Preventive Medicine 67 (2014) 89–99

Contents lists available at ScienceDirect

Preventive Medicine

journal homepage: www.elsevier.com/locate/ypmed

Review

# Addressing cancer control needs of African-born immigrants in the US: A systematic literature review

Alejandra Hurtado-de-Mendoza [a,*], Minna Song [a], Ocla Kigen [b], Yvonne Jennings [a], Ify Nwabukwu [c], Vanessa B. Sheppard [a]

[a] Breast Cancer Program and Office of Minority Health and Health Disparities, Lombardi Comprehensive Cancer Center, Department of Oncology, Georgetown University Medical Center, Washington, DC, USA
[b] Cancer Biology, Prevention & Control, University District of Columbia, Lombardi Cancer Center Cancer Prevention Master's Degree Program, Washington, DC, USA
[c] African Women's Cancer Awareness Association, Silver Spring, MD, USA

ARTICLE INFO

Available online 14 July 2014

*Keywords:*
African immigrants
Cancer
Cancer prevention
Systematic literature review

ABSTRACT

Compared to non-Hispanic Whites, African immigrants have worse cancer outcomes. However, there is little research about cancer behaviors and/or interventions in this growing population as they are generally grouped with populations from America or the Caribbean. This systematic review examines cancer-related studies that included African-born participants.

We searched PsycINFO, Ovid Medline, Pubmed, CINHAL, and Web of Science for articles focusing on any type of cancer that included African-born immigrant participants. Twenty articles met study inclusion criteria; only two were interventions. Most articles focused on one type of cancer (n = 11) (e.g., breast cancer) and were conducted in disease-free populations (n = 15). Studies included African participants mostly from Nigeria (n = 8) and Somalia (n = 6). However, many papers (n = 7) did not specify nationality or had small percentages (<5%) of African immigrants (n = 5). Studies found lower screening rates in African immigrants compared to other subpopulations (e.g. US-born). Awareness of screening practices was limited. Higher acculturation levels were associated with higher screening rates. Barriers to screening included access (e.g. insurance), pragmatic (e.g. transportation), and psychosocial barriers (e.g. shame).

Interventions to improve cancer outcomes in African immigrants are needed. Research that includes larger samples with diverse African subgroups including cancer survivors is necessary to inform future directions.



**Contents**



* Corresponding author at: 3300 Whitehaven St. NW, Suite 4100, Washington, DC 20007, USA. Fax: +1 202 687 0305.
*E-mail address:* ahd28@georgetown.edu (A. Hurtado-de-Mendoza).

http://dx.doi.org/10.1016/j.ypmed.2014.07.006
0091-7435/

## Introduction

African-born immigrants are one of the fastest growing immigrant groups in the US; increasing from 881,300 in 2000 to 1,606,914 by 2010 (US Census Bureau, 2013). The majority of African immigrants come from Western (35.71%) and Eastern Africa (29.612%). Specific top countries of origin include Nigeria (13.65%), Ghana (7.76%), Ethiopia (10.80%), and Kenya (5.51%) (Immigration Policy Center, 2014). More than half of the African immigrants arrived recently to the US. Thus, there has been limited research on African immigrant health, and it has mostly focused on infectious diseases (e.g. tuberculosis, HIV) while chronic diseases, such as cancer, have been understudied (Venters and Gany, 2011).

Previous research has shown disparities among US and immigrant populations in cancer information (Zhao, 2010), screening rates (Bazargan et al., 2004; Consedine, 2012; Goel et al., 2003; Lofters et al., 2010; Shih et al., 2008; Swan et al., 2003), early diagnosis (Kouri et al., 2010), quality of care (Nielsen et al., 2010), receipt of recommended treatment (Kouri et al., 2010; Nielsen et al., 2010), and survival outcomes (Creque et al., 2010). Identified barriers to accessing health services include access to care factors (e.g. insurance, citizenship status) (De et al., 2005; Echeverria and Carrasquillo, 2006; Shahidi et al., 2013), pragmatic factors (e.g. language difficulties) (Shahidi et al., 2013), and psychosocial factors (e.g. limited knowledge, embarrassment and fear of screening procedures, cultural beliefs) (Consedine, 2012; Consedine et al., 2007, 2011; Johnson et al., 2008). Having a usual source of care (Jandorf et al., 2010; Shih et al., 2008; Taylor et al., 2009), provider recommendation (Jandorf et al., 2010; Taylor et al., 2009), and acculturation (Brown et al., 2006; Jandorf et al., 2010), are some of the identified protective factors that increase the odds of screening in this population.

