girls in the United States. J Racial Ethn Health Disparities. 2022; https://doi.org/10.1007/s40615-022-01266-x.
34. Jones AL, Cochran SD, Rafferty J, Taylor RJ, Mays VM. Lifetime and twelve-month prevalence, persistence, and unmet treatment needs of mood, anxiety, and substance use disorders in African American and U.S. versus foreign-born Caribbean women. Int J Environ Res Public Health. 2020;17(19):7007. https://doi.org/10.3390/ijerph17197007.
35. Le D, Ciceron AC, Pan J, Juon H-S, Berg CJ, Nguyen TA, Le HC, Yang YT. Linkage-to-care following community-based HBV and HCV screening among immigrants from the Washington–Baltimore Metropolitan Area, 2016–2019. J Immigr Minor Health. 2022;24(5):1137–44. https://doi.org/10.1007/s10903-022-01327-7.
36. Lebrun LA. Effects of length of stay and language proficiency on health care experiences among immigrants in Canada and the United States. Soc Sci Med. 2012;74(7):1062–72. https://doi.org/10.1016/j.socscimed.2011.11.031.
37. Lipsky S, Caetano R. Impact of intimate partner violence on unmet need for mental health care: results from the NSDUH. Psychiatr Serv. 2007;58(6):822–9. https://doi.org/10.1176/ps.2007.58.6.822.
38. Lum TY, Vanderaa JP. Health disparities among immigrant and non-immigrant elders: the association of acculturation and education. J Immigr Minor Health. 2010;12(5):743–53. https://doi.org/10.1007/s10903-008-9225-4.
39. Magai C, Consedine N, Conway F, Neugut A, Culver C. Diversity matters: unique populations of women and breast cancer screening. Cancer. 2004;100(11):2300–7. https://doi.org/10.1002/cncr.20278.
40. Malika N, Roberts L, Alemi Q, Casiano CA, Montgomery S. Ethnic differences among Black men in prostate cancer knowledge and screening: a mixed-methods study. J Racial Ethn Health Disparities. 2022;9(3):874–85. https://doi.org/10.1007/s40615-021-01027-2.
41. Mohammadifirouzeh M, Oh KM, Basnyat I, Gimm G. Factors associated with professional mental help-seeking among U.S. immigrants: a systematic review. J Immigr Minor Health. 2023;25(5):1118–36. https://doi.org/10.1007/s10903-023-01475-4.
42. Moola S, Munn Z, Sears K, Sfetcu R, Currie M, Lisy K, Tufanaru C, Qureshi R, Mattis P, Mu P. Conducting systematic reviews of association (etiology): the Joanna Briggs Institute's approach. Int J Evid Based Healthc. 2015;13(3):163–9. https://doi.org/10.1097/XEB.0000000000000064.
43. Morrison TB, Wieland ML, Cha SS, Rahman AS, Chaudhry R. Disparities in preventive health services among Somali immigrants and refugees. J Immigr Minor Health. 2012;14(6):968–74. https://doi.org/10.1007/s10903-012-9632-4.
44. Mose GB, Gillum TL. Intimate partner violence in african immigrant communities in the united states: reflections from the IDVAAC African women's round table on domestic violence. J Aggress Maltreat Trauma. 2016;25(1):50–62. https://doi.org/10.1080/10926771.2016.1090517.
45. Murray KE, Mohamed AS, Ndunduyenge G. Health and prevention among East African women in the U.S. J Health Care Poor Underserved. 2013;24(1):233–46. https://doi.org/10.1353/hpu.2013.0029.
46. Nadeem E, Lange JM, Edge D, Fongwa M, Belin T, Miranda J. Does stigma keep poor young immigrant and U.S.-born Black and Latina women from seeking mental health care? Psychiatr Serv. 2007;58(12)
47. Ogungbe O, Turkson-Ocran R-A, Koirala B, Byiringiro S, Liu X, Elias S, Mensah D, Turkson-Ocran E, Nkimbeng M, Cudjoe J, Baptiste D, Commodore-Mensah Y. Acculturation and cardiovascular risk screening among African immigrants: the African immigrant health study. Int J Environ Res Public Health. 2022;19(5):2556. https://doi.org/10.3390/ijerph19052556.
