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Health Conditions of Post-Resettlement African Refugees in Boise, Idaho

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Abstract

This study describes the health conditions of African refugees in Boise, Idaho obtained through self-report interviews and medical chart review. Comparisons between self-report data and data obtained through the medical chart review are described. This paper also describes the challenges and successes of collecting health data from African refugees in a health fair setting, the use of interpreters and DVDs with participants who speak seven different languages, and collaborative research with different African refugee groups utilizing community based participatory research. Findings include descriptive statistics related to the health conditions of the population. Comparison of the self-report and medical chart review indicated discrepancies in the areas of limitations to running and walking, high blood pressure, high cholesterol and in the need for exercise. Other issues emerged such as concern for safe administration of OTC medications due to parents' lack of knowledge of their children's weight.

Keywords

African refugees, post resettlement, health status, health literacy

Background and Review of Literature

Each year, refugees from unstable areas throughout the world are forced to leave their homes and countries due to war or political turmoil. Idaho is one of 15 states in which refugees have resettled, with the majority of them located in the capital city of Boise (Idaho Office for Refugees, 2011). The sub-group of African refugees settled in Boise represents a diverse, unique population vulnerable to health disparities due to the many economic, cultural, and linguistic barriers they face as they transition to the U.S. health care system (Adams & Asefi, 2002; AHRQ, 2011).

When refugees arrive in the United States, initial screening of physical health is completed in primary care settings utilizing guidelines of the Center for Disease Control (Brodine et al., 2009; Centers for Disease Control and Prevention, 2013). After the initial screening, little is known of the physical health or health promoting behaviors of refugees. Researchers have explored the frequency of mental health issues

and coping mechanisms of refugees, as well as the anxiety and depression that accompany the trials that refugees have endured, such as famine, rape, and torture (Adair, Nwaneri, & Barnes, 1999; Adams & Assefi, 2002; Begic & McDonald, 2006; International Organization for Migration, 2011; Jordan, Matheson, & Anisman, 2009; Pavlish, 2007; Robertson et al., 2006). In addition, researchers have studied women's and children's health care issues, including the childbearing experience and genital mutilation, as well as immunization status and vitamin deficiency in children (Adams & Assefi, 2002; Carroll et al., 2007; Degni, Koivusilta, & Ojanlatva, 2006; Guerin, Allotey, Elmi, & Baho, 2006; Merry, Gagnon, Kalim, & Bouris, 2011; O'Mahoney, Donnelly, Bouchal, & Este, 2012; Pavlish, 2007; Sheikh et al., 2009; Sheikh-Mohammed, MacIntyre, Wood, Leask, & Isaacs, 2006). Still, little is known about the current health status of refugees in the years following resettlement, as they are a population at high risk of significant health issues.

In most cases, refugees coming to the U.S. are of lower income and are underserved by health promotion interventions, such as programs targeting obesity, exercise, smoking, and alcohol abuse (Barnes, Harrison, & Heneghan, 2004; Morris, Popper, Rodwell, Brodine, & Brouwer, 2009). Health disparities due to communication barriers such as limited literacy, language, or culture have been identified as significant (Bailey et al., 2009; Edberg, Cleary, & Vyas, 2011; National Institute of Health, 2011). Poor health literacy has been associated with decreased ability to participate in shared decision-making in health care issues (National Institute of Health, 2011; White, Chen, & Atchison, 2008). Limited English acquisition and cultural factors present opportunities for miscommunication, which can result in increased risk for medical errors. Many African refugees represent a pre-literate population with significant health literacy deficits leaving them highly vulnerable (Fiscella, Franks, Doescher,

& Saver, 2002; Springer, Black, Martz, Deckys, & Soelberg, 2010; Wolf, Feinglass, Thompson, & Baker, 2010). Understanding the language and communication challenges of refugees may help decrease the risk for error in this vulnerable population (Morris et al., 2009).

