

Reproductive Health Outcomes in African Refugee Women: A Comparative Study

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Abstract

Background: African refugee women in the United States are at risk of poor reproductive health outcomes; however, examination of reproductive health outcomes in this population remains inadequate. We compared: (1) prepregnancy health and prenatal behavior; (2) prenatal history and prenatal care utilization; and (3) labor and birth outcomes between African refugee women and U.S.-born Black and White women.

Methods: A secondary data analysis of enhanced electronic birth certificate data was used. Univariate comparisons using chi-squared tests for dichotomous variables and analysis of variance and/or Kruskal–Wallis tests for continuous variables were conducted for Refugee versus Black versus White women. A p -value <0.05 was considered statistically significant.

Results: From 2007 to 2016, 789 African refugee, 17,487 Black, and 59,615 White women in our population gave birth. African refugees experienced more favorable health outcomes than U.S.-born groups on variables examined. Compared to U.S.-born women, African refugee women had fewer prepregnancy health risks ($p < 0.001$), fewer preterm births ($p < 0.001$), fewer low birth weight infants ($p < 0.001$), and higher rates of vaginal deliveries ($p < 0.001$). These favorable outcomes occurred despite later initiation of prenatal care ($p < 0.001$) and lower scores of prenatal care adequacy among refugee women compared to U.S.-born groups ($p < 0.001$).

Conclusions: The healthy immigrant effect appears to extend to reproductive health outcomes in our studied population of African refugee women. However, based on our data, targeted, culturally-congruent education surrounding family planning and prenatal care is recommended. Insight from reproductive health care experiences of African refugee women can provide understanding of the protective factors contributing to the healthy immigrant effect in reproductive health outcomes, and knowledge gained can be utilized to improve outcomes in other at-risk groups.

Keywords: prenatal care, maternal health services, vulnerable populations, immigrants and refugees, African

Introduction

THE CENTERS FOR Disease Control and Prevention (CDC) describe health disparities as poor health or health outcomes among specific groups that are socially disadvantaged.¹ African refugee women are susceptible to many health disparities as a result of factors such as socioeconomic status, geography, gender, age, race, ethnicity, and immigrant

or refugee status.² Risks for poor health in this group are further compounded when considering outcomes of reproductive health, which carry additional barriers and burdens, and have exceptional importance to overall health.^{3–8}

Poor reproductive outcomes also carry significant economic costs. For example, each year there are ~380,000 preterm births in the United States that cost an estimated \$26 billion, the majority of which are covered by Medicaid.⁹

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Costs for other poor birth outcomes, including low birth weight, respiratory distress, and jaundice, have steadily increased over the past 10 years, with higher proportions of deliveries and infant care also covered by Medicaid.¹⁰ Refugees can access Medicaid coverage if eligible, and indeed many refugees use Medicaid after the temporary Refugee Medical Assistance coverage is exhausted.^{11,12} The economic costs of poor reproductive health outcomes are eclipsed only by the significant health and personal costs, which are disproportionately felt by those in lower socioeconomic groups.

Low socioeconomic status is associated with adverse reproductive health outcomes regardless of country of origin; however, it is only one of several factors that contribute to the risks for poor reproductive health among African refugee women.¹³ Other risk factors include lack of access to information and health services, low levels of education related to gender and societal position, and population-specific maternal risk factors related to past traumatic experiences and gender-based violence such as female genital cutting and physical and sexual assault.^{14–16} Health care utilization is made more difficult for African refugees due to a variety of barriers relating to language, culture, religion, and education, and is worsened by discrimination pertaining to a combination of racial and political biases associated with race and refugee status.^{17,18} Together, these impeding components further increase health risks for African refugee women upon resettlement in the United States, particularly related to reproductive health.¹⁹

Despite these risks and the increasing numbers of African refugee women resettling into the United States, there is a dearth of information regarding their reproductive health outcomes. Reproductive health disparities between U.S.-born White and U.S.-born Black women are well documented, but there is a lack of adequate comparison of reproductive health outcomes between African refugee women and U.S.-born women.^{20,21} The goals of this study are 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. We hypothesize that due to lower socioeconomic status, poor health care utilization, and maternal risk factors related to the refugee process, African refugee women may experience poorer reproductive health outcomes than U.S.-born comparison groups. Describing reproductive health outcomes in African refugee women and U.S.-born women can help guide interventions to reduce disparities in reproductive health and advise health policy regarding refugee health and resettlement.