However, African immigrants are underrepresented in this research. The scarce research that includes African immigrants has shown cancer-related disparities across the cancer control continuum (Creque et al., 2010; Goel et al., 2003; Morrison et al., 2012; Seeff and McKenna, 2003; Sussner et al., 2009; Tsui et al., 2007; Zhao, 2010). However, African-born immigrants tend to constitute small percentages of the samples and/or they tend to be lumped with African Americans or Caribbean, or categorized as "African" or "Black foreign-born" without specifying country of origin (Goel et al., 2003; Seeff and McKenna, 2003; Zhao, 2010). The goal of this paper is to offer a systematic literature review of cancer studies that include African-born populations to suggest venues for further research and interventions that can be implemented in the US.

## Methods

### *Search strategy*

The research team participated on a literature search course conducted by a librarian at Georgetown University. The course included strategies for conducting searches (e.g. selecting, exploding, and combining medical subject heading terms — MeSH terms) as well as the particularities of different search engines (e.g. Ovid, CINHAL). The authors followed the guidelines outlined by the Preferred Reporting Items for Systematic Literature Reviews and Meta-Analysis (PRISMA) (Liberati et al., 2009; Moher et al., 2009).

### *Identification of studies*

We searched PsycINFO, Ovid Medline, Pubmed, CINHAL, and Web of Science for papers on any type of cancer (including disease free) with African-born immigrant participants. The search was conducted in May 1, 2013. We used the following search terms: "cancer" and "African immigrant" to find the appropriate MeSH terms within each search engine. For the cancer keyword we used neoplasm as a MeSH term in all search engines. However, "African immigrant" elicited different MeSH terms in the various search engines. We developed specific search strategies for each search engine to maximize the number of papers retrieved without losing the population target. For instance, when typing African Immigrants in PsycINFO we obtained several MeSH terms including: Immigration, Blacks, and African cultural groups. After examining the scope and the papers retrieved we realized that Black referred to African Americans whereas African cultural groups referred to the cultural groups from Continental Africa. Combining "immigrant" and "African cultural groups" and "neoplasms" yielded fewer results (n = 5), so we decided to use African cultural groups in combination with neoplasm (n = 11). We used "African cultural groups" in PsycINFO, "African continental ancestry group" in combination with "emigrants and immigrants" in Ovid Medline, "African" in CINHAL, "African immigrant" in Pubmed, and "African" combined with "immigrant" in Web of Science. An exemplary search with PsycINFO is provided in Table 1. We additionally included other papers retrieved from the reference list of the selected papers and others suggested by scholars. References were imported to Refworks to delete duplicates.

### *Review and abstraction process*

First, two members of the research team (AH and MS) independently reviewed all the abstracts and categorized the papers based on whether they met the inclusion criteria (i.e. Yes, No, and Maybe). In the second round of review, the two members of the team independently reviewed the full text articles categorized as "Maybe" to further determine eligibility. Discrepancies were solved by discussion until consensus was reached (AH, MS) and a third researcher was consulted (VS) to resolve disagreements. We developed a data abstraction document to capture the information from the studies that met the eligibility criteria (e.g. sample characteristics, main outcomes, main results). Two members of the research team conducted the data abstraction (AH, MS).

### *Inclusion/exclusion criteria*

Retrieved papers were eligible if they addressed (1) any type of cancer and included (2) African-born immigrant populations in the sample. No year, language, or study location limits were added in the search. We did not set a threshold for the number or percent of African-born persons in study samples. Case studies, review papers, and epidemiological studies outside the US were excluded.

## Results

The five search engines yielded a total of 104 records, and 24 additional records were identified through the list of references, scholars, and study authors. After deleting duplicates, 99 records were screened for eligibility. A total of 20 papers met inclusion criteria (see Fig. 1 for additional details). Although English language was not an inclusion criteria, all the articles that met the eligibility criteria were written in English.

Most papers focused on a single type of cancer (55%) and breast, cervical, and prostate were the most common among those studies. The majority of the studies were conducted with disease free samples (75%). Half used quantitative methods (50%) and there were only two intervention studies(Lepore et al., 2012; Piwowarczyk et al., 2013). Most research focused on women only (60%), and Nigerians (40%) and Somalis (30%) were the most represented nationalities in the articles. However, a significant number of studies (35%) did not specify nationality or had African immigrant samples (25%) that were less than 5% of the total sample, so no specific results about African immigrants were reported (see Table 2 for summary description). The retrieved

**Table 1**
PsycINFO search.

| Steps search terms number of retrieved papers | | |
|---|---|---|
| 1 | Exp neoplasms/ | 31,295 |
| 2 | Exp African cultural groups/ | 1020 |
| 3 | Exp immigration/ | 12,807 |
| 4 | (African cultural groups and immigration). | 77 |
| 5 | (Neoplasms and (African cultural groups and immigration)) | 5 |
| **6** | **(Neoplasms and African cultural groups).** | **11** |

Exp: exploded terms.
Note: Step 6 is presented in bold text to highlight the search we used.