While culturally congruent care has become a national priority in healthcare, the same diligence in providing culturally appropriate interactions can be utilized in cross-cultural research (Leininger & McFarland, 2002). An effective way to examine health disparities and develop culturally congruent solutions in vulnerable populations is through community-based research (Israel, Schulz, Parker, & Becker, 1998; Smedley, Stith, & Nelson, 2002). One such method is community-based participatory research (CBPR), which is a culturally appropriate and collaborative approach to research in which researchers and community members partner through the research process. Community based participatory research employs the experience of those community members most affected by health issues and those who have control of community resources in the research process (Ellis, Kia-Keating, Yusuf, Lincoln, & Nur, 2007; Park, 1992). Using a CBPR approach, the researchers from the School of Nursing at Boise State University partner with local African refugees in research to: identify health care needs of this group, gain deeper understanding about the cultural factors unique to this population, and develop appropriate interventions. This project is one of several projects the refugees and researchers have undertaken and provides key background information of the health status of the population to inform future projects. Culture care theory was used to frame the research methodology by utilizing culturally appropriate processes based on the cultural and social structure dimensions found in the Sunrise Model (Leininger & McFarland, 2002). This project was approved by the Institutional Review Board at Boise State University.

Purpose of study

The aim of this project was to document the health status of the African refugees post resettlement who live in the Boise area. This project was a follow-up to an initial community assessment (Springer et al., 2010) and was undertaken to provide a background for future research projects outlined by the community advisory board and researchers. For this study, the health status of the African refugees was documented through self-report and medical record review.

Method

Sample

The sample was taken from all African refugees in the Boise area. These refugees are self-organized into three organizations; the Somali-Bantu Community Association (SBCA), and the Somali-Bantu Zigua Association (SBZA), both of which include only Somali Bantu, and the African Community Development (ACD), which represents refugees from many African countries. A Community Advisory Board (CAB), with representatives from the Somali Bantu African refugees, has been operating for years for the purpose of guiding research projects in collaboration with researchers from Boise State University (Springer et al., 2010). The CAB for this project was expanded to include other African refugees as well as the Somali Bantu, and consisted of approximately 20 representatives from the African refugee communities. A linguist was also added to assist with the many different languages present among the refugees. The refugee CAB members spoke three different languages and CAB meetings always included interpreters. During meetings with researchers, CAB members spoke frequently of the issues within their communities due to cultural differences and linguistic challenges, because the vast majority of their members did not speak or read English. While approximately 1400 African refugees have resettled in Boise since 2000 who speak diverse languages and dialects, including Swahili, Kizigua, Af Maay

Maay, Somali, and French, the CAB estimated the number of African refugees in Boise to be much lower than reported (Idaho Office for Refugees, 2011).

The vast majority of the African refugees live in three large apartment complexes in the Boise area (Springer et al., 2010). The CAB decided to conduct the self-report portion of the research through health fairs at the apartment complexes. The CAB members arranged for transportation of refugees to the health fairs for those not living in the apartments. Due to the many languages spoken by the refugees, researchers could not rely on traditional methods, such as flyers at apartment complexes, to advertise the health fairs and the research study. CAB members spoke at churches and community meetings, and spread the word of the study throughout the communities. Enrollment took place at the three apartment complexes during health fairs offered by the School of Nursing.

Instrumentation and Data Collection

The CAB, developed a self-report interview guide based on National Health and Nutrition Examination Survey questions (NHANES) (CDC, 2010a). Eighteen questions were asked in 14 content health areas including: height and weight, prescription medications, mental health, diabetes, diabetes medications, physical health limitations, cholesterol, hypertension, hypertension medications, asthma, asthma medications, losing/gaining weight, increase in exercise, reducing fat in diet, along with questions regarding demographic information. Interpreters provided input to ensure cultural and linguistic appropriateness of the questions in the interview guide to enhance accuracy of the data.

Each health fair included space for health teaching and tents to provide privacy for obtaining consents and for interviews. The health fairs also included participation of over 60 students from nursing, linguistics, and pharmacy who contributed by providing community-re-

quested health information and screenings, as well as assisting in data collection.