Materials and Methods

Data source and study population

Enhanced electronic birth certificate data were extracted from hospitals within Erie County, New York, an area of Western New York that resettles a large number of refugees. The data reflect clinical, psychosocial, socioeconomic, and demographic information, including mothers' country of birth, and are collected *via* patient self-report or extracted from the medical chart. For the purposes of this study, maternal country of birth was used as a proxy for refugee status, with women born in the following African countries con-

sidered refugees: Burundi, Democratic Republic of Congo, Eritrea, Rwanda, and Somalia (Fig. 1). We considered women from these countries as refugees because of known, large refugee populations in our region resettled from these areas. We were unable however, with the information available to us, to identify smaller subgroups, such as asylees, students, or wives of students. However, due to our sustained engagement with the African refugee community in this region, we know that very few of the women would potentially have been classified under other categories.

The prenatal histories and pregnancy outcomes of these women were compared to U.S.-born White and Black women. We used Medicaid as a proxy for socioeconomic status, and as a form of matching, to equitably compare these three populations. Upon combining the datasets for the years 2007 to 2016, and limiting inclusion to singletons and first-born of multiples (we incorporated these pregnancies because the dataset was structured to include them), a total of 789 Refugee women, 59,615 U.S.-born White women, and 17,487 U.S.-born Black women were included.

Measures

The following three main variables were examined: (1) prepregnancy health and prenatal behavior; (2) prenatal history and prenatal care utilization; and (3) labor and birth outcomes. We selected these variables because these are the three maternal health outcomes collected by the birth certificate data system. In addition, all measures were identified from the preexisting information in the data system. Prepregnancy health and prenatal behavior data included the following: medical risk factors in pregnancy; prepregnancy body mass index (BMI); and behavioral risk factors in pregnancy, such as cigarette, alcohol, and drug use. Prenatal history and care utilization data included the following: total number of prior pregnancies; intendedness of recent pregnancy; prenatal care initiation; and Kotelchuck prenatal care adequacy index (measures number of prenatal care visits completed to number of visits recommended). Labor and birth outcome data included the following: preterm births (<37 weeks); low birth weight neonates (<2,500 g); average gestational age at birth; birth method; interventions during birth (medical induction); and meconium staining (neonatal complication).

Statistical analysis

This was a cross-sectional analysis of secondary data, using data from an existing, deidentified perinatal database. Data from 2007 to 2016 were obtained *via* IBM SPSS Statistics for Windows, version 24.0 file with deidentified information.²¹ Analyses were conducted *via* univariate comparisons using chi-squared tests for dichotomous variables and analysis of variance and/or Kruskal–Wallis tests for continuous variables. A *p*-value <0.05 was considered statistically significant. Comparisons consisted of African refugee versus U.S.-born White versus U.S.-born Black mothers. All percentages reported are represented within group ratios, unless otherwise stated. This article did not contain any studies with human participants and consequently was certified as not requiring institutional review board (IRB) approval, as it did not involve human subjects.

