

Public Health Determinants of Breast Cancer Screening Uptake Among African Immigrant Women in Georgia

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Publication Date: 2025/05/07

Abstract: Despite generally higher levels of education and household income, African immigrant women in the United States face unique barriers to timely screening and diagnosis of breast cancer, which hinders early detection and treatment. Research suggests that many variances are present between the cancer screening practices of American women and women who immigrated to the US. The objective of this study was to determine the rates of breast cancer screening amongst the African immigrant population in Georgia and to determine the factors that affect screening uptake. A community-based cross-sectional study was carried out using semi-structured questionnaires administered to 145 African immigrant women through a joint initiative involving Morehouse School of Medicine and Redeemer's Medical Centre. Data were analyzed using descriptive, bivariate, and multivariate statistical methods. Although 82% of participants said they practiced BSE, the study discovered that there were substantial differences in the frequency and accuracy of these activities among the various demographic groups. Although screening behaviours were favourably correlated with money and education, obstacles like ignorance, fear, mistrust of the healthcare system, cultural views, and a limited knowledge of the healthcare system in the United States continued to exist. Notably, there were misunderstandings regarding breast cancer, such as the idea that the illness has contagious or spiritual roots. Due to social, linguistic, and healthcare system-related problems, African immigrant women in Georgia face significant obstacles to breast cancer screening, even with relatively high levels of education and money. Our results suggest that there is an urgent need for more research to develop more culturally competent interventions to improve breast cancer screening and ultimately help reduce the prevalence of breast cancer among female African immigrants living in the US.

Keywords: Breast Cancer, Screening Practices, African Immigrants, Georgia, Breast Cancer Screening, Health Disparities, Cultural Barriers

How to Cite: Oluwatoyosi A. Adekeye (2025) Public Health Determinants of Breast Cancer Screening Uptake Among African Immigrant Women in Georgia. *International Journal of Innovative Science and Research Technology*, 10(4), 2590-2598. <https://doi.org/10.38124/ijisrt/25apr824>

I. INTRODUCTION

In 2020, there were more than 2.3 million new cases worldwide, making for over 12% of all cancer diagnoses [1]. Over 685,000 deaths worldwide were attributed to breast cancer in 2020, making it the most prevalent cancer in women and a major cause of cancer mortality [1, 2]. With more than 310,000 new cases identified each year, breast cancer ranks second among cancer-related deaths among women in the United States (U.S.), after lung and bronchus cancer [3]. By the end of 2024, estimates also suggest that breast cancer will be a contributing factor in more than 42,000 fatalities in the United States [3].

The health of Black women in the United States is substantially worse than that of women from other ethnic groups when it comes to cancer [4]. For instance, Black women have a 41% higher death rate from breast cancer than White women, even though their incidence rate is lower (126.7 vs. 134.9 per 100,000 women) [4]. Socioeconomic status (SES), delayed diagnosis, and restricted access to care are the reasons stated for the high death rate [4–6].

Black/African Americans and the general U.S. population are very different from immigrants who were born in Africa. African-born immigrants, for example, are more likely to have poor physical, psychological, and social health

[8, 9], are less likely to have a regular healthcare provider, and have a higher incidence of uninsured status [10] while having higher levels of education and household income [7]. They also tend to be a little older population [7] and have distinct chronic disease risk profiles [11].

Furthermore, African immigrants encounter particular healthcare obstacles that Black Americans do not always share. These include a lack of proficiency in English [12], a lack of understanding and reservations about the American healthcare system [13], a lack of a provider who is culturally and linguistically competent [14], and subconscious prejudice among healthcare providers regarding a patient's immigration status, which leads to lower-quality care [15]. Together with these obstacles, new research indicates that women from specific African countries (like Nigeria) may be more susceptible to breast cancer morbidity and death as a result of inherited genetic mutations in the BRCA1 and BRCA2 genes [16]. These mutations increase the risk of developing triple-negative breast cancer, a very aggressive type of disease that spreads quickly and has few effective treatment options [17-19]. There is an urgent need to tailor public health campaigns and breast cancer screening programs to the specific sociocultural norms, behaviours, and language preferences of the estimated 2 million African immigrants living in the United States [20, 21].

Black women are more likely than White women to die from breast cancer in Atlanta, Georgia, and in the United States [22, 23]. Between 2014 and 2018, the number of fatalities from breast cancer among Black women in Fulton County, which comprises the majority of Atlanta, was 31.5 per 100,000, whereas the rate for White women was 16.8 [24]. Black women in nearby Dekalb County had a breast cancer death rate of 28.9 per 100,000, whereas white women had a rate of 16.5 per 100,000.