Interpreters from each of the three associations were selected by the CAB to assist with the informed consent process and data collection. Interpreters were available for speakers of Swahili, Af Maay Maay, Kizigua, French, Somali, and various dialects of each of these languages. All interpreters were male, despite efforts to identify female interpreters. The researchers trained the interpreters in relevant medical terminology, obtained informed consent, and ensured voluntary participation and confidentiality of the data. As many of the African refugees do not read or write, information about informed consent was imparted in audio form in an appropriate language for each participant. A DVD about the information in the consent was developed in the three primary languages spoken by the community: Af Maay Maay, Kizigua, and Swahili. Interpreters worked with the linguist and checked the consistency of interpretation of the recorded consent and assent materials.

Interpreters greeted members of the African refugee communities at the health fair and invited them to participate in the research. One interpreter would accompany a family unit through the informed consent and interview process, as recommended by the CAB. The researcher or research assistants trained in data collection worked with the interpreters throughout the data collection process. After listening to the consent through the interpreter or the DVD, participants were given the opportunity to agree or decline participation in the study. Parental permission from one parent was obtained for participation of all children in a family. Children between the ages of 11 and 18 were also assented. In most cases, both parents were interviewed for data related to the children. Consent and assent was obtained to participate in a self-report interview and for the researcher to review medical records. Utilizing the interview guide (Appendix A), self-report-

ed data from participants was collected at the three health fairs through oral interviews with the assistance of interpreters. Participants also provided information about where they received health care, and signed medical releases allowing researchers to review health records for the same 14 areas addressed in the self-report interviews.

Within two months after the health fairs, chart reviews were performed at medical clinics where primary care was provided to the refugees. The researcher examined medical records to see if the provider indicated the same conditions that the refugees were asked about. A spreadsheet was developed by the researchers for recording the data in a consistent manner, delineating inclusion of the conditions or medications in the health history or progress notes.

Analysis and Results

A total of 260 African refugees were enrolled in this study using convenience sampling. Almost all of the participants from Somalia identified themselves as Bantu (84/89). Refugees also reported arriving in the U.S. from Kenya, Congo, and Burundi. Descriptive information from the sample is described in Table 1. The majority of the participants were children reflecting the large number of children in each family. Most adults were married.

Gender, educational, and economic factors indicate the sample of adults participating in the interviews included more females than males; the majority were married; and very few had a formal education; all findings which are consistent with current literature (Lehman & Eno, 2003; Seicean, n.d.; Springer et al., 2010). The majority of the sample was in the poverty income level. Most rely on Medicaid, which is consistent with the 2010 Health Disparities report indicating that the poor and those with less than a high school education are significantly less likely to have insurance (AHRQ, 2011).

All 113 African refugee parents were asked to provide their own height and weight and

Table 1. Demographics of Total Sample

	Adults			Children (0-18)
Total	113 (43.5%)			147 (56.5%)
Female	60 (53.1%)			77 (52.4%)
Male	52 (46%)			64 (43.5%)
Missing	1 (9%)			6 (4.1)
Marital Status				
Married	75 (66.4%)			
Single	22 (19.5%)			
Widowed	12 (10.6%)			
Missing	4 (3.5%)			
Country of Origin				
Somalia	53 (46.9%)			36 (24.5%)
Kenya	2 (1.8%)			25 (17%)
Congo	28 (24.8%)			20 (13.6%)
Burundi	24 (21.2%)			23 (15.6%)
Other/unknown	6 (5.3%)			43 (29.3%)
Insurance				
Medicaid	75 (66.4%)			116 (79%)
Private pay	26 (23%)			1 (0.7%)
Unknown	12 (10.6%)			30 (20.3%)
Educational Level				
	Total	Male	Female	
1-5 years	39	9 (23.1%)	30 (76.9%)	
6-10 years	22	13 (59%)	9 (41%)	
High School Diploma	16	12 (75%)	4 (25%)	
Some College	7	6 (85.7%)	1 (14.3%)	
College degree	1	1 (100%)	0	
Unknown	28			
Mean household income	\$7,643			

their children's height and weight. Thirty nine percent (44) of adults knew or could locate their own height (on driver's licenses or ID cards) and 60.1% (68) knew or could locate their own weight. When asked about their children, only one parent knew or could locate information about their children's height, and 9% of parents knew or could locate information about their children's weight.