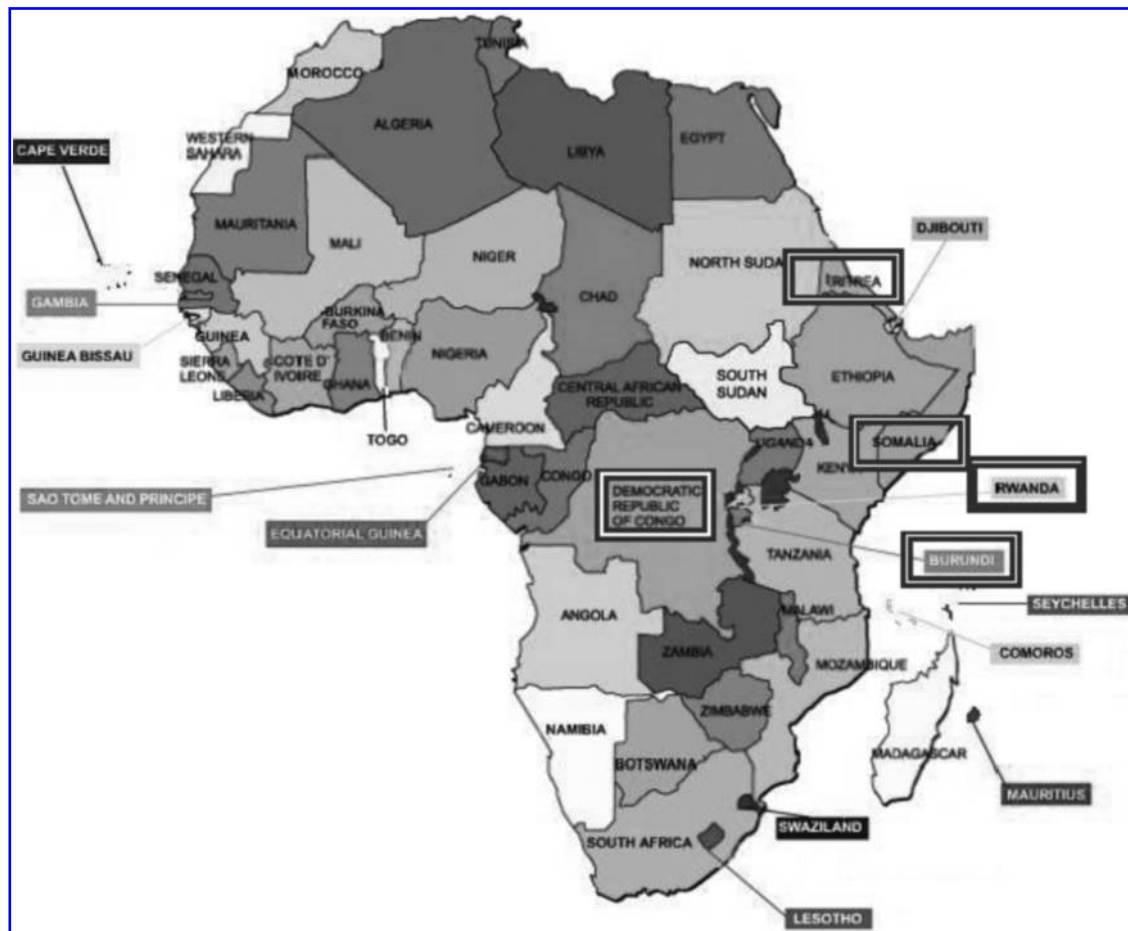


FIG. 1. Map of African refugee maternal countries of birth. Countries of origin for African refugee women in this sample are distinguished with a box.

Results

Demographic characteristics

During 2007–2016, 77,891 women gave birth to a live infant in Erie County. African refugee women accounted for 1% ($n=789$), U.S.-born Black women accounted for 22.5% ($n=17,487$), and U.S.-born White women accounted for 76.5% ($n=59,615$) of births during this period. The majority of births to refugee women (95.1%) and U.S.-born Black women (81.4%) used Medicaid or self-pay, while the majority of births to U.S.-born White women used private insurance (71.1%). Among the total sample, most women were ages 20–34 (77.5%); however, significantly more U.S.-born Black women (17.6%; $p<0.01$) were younger than 20 years compared to refugee women (4.3%) or U.S.-born White women (3.9%). U.S.-born women predominantly had high school education or higher (89.5%), while most refugee women (70.3%) had less than high school education ($p<0.001$). More refugee women were married (76.0%; $p<0.001$) than either U.S.-born White women (67%) or U.S.-born Black women (13.1%). Of the refugee women, 68.3% were from Somalia and 5% were from Burundi, with the rest from the Democratic Republic of Congo, Eritrea, and Rwanda in approximately equal amounts (9.8%, 8.9%, and 7.7%, respectively). The number of births to African refugee women increased over the study period, making up 0.6% of all births

in 2007 and 1.4% of all births in 2016. Table 1 summarizes demographic characteristics of this sample.