48. Ogunwobi OO, Dibba O, Zhu L, Ilboudo A, Tan Y, Fraser MA, Ma GX. Hepatitis B virus screening and vaccination in first-generation african immigrants: a pilot study. J Community Health. 2019;44(6):1037–43. https://doi.org/10.1007/s10900-019-00668-z.
49. Ojikutu B, Mazzola E, Fullem A, Vega R, Landers S, Gelman RS, Bogart LM. HIV testing among Black and Hispanic immigrants in the United States. AIDS Patient Care STDs. 2016;30(7):307–14. https://doi.org/10.1089/apc.2016.0120.
50. Ojikutu B, Nnaji C, Sithole J, Schneider KL, Higgins-Biddle M, Cranston K, Earls F. All Black people are not alike: differences in HIV testing patterns, knowledge, and experience of stigma between U.S.-born and non–U.S.-born Blacks in Massachusetts. AIDS Patient Care STDs. 2013;27(1):45–54. https://doi.org/10.1089/apc.2012.0312.
51. Ojikutu B, Nnaji C, Sithole-Berk J, Bogart LM, Gona P. Barriers to HIV Testing in Black immigrants to the U.S. J Health Care Poor Underserved. 2014;25(3):1052–66. https://doi.org/10.1353/hpu.2014.0141.
52. Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, Shamseer L, Tetzlaff JM, Akl EA, Brennan SE, Chou R, Glanville J, Grimshaw JM, Hróbjartsson A, Lalu MM, Li T, Loder EW, Mayo-Wilson E, McDonald S, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. BMJ. 2021;n71 https://doi.org/10.1136/bmj.n71.
53. Pandey SK, Cantor JC, Lloyd K. Immigrant health care access and the affordable care act. Public Adm Rev. 2014;74(6):749–59. http://www.jstor.org/stable/24029499
54. Pham K, Thornton JD, Engelberg RA, Jackson JC, Curtis JR. Alterations during medical interpretation of ICU family conferences that interfere with or enhance communication. Chest. 2008;134(1):109–16. https://doi.org/10.1378/chest.07-2852.
55. Power DV, Shandy DJ. Sudanese refugees in a Minnesota family practice clinic. Fam Med. 1998;30(3):185–9.
56. Pumariega AJ, Rothe E, Pumariega JB. Mental health of immigrants and refugees. Community Ment Health J. 2005;41(5):581–97. https://doi.org/10.1007/s10597-005-6363-1.
57. Raymond NC, Osman W, O'Brien JM, Ali N, Kia F, Mohamed F, Mohamed A, Goldade KB, Pratt R, Okuyemi K. Culturally informed views on cancer screening: a qualitative research study of the differences between older and younger Somali immigrant women. BMC Public Health. 2014;14(1):1188. https://doi.org/10.1186/1471-2458-14-1188.
58. Remien RH, Bauman LJ, Mantell JE, Tsoi B, Lopez-Rios J, Chhabra R, DiCarlo A, Watnick D, Rivera A, Teitelman N, Cutler

B, Warne P. Barriers and facilitators to engagement of vulnerable populations in HIV primary care in New York city. JAIDS J Acquire Immune Deficiency Syndromes. 2015;69(Supplement 1):S16–24. https://doi.org/10.1097/QAI.0000000000000577.
59. Rodríguez M, Valentine JM, Son JB, Muhammad M. Intimate partner violence and barriers to mental health care for ethnically diverse populations of women. Trauma Violence Abuse. 2009;10(4):358–74. https://doi.org/10.1177/1524838009339756.
60. Ross J, Akiyama MJ, Slawek D, Stella J, Nichols K, Bekele M, Cunningham CO, Blackstock OJ. Undocumented African immigrants' experiences of HIV testing and linkage to care. AIDS Patient Care STDs. 2019;33(7):336–41. https://doi.org/10.1089/apc.2019.0036.
61. Saasa SK. Discrimination, coping, and social exclusion among African immigrants in the United States: a moderation analysis. Soc Work. 2019;64(3):198–206. https://doi.org/10.1093/sw/swz018.