Data from the interviews for the total sample for both adults and children, are found in Table 2. Of the adults interviewed, 41.6% stated they have difficulties with running or walk-

ing and 28.3% stated they have limitations due to physical or emotional problems. Children were reported to have few health conditions, with asthma the most frequent at 4.1%. Previous research with this population indicated the refugees believed diabetes and asthma were significant health problems in the community, however these conditions were not ones most frequently reported (Springer et al., 2010)

The researchers then examined the health status of the refugees based on review of medical records. Of the 260 participants who provided self-report data, the researchers were able

Table 2. Self-reported Health Status of African Refugees, Total Sample, Adults, and Children

	Total sample (n=260)	Adults (113)	Children (147)
Difficulty running/walking	50 (19.2%)	47 (41.6%)	3 (2%)
Have limitations due to physical or emotional	37 (14.2%)	32 (28.3%)	5 (3.4%)
Have diabetes	19 (7.3%)	19 (16.8%)	0
Take diabetic pills	13 (5%)	13 (11.5%)	0
Take insulin	8 (3.1%)	8 (7.1%)	0
Has asthma	18 (6.9%)	12 (10.6%)	6 (4.1%)
Takes asthma medication	14 (5.4%)	8 (7.1%)	6 (4.1%)
Has high cholesterol	5 (1.9%)	5 (4.4%)	0
Has high blood pressure	30 (11.5%)	30 (26.5%)	0
Takes blood Pressure medication	23 (8.8%)	23 (20.4%)	0
Takes prescription medications	58 (22.3%)	48 (42.5%)	10 (6.8%)
Is overweight	13 (5%)	9 (8%)	4 (2.7%)
Told by MD to lose weight?	11 (4.2%)	10 (8.8%)	1 (0.7%)
Told by MD to exercise?	36 (13.8%)	33 (29.2%)	3 (2%)
Told by MD to reduce fat or calories?	19 (7.3%)	17 (15%)	2 (1.4%)
Missing data	4 (1.5%)	0	4 (2.7%)

to locate medical records for 144 participants. Demographics for participants with medical records mirrored the demographics for the entire sample, with the exception of except the vast majority of participants having retrievable medical records were children (97/144). This may be due to easily accessible health care for infants, as well as the fact that children were more likely to have medical insurance (Medicaid). For the sample with accessible medical records, 75.7% were recipients of Medicaid, 7.6% had private insurance, and 14.6% did not know about their insurance.

Language barriers can pose a threat to understanding information exchanged between patients and providers. As such, the researcher

wanted to assess congruency between the reported health data from the refugees and what was reported in the medical records. (International Organization for Migration, 2011; Adair, Nwaneri, & Barnes, 1999; Springer et al., 2010). To answer this question, for the sample of refugees for whom medical records could be located (n=144), the researcher compared the self-report health history with data from medical records using a McNemar's test. McNemar's test is a non-parametric test that checks for differences when participants are paired (Green & Salkind, 2011). Table 3 shows the results of this comparison. Six areas showed a statistically significant difference between self-report and medical-report data. Adult participants generally reported

Table 3. Health Data from Medical Records

	Medical Records review— Total sample (144)	Medical Records review— Adults (44)	Medical Records review— Children (100)
Difficulty running/walking	11 (7.6%) *	8 (18.2%) *	3 (3%)
Limitations due to physical or emotional	21 (8.1%)	8 (18.2%)	14 (14%) *
Have diabetes	7 (4.9%)	7 (15.9%)	0 (0%)
Take diabetic pills	5 (3.5%)	5 (11.4%)	0 (0%)
Take insulin	3 (2.1%)	3 (6.9%)	0 (0%)
Has asthma	8 (5.6%)	4 (9.1%)	4 (4%)
Takes asthma medication	10 (6.9%)	5 (11.4%)	5 (5%)
Has high cholesterol	8 (5.6%) *	8 (18.2%) *	0 (0%)
Has high blood pressure	8 (5.6%) *	8 (18.2%) *	0 (0%)
Takes blood Pressure medication	9 (6.3%)	9 (20.5%)	0 (0%)
Takes prescription medications	24 (16.7%)	17 (38.6%)	7 (7%)
Is overweight	12 (8.3%)	4 (9.1%)	8 (8%)
Told by MD to lose weight?	5 (3.5%)	4 (9.1%)	1 (1%)
Told by MD to exercise?	9 (6.3%)	5 (11.4%) *	4 (4%)
Told by MD to reduce fat or calories?	14 (9.7%)	7 (15.9%)	7 (7%) *