Prepregnancy health and prenatal behavior

Prepregnancy health status and prenatal behavior revealed refugee women as generally healthier than U.S.-born women in this sample. Refugee women had significantly less maternal medical risk factors (34.5%; $p<0.001$), such as pre-pregnancy hypertension, diabetes, or other serious chronic conditions, compared to U.S.-born Black women (41.3%) and U.S.-born White women (44.0%). Refugee women had similar prepregnancy BMI to U.S.-born White women (mean 26.72, standard deviation [SD] 0.24), while U.S.-born Black women on average had higher prepregnancy BMIs (mean 28.97, SD 0.07; $p<0.001$). Refugee women also smoked significantly less (0.5%; $p<0.001$) and were significantly less likely to take illegal drugs during pregnancy (0.6%; $p<0.001$) than both U.S.-born White women (12.2% smoked; 4.5% took illegal drugs) and U.S.-born Black women (15.3% smoked; 18.6% took illegal drugs) (Table 2).

Prenatal history and prenatal care utilization

Prenatal history and prenatal care utilization indicated that significantly more refugee women (88%; $p<0.001$) had at

TABLE 1. SELECTED DEMOGRAPHIC CHARACTERISTICS FOR REFUGEE AND U.S.-BORN MOTHERS

	Refugee (N = 789)		U.S.-born White (N = 59,615)		U.S.-born Black (N = 17,487)		p
	n	%	n	%	n	%	
Age							<0.001
<20	34	4.3	2,352	3.9	3,084	17.6	
20–34	621	78.7	46,790	78.5	12,931	73.9	
35+	134	17.0	10,473	17.6	1,472	8.4	
Education							<0.001
<High school	521	70.3	3,728	6.3	4,272	24.8	
≥High school	220	29.7	55,528	93.7	12,948	75.2	
Marital status							<0.001
Single, no paternity filed	103	13.1	5,247	8.8	7,140	40.8	
Unknown, paternity filed	86	10.9	14,449	24.2	8,054	46.1	
Married, paternity filed	600	76.0	39,919	67.0	2,293	13.1	
Insurance							
Medicaid/self-pay	750	95.1	17,228	28.9	14,239	81.4	
Private insurance	39	4.9	42,387	71.1	3,248	18.6	
Refugee country of origin							<0.001
Somali	539	68.3					
Burundi	42	5.3					
Democratic Republic of Congo	77	9.8					
Eritrea	70	8.9					
Rwanda	61	7.7					

least one previous pregnancy compared to U.S.-born Black and White women (75% and 68%, respectively). Approximately, 36% of refugee women reported their recent pregnancy as unintended compared to 24.5% of U.S.-born White women and 57.5% of U.S.-born Black women ($p < 0.05$). Most of the women from all the groups began prenatal care within the first trimester as recommended; however, significantly more refugee women delayed initiating prenatal care until the second trimester (33.4%) compared to U.S.-born women (19.2% White women; 28.4% Black women; $p < 0.001$). Refugee women also scored more poorly on measures of prenatal care adequacy compared to U.S.-born women, with 27.3% of refugee women receiving inadequate amounts of prenatal care compared to 11.8% of White women and 23.9% of Black women ($p < 0.001$; Table 2).

Labor and birth outcomes

Despite the overall deficient prenatal care received by refugee women compared to U.S.-born women, labor and birth outcomes among this group were generally better than their U.S.-born White or U.S.-born Black counterparts. Refugee women had the fewest number of preterm births, defined as births <37 weeks gestation (6.3% refugee; 8.9% U.S.-born White; 13.6% U.S.-born Black; $p < 0.001$) and the fewest number of low birth weight infants (5.5% refugee; 7.0% U.S.-born White; 13.6% U.S.-born Black; $p < 0.001$). Refugee women also delivered at an older average gestational age than U.S.-born women (mean 39.05, SD 2.3 refugee; mean 38.58, SD 2.1 U.S.-born White; mean 38.16, SD 2.9 U.S.-born Black; $p < 0.001$). The positive birth trends among refugee women also extended to birth method, as significantly more refugee women experienced a vaginal birth compared to the U.S.-born mothers (73.4% refugee; 65.3% U.S.-born White; 66.6% U.S.-born Black), with corresponding fewer primary cesarean sections within this group

(13.2% refugee; 19.1% U.S.-born White; 18.3% U.S.-born Black). Significantly fewer refugee women were medically induced into labor (19.1% refugee; 29.7% U.S.-born White; 25.6% U.S.-born Black; $p < 0.001$). Interestingly, these favorable outcomes in the refugee group occurred despite higher rates of meconium staining (25.0% refugee; 14.2% U.S.-born White; 14.9% U.S.-born Black; $p < 0.001$), which is considered a sign of fetal distress and a complication in birth (Table 3).