Previous studies have identified several factors that contribute to Black women's high breast cancer mortality rate. Compared to their non-Hispanic White peers, non-Hispanic Black women in metropolitan Atlanta who receive a breast cancer diagnosis are typically younger and have node-positive, triple-negative, later-stage tumors [24]. A triple-negative breast cancer diagnosis denotes a genetic predisposition to breast cancer and limits available treatment options [25]. Researchers have identified socioeconomic deprivation and environmental factors as crucial in understanding the greater breast cancer mortality among Black women, even if hereditary factors probably play a role [25].

In Georgia, approximately one in four Black women 40 years of age or older have not had a mammogram in the previous two years [24]. Given the poor prognosis of late-stage tumors, of which Black women are disproportionately diagnosed, and Georgia's high breast cancer mortality rate, it is imperative to evaluate Atlanta's Black women's hurdles to mammograms. Black women often express psychological/knowledge-related barriers, such as pain/discomfort and worry, as well as financial/logistical barriers, according to the collective study to far on breast cancer screening [26]. The most frequently stated

impediments among underserved women, according to research, were the cost of health care and the lack of health insurance [27].

Triple-negative breast cancer (tumors that do not express the estrogen receptor [ER], progesterone receptor [PR], or human epidermal growth factor receptor 2 [HER2]) is twice as common in black women in the United States as in white women. [1, 2] This disparity could be a result of racial variations in both hereditary and non-genetic variables. [3, 4] Notably, a recent study from The Cancer Genome Atlas estimates that inherited germline variants account for about 40% of the ethnic variance in breast cancer subtypes, indicating a substantial impact from genomic structure and related tumor biology that are uniquely shared. [5] An increased risk of ER-negative and triple-negative breast cancers in Black women has been linked to a larger percentage of "African ancestry," as determined by ancestry-informative markers (AIMs). [6-8]. Unfortunately, samples primarily gathered in West Africa showed "African ancestry" represented by AIMs [9], which limited the ability to modify population stratification in admixed populations and capture the varied ancestral components in the remaining parts of Africa. Furthermore, according to recent research, people who identify as Black or African American have the highest level of genetic diversity within their population of any racial or ethnic group in the United States [10, 11].

This evidence is necessary for researchers, doctors and public health educators to begin designing culturally competent interventions to reduce the prevalence of breast cancer among female African immigrants living in the US.

II. METHODS

A community-based collaborative project was carried out through a cross-sectional study that employed semi-structured questionnaires, involving an academic health center, Morehouse School of Medicine, a community organization Redeemer's Medical Center (RMC), and its affiliated church. This initiative formed part of a health education campaign aimed at a largely African immigrant population. The collaboration, rooted in Community-Based Participatory principles, emerged from RMC's involvement in the nationally recognized Community Health Leadership Program (CHLP) offered by the Satcher Health Leadership Institute. The study was integrated into RMC's quarterly health education outreach program, taking place either at the RMC location, its adjacent parking area, or its partner religious center. Both venues provide ample parking and are conveniently located near public transportation.

RMC and its parent church were identified as superb community partners for this initiative due to the predominance of African immigrants among their clientele, and the well-documented link between faith and health within this group. The Morehouse School of Medicine's Institutional Review Board (IRB) reviewed and granted approval for this research. The data were anonymized with identification numbers, ensuring that names and other personal information were not gathered in the questionnaire, and there was no connection to any medical records. The research team maintained the

confidentiality of all collected information, which was securely processed.

A. Data Collection

Self-completed semi-structured questionnaires were employed to gather data for the study. The tool was created to shed light on the breast cancer screening behaviors in this population and to highlight potential health interventions aimed at improving inadequate screening practices.

B. Measures

The surveys, which took about 10 minutes to finish, were offered in English, and trained volunteers were on hand to assist participants who needed help with the questionnaires. The survey included questions on demographics, healthcare access, diagnoses, practices and family history of breast cancer.

C. Data Analysis

Data were analyzed using IBM SPSS Statistical Package (version 25). Data analysis included descriptive statistics to examine participant demographics and other study variables of interest.