* Significant difference between self-report and information in medical records ($p < .05$)

a higher incidence of issues/conditions than was found in the medical record for all areas except for high cholesterol.

To assess the influence of English skills, the data were further examined by comparing the Somali-Bantu with all other African refugees in the study. The Somali-Bantu are a pre-literate population and few speak English. Cross-tabulations with Chi Square were performed to compare the health status of the Somali Bantu and all other African refugees based on the data collected from the self-report data and the medical record reviews. The only significant difference noted was from the self-report data where the Somali-Bantu reported being told more often by

the physician to exercise than other African refugees ($p = .005$).

Through a series of meetings the results were shared and discussed with the CAB. Findings from this study were used by the CAB, and researchers to plan future studies and potential interventions to address concerns highlighted from the research and the community members.

Discussion

The African refugees face many cultural and linguistic challenges in accessing health care after resettlement in the United States. Refugees bring lay knowledge and practices with them to the United States and are not always aware of

Table 4. Comparison of African Refugee Self-report Data with National Samples

Health indicator	African refugee sample—self-reported data	NHANES reported data*
High cholesterol-adults	4.4%	16.3%
Diabetes-adults	16.8%	7.7%

* http://wwwn.cdc.gov/nchs/nhanes/bibliography/key_statistics.aspx

norms related to health care in the United States (Springer et al., 2010). Knowledge of the use of over-the-counter medications is necessary in the United States, as home treatment and self-management of symptoms such as a headache or fever are expected. However, the proper use of these medications for children sometimes requires knowledge of the weight of a child. This sample of African refugees did not know their child's weight nor could they access the information in documents they routinely carry. This knowledge deficit could result in compromised safety of the child due to incorrect dosing, as well as unnecessary and expensive visits to the emergency room or health care providers.

To assess the basic health status of this population, the African refugees in this sample differ from NHANES data for non-Hispanic Black adults (CDC, 2010b; Ostchega, Yoon, Hughes, & Louis, 2008) as domains of obesity, high cholesterol, and high blood pressure, with the African refugees having lower incidences of these conditions. The African refugees in this sample have higher rates of diabetes than the population reported in the NHANES database (CDC, 2010b). The increased incidence of diabetes is similar to the findings by Kinzie et al., (2008) who reported a prevalence of diabetes of 32% in a sample of 72 African refugees receiving psychiatric service in the Pacific Northwest (Table 4 shows a summary of these comparisons).

Explanations for the high rate of diabetes in the population of African refugees deserve further examination. One possible explanation relates to racial differences in Africans. Research-

ers have found the differences in diabetes rates to be more applicable to social factors, such as poverty, than to racial differences (LaVeist, Thorpe, Galarraga, Bower, & Gary-Webb, 2009). Also, the issues of acculturation, changes in diet with a trend toward increasing obesity, chronic stress, and history of trauma all have been linked to contributing to diabetes of refugees (Boscarino, 2004; Kinzie, et. al., 2009). Nurses working with this population need to be aware of the past trauma refugees have experienced and be aware of the potential effects such as increased diabetes.

The researchers were not surprised by the findings related to weight, as the African refugees tend to arrive in the United States underweight. Since food is so much more plentiful in the United States, weight gain can be problematic (Drummond, Mizan, Burgoyne, & Wright, 2010; Hervey et al., 2010). The African refugees in this study did not demonstrate an understanding of the concept of being overweight or the impact of nutrition on weight. Findings from a previous study indicate the Somali Bantu women want to be heavier, as it represents health and fertility; however, females in this study were no more overweight than their male counterparts (Springer et al., 2010). Food security is defined by the World Health Organization as availability, access, utilization, and stability of appropriate food (WHO, 2013). These refugees are coming from countries with limited food security and where food was different from what is available in the United States. As the refugees adapt to diets in the U.S., their weight is an area

to monitor. Refugees may have difficulty with understanding good nutrition after arrival in the United States. As the refugees assimilate and acculturate into the food cultures of the United States, providing nutrition counseling will be essential to head off increasing trends in obesity and the impairments to health that result (Dharod, Croom, Sady, & Morrell, 2011).