62. Saasa SK, Rai A, Malazarte N, Yirenya-Tawiah AE. Mental health service utilization among African immigrants in the United States. J Community Psychol. 2021;49(6):2144–61. https://doi.org/10.1002/jcop.22602.
63. Sabri B, Bolyard R, McFadgion AL, Stockman JK, Lucea MB, Callwood GB, Coverston CR, Campbell JC. Intimate partner violence, depression, PTSD, and use of mental health resources among ethnically diverse Black women. Soc Work Health Care. 2013;52(4):351–69. https://doi.org/10.1080/00981389.2012.745461.
64. Sarría-Santamera A, Hijas-Gómez AI, Carmona R, Gimeno-Feliú LA. A systematic review of the use of health services by immigrants and native populations. Public Health Rev. 2016;37(1):28. https://doi.org/10.1186/s40985-016-0042-3.
65. Satyen L, Rogic AC, Supol, · Meu. Intimate partner violence and help-seeking behaviour: a systematic review of cross-cultural differences. J Immigr Minor Health. 2019;21:879–92. https://doi.org/10.1007/s10903-018-0803-9.
66. Schuster RC, Rodriguez EM, Blosser M, Mongo A, Delvecchio-Hitchcock N, Kahn L, Tumiel-Berhalter L. "They were just waiting to die": Somali Bantu and Karen experiences with cancer screening pre- and post-resettlement in Buffalo, NY. J Natl Med Assoc. 2019;111(3):234–45. https://doi.org/10.1016/j.jnma.2018.10.006.
67. Simbiri KOA, Hausman A, Wadenya RO, Lidicker J. Access impediments to health care and social services between Anglophone and Francophone African immigrants living in Philadelphia with respect to HIV/AIDS. J Immigr Minor Health. 2010;12(4):569–79. https://doi.org/10.1007/s10903-009-9229-8.
68. Sussner KM, Thompson HS, Jandorf L, Edwards TA, Forman A, Brown K, Kapil-Pair N, Bovbjerg DH, Schwartz MD, Valdimarsdottir HB. The influence of acculturation and breast cancer-specific distress on perceived barriers to genetic testing for breast cancer among women of African descent: genetic testing among women of African descent. Psycho-Oncol. 2009;18(9):945–55. https://doi.org/10.1002/pon.1492.
69. Szaflarski M, Bauldry S. The effects of perceived discrimination on immigrant and refugee physical and mental health. In: Frank R, editor. Advances in Medical Sociology, vol. 19. Emerald Publishing Limited; 2019. p. 173–204. https://doi.org/10.1108/S1057-629020190000019009.
70. Szaflarski M, Klepinger DH, Cubbins LA. Alcohol use/abuse and help-seeking among U.S. adults: the role of racial-ethnic origin and foreign-born status. J Ethn Subst Abus. 2019;18(2):183–210. https://doi.org/10.1080/15332640.2017.1333476.
71. Tamir, C. (2022, January 27). Key findings about black immigrants in the U.S. Pew Research Center. https://www.pewresearch.org/short-reads/2022/01/27/key-findings-about-black-immigrants-in-the-u-s/
72. U.S. Department of Health and Human Services, Bureau of Health Professionals, Health Resources and Services Administration. (2007). Community health worker national workforce study. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5269544/pdf/HESR-52-360.pdf
73. Venters H, Gany F. African immigrant health. J Immigr Minor Health. 2011;13(2):333–44. https://doi.org/10.1007/s10903-009-9243-x.
74. Wallace PM, Torres S, Beltran J, Cohen-Boyar R. Views of mammography screening among U.S. Black and Hispanic immigrant women and their providers. Health Care Women Int. 2014;35(10):1181–200. https://doi.org/10.1080/07399332.2013.862794.
75. Yang PQ, Hwang SH. Explaining immigrant health service utilization: a theoretical framework. SAGE Open. 2016;6(2):215824401664813. https://doi.org/10.1177/2158244016648137.

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Springer Nature or its licensor (e.g. a society or other partner) holds exclusive rights to this article under a publishing agreement with the author(s) or other rightsholder(s); author self-archiving of the accepted manuscript version of this article is solely governed by the terms of such publishing agreement and applicable law.