D. Materials and Methods

The research received approval from both the Plateau State Ministry of Health and the University of Liverpool Research Ethics Committee. Due to safety issues, prisons and police stations were left out of the study. After calculating the necessary sample size, women aged 18 to 65 who were employed at a Federal non-healthcare institution were randomly selected to fill out a validated questionnaire. Participants who consented were given 1–2 days to complete and submit the questionnaire. Out of the 450 questionnaires distributed, 388 were filled out and returned, yielding a response rate of 86.2%. The questionnaire data were recorded in a spreadsheet, categorical data were converted into numerical variables, and the analysis was performed using SPSS version 10 for Windows. Univariate analyses using frequency distributions and means were conducted to outline the characteristics of the respondents. Bivariate analysis involved Chi-square and t-tests to explore associations. Finally, multivariate logistic regression was performed to determine factors that independently predict awareness of cervical cancer and the Pap smear test and/or the utilization of the Pap smear test.

III. RESULTS

Table 1 Univariate analysis

Characteristics	Total (n)
Age	
18-25	30
25-33	25
33-45	43
>45 years	47
Total	145
No formal education	3
High School Diploma	9
Some College Education	22
Completed College	119
Unemployed	41
Self-Employed	35
Employed but not self-employed	64
Retired	10
Less than \$25,000	30
\$25,000-\$49,000	37
>\$50,000	56
Single	48
Married	87

Living Together	3
Divorced, separated, widowed	15

Independent variables – Age, Education, Employment status, Household income, Marital Status. Dependent variable- Breast examination practices.

Table 2 Bivariate Analysis

Characteristics	Do you practice breast self-examination			Total (n)
Age	Yes	No	I Don't Know	
18-25	29	0	1	30
25-33	21	2	2	25
33-45	38	2	3	43
>45 years	47	2	2	47
Education				
No formal education	2	0	1	3
High School Diploma	6	1	2	9
Some College Education	21	1	0	22
Completed College	109	5	5	119
Occupation				
Unemployed	36	1	4	41
Self-Employed	31	0	4	35
Employed but not self-employed	59	5	0	64
Retired	10	0	0	10
Level of Household Income				
Less than \$25,000	26	3	1	30
\$25,000-\$49,000	32	2	3	37
>\$50,000	53	2	1	56
Marital Status				
Single	38	5	5	48
Married	82	2	3	87
Living Together	2	1	0	3
Divorced, separated, widowed	14	0	1	15
Breast cancer is one of the most common cancers in women				
Yes	128	1	4	133
No	3	7	2	12
I don't know	4	0	3	7
Breast cancer occurs more commonly in older women				
Yes	61	6	3	70

No	60	2	1	63
I don't know	16	0	4	20
Breast cancer can be inherited				
Yes	107	5	3	115
No	20	3	1	24
I don't know	12	0	5	17
The first sign of breast cancer is usually a lump in the breast				
Yes	121	6	4	131
No	8	2	0	109
I don't know	9	0	5	14
It can also present by nipple discharge or bleeding, pain, swollen breast				
Yes	114	6	3	123
No	3	2	1	6
I don't know	20	0	5	25
Breast examination is useful for finding the disease early				
Yes	9	18	0	27
No	0	5	0	5
I don't know	1	6	0	7
Surgery is the main form of treatment for breast cancer				
Yes	44	3	1	48
No	66	4	1	71
I don't know	25	1	6	32
Some men reject their wife when she gets breast cancer				
Yes	37	0	2	39
No	36	6	3	45
I don't know	61	1	4	66
Breast cancer is caused by evil spirits				
Yes	8	2	1	11
No	109	4	3	116
I don't know	14	1	5	20
Breast cancer is caused an infection				
Yes	33	5	1	39
No	74	1	1	76
I don't know	27	1	6	34
What do you think the best approach to breast cancer is?				

Go to the doctor	118	6	5	129
Go to an alternative practitioner (e.g. herbalist, traditional healer)	5	0	1	6
Pray for good health	4	1	2	7
If you suspect that there may be a problem with your breast you would delay going to the doctor because				
I will not delay	111	6	5	122
Fear of losing my breast	4	0	1	5
More important things to do	0	1	0	1
Lack of money	4	0	0	4
Lack of health insurance	8	0	1	9
I do not know	4	0	1	5
If yes to question 6, how did you learn to practice BSE				
From a doctor	73	5	1	79
From the media	14	0	0	14
From churches/ religious groups	0	1	2	3
Other	29	0	3	32
How often do you practice BSE?				
More than once a month	37	3	0	40
Once a month	27	0	2	29
Once in two months	13	1	0	14
Three to five times a year	11	0	0	11
Once or twice a year	14	2	0	16
Less Often	19	1	1	21
What is your reason for not practicing BSE?				
I do not have a breast problem	18	2	1	21
I do not think I should	1	2	0	3
I do not know how to do it	9	0	0	9
I do not know	13	1	4	18
Other	37	0	2	39