The finding in the self-report data of limitations in running and walking is consistent with other research. In a study of 258 African refugees who had resettled in Australia, many musculoskeletal problems were reported (Tiong et al., 2006). These musculoskeletal problems may be the result of malnutrition, environmental exposure, or tortures that occurred in the refugees' homeland. Nurses need to ensure they are assessing musculoskeletal problems as these may not be perceived to be as important as cardiovascular or nutritional issues.

Many studies have revealed a link between low health literacy and poor health outcomes (Wolf et al., 2010; McCray, 2005; AHRQ, 2007). While most all of the African refugees struggle, the Somali Bantu refugees are particularly at-risk for low health literacy due to limited English proficiency and cultural barriers among this population (Springer et al., 2010). The discrepancy between self-reported diagnoses of cholesterol against the higher incidences of the diagnosis in the medical records could be explained by language barriers. According to the interpreters involved in this study, an equivalent word for cholesterol does not exist in some African languages; thus the understanding of this concept is very limited among some of the African refugee population.

Illness and disability were the two areas where statistically significant differences between self-report and medical record information for children were found, as more instances of both were found in the medical record than what the parents described. This could be due to communication barriers, which could represent lack of understanding by the parents.

In contrast, participants in this study reported having been diagnosed with a few conditions more often than was supported in their medical records. The refugees reported higher frequencies of high blood pressure diagnosis. The same was true for difficulty running/walking and being told to get more exercise. These differences may demonstrate a level of misunderstanding or miscommunication that requires further investigation.

Limitations to this study included: use of a convenience sample, interpreters who had varying levels of training in collecting data, no direct test of English capabilities, and limited access to adult medical records. Also, the researcher did not delve into mental health issues or AIDS/HIV at the request of the CAB.

Conclusion

The United States is truly a mosaic of cultures and languages. Nurses do not care for people who are primarily from one ethnic group; instead they care for people who have diverse cultures and health beliefs and practices. To deliver the best care possible, nurses need to understand and respect the cultural context within which our patients live (Leininger & McFarland, 2002). The African refugees represent a complex ethnic group who has little adjustment preparation prior to resettlement. While they do attend classes in the refugee camps, actually understanding and navigating the health care system in the United States can be a challenge even for those of us born and raised here. The literature includes many studies related to the mental health status of African refugees and women's health issues in this population. However, little has been published about the general health status of this refugee group post-resettlement.

This research presented information on the health status of the African refugees based on self-report and on a review of medical records. Diabetes occurred in this population at a higher than expected rate.

Differences that were found between the medical records and self-report data may be expected because of communication barriers; however, this was not demonstrated in this study even for the Somali-Bantu, who are less likely to speak or understand English. This result caused the researchers to speculate that the adaptability and suspected collective efficacy of this refugee group may enable them to successfully understand the medical issues in the community. The interpreters used by the African refugees are part of the African refugee community, and not only interpret, but also follow-up at home to explain to families the results of visits to health care providers (Springer, et al., 2010). However, those few areas where significant differences in health status between what the refugees reported and what the medical records revealed merit further study.

Further research is needed to understand why there were so few significant differences between what the refugees understood and what was reflected in the medical record in a population with so many language, cultural, and financial challenges. The increased level of diabetes in this population is similar to other refugee groups, and further research to determine cause and effective prevention is warranted.

Because participants in this study did not know the weight of their children, a follow-up study could examine how medications that are dosed according to weight are handled with children in this population. A follow-up study in five years would be interesting to continue to document the post-resettlement health of this unique population, and to follow refugees comparing the initial health screening information of individuals over time.

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