IV. DISCUSSION

The paper examined breast cancer screening practices among African immigrant women in the United States, with a focus on critical challenges that significantly hinder timely detection and care. Although one hundred and nineteen African immigrants reported higher levels of education and fifty-six reported a >\$50,000 household income in comparison to other minority groups [15, 7], the findings show the persistent existence of considerable barriers that are cultural, linguistic, and systemic.

The varying uptake of breast self-examinations (BSE) and mammography screenings vividly demonstrates these barriers. Many participants expressed that they either do not regularly participate in screening practices or depend on non-medical advice, such as informal consultations with family or friends, when they suspect a possible health issue.

Additionally, the paper reveals that the decrease in the screening rate is strictly correlated with differing factors. Proficiency in English plays an essential role, as women with some degree of English skills often find it difficult to

communicate effectively within the healthcare system. Also, nine participants indicated a limited knowledge of the complexities of the U.S. healthcare system in terms of navigating insurance and appointment scheduling, which greatly influences their health-seeking behaviour. Cultural beliefs concerning illness and health, including stigmatization related to breast cancer and mistrust in medical professionals, play a vital role in influencing their engagement in preventive health practices. These factors altogether create a challenging environment for African immigrant women, eventually affecting their ability to access and benefit from early breast screening practices. This result is in line with previous studies that reveal the lack of culturally sensitive healthcare facilities, which leads to delays in screening, even among women with higher education levels [12, 14].

The data demonstrate that women with a higher educational achievement were more likely to partake in the regular screening practices. However, the presence of ongoing disparities means that educational achievement by itself cannot resolve the varying hindrances faced by this demographic. The intricate relationship between socioeconomic factors, cultural beliefs, and steering the healthcare system highlights the importance of specific targeted interventions [5, 6].

The importance of prior and more regular screening practices in this demographic is emphasized by the recent findings demonstrating that women of African descent are at a higher risk of developing aggressive subtypes of breast cancer, such as the triple-negative breast cancer linked to BRCA1 and BRCA2 mutations [16, 17]. These findings are in line with the national trends, revealing that breast cancer continues to be the leading cause of mortality among American women [3].

V. CONCLUSION

In conclusion, the paper reveals the significant paucities in breast cancer screening practices in African immigrant women in the U.S., although their socioeconomic conditions are more favourable in comparison to other minority groups. Cultural, linguistic, and systemic barriers greatly hinder screening and prior detection, leading to elevated mortality rates within this demographic [4, 2]. The data shows the importance of the need for public health strategies that are culturally informed and can effectively address these challenges.

Community-oriented interventions, targeted educational initiatives, and collaborations with reliable local organizations (such as faith-based groups and community health centers) are essential for refining health literacy and increasing the rate of screening practices [13, 15].

In addition, policy initiatives that ensure access to healthcare services that are profound to language and culture could significantly reduce the disparities seen in screening practices. Future research should keep investigating creative methods to engage African immigrant women, eventually supporting better breast cancer outcomes through early detection and intervention [6, 12].

By confronting these intricate issues through an all-inclusive approach, healthcare professionals and policymakers can collaborate to ensure that breast cancer screening and subsequent care are both available and effective for African immigrant women in the U.S.

VI. LIMITATIONS

Even though this paper reveals valuable insights into the experiences and challenges the African immigrants in the U.S. face, it is important to acknowledge its limitations. The sample size of the participants for the study may not have adequately represented the full range of diversity within the African immigrant population, which incorporates a wide range of ethnic backgrounds, languages, and cultural practices. In addition, the cross-sectional method limits the ability to draw conclusive decisions about causality, as it captures data at a single point in time rather than over a long period.

To improve the strength of future research, it is essential to make use of larger and more diverse samples that better reflect the complex nature of the demographic. Implementing longitudinal methods would enable researchers to track changes over time and gain deeper insights into the long-term effects of culturally targeted initiatives on the health and well-being of African immigrants. Studies can also consider integrating a qualitative approach to include individual narratives and experiences, therefore providing a more nuanced understanding of the needs and effectiveness of interventions.

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