Discussion

This study reports on reproductive health disparities among African refugee women compared to groups of U.S.-born American women along following three major variables of reproductive health: prepregnancy health and prenatal behavior, prenatal history and prenatal care utilization, and labor and birth outcomes. We hypothesized that African refugee women may experience poorer reproductive health outcomes compared to U.S.-born women; however, we found that outcomes of African refugee women generally surpassed those of U.S.-born women in all areas examined.

Compared to U.S.-born Black and White women, African refugee women carried fewer prepregnancy maternal health risk factors, experienced more vaginal deliveries with less medical interventions, and enjoyed favorable birth outcomes with fewer preterm births and low birth weight infants. These positive results were unexpected due to a variety of socially determined risk factors that classified African refugee women as having a greater risk for poor reproductive health outcomes compared to U.S.-born women. They are even more surprising given the late initiation of prenatal care and inadequate scores of prenatal care utilization among this group.

These findings are consistent with previous reports of the healthy immigrant effect on preterm birth outcomes of refugee and immigrant women.²² The healthy immigrant effect

TABLE 2. SELECTED CHARACTERISTICS OF PREPREGNANCY HEALTH, PRENATAL HEALTH AND BEHAVIOR, AND PRENATAL CARE UTILIZATION OF AFRICAN REFUGEE VERSUS U.S.-BORN WHITE VERSUS U.S.-BORN BLACK WOMEN IN ERIE COUNTY, 2007–2016

	Refugee (N = 789)		U.S.-born White (N = 59,615)		U.S.-born Black (N = 17,487)		p
	n	%	n	%	n	%	
Prepregnancy health and prenatal behavior							
Prepregnancy medical risk factor ^a	272	34.5	26,237	44.0	7,222	41.3	<0.001
Prepregnancy BMI							0.007
<18.5	20	3.6	1,670	2.9	499	3.3	
18.5–24.9	221	40.1	26,950	47.5	5,003	33.2	
25–29.9	174	31.6	14,364	25.3	3,924	26.1	
30+	136	24.7	13,703	24.2	5,630	37.4	
Tobacco in pregnancy	4	0.5	7,282	12.2	2,670	15.3	<0.001
Illegal drugs in pregnancy	5	0.6	2,684	4.5	3,257	18.6	<0.001
Prenatal history and prenatal care utilization							
Gravidity ^b							<0.001
None	93	11.8	19,301	32.4	4,308	24.7	
One or more	694	88.2	40,255	67.6	13,141	75.3	
Unintended pregnancy	127	36.3	12,874	24.5	7,753	57.5	<0.05
Prenatal care initiation							<0.001
No prenatal care	11	11.7	322	0.6	200	1.3	
First trimester	369	58.5	43,663	77.5	9,544	64.0	
Second trimester	211	33.4	10,822	19.2	4,231	28.4	
Third trimester	40	6.3	1,558	2.8	927	6.2	
Prenatal care adequacy index ^c							<0.001
Inadequate	161	27.3	6,530	11.8	3,336	23.9	
Intermediate	128	21.7	10,940	19.8	2,600	18.6	
Adequate	182	30.8	26,096	47.2	5,089	36.4	
Adequate plus	119	20.2	11,702	21.2	2,944	21.1	

^a Are within group.

^b Gravidity, number of previous pregnancies regardless of outcome.

^c Kotelchuck prenatal care adequacy index, measures number of prenatal care visits completed versus recommended.

BMI, body mass index.

TABLE 3. SELECTED CHARACTERISTICS OF LABOR AND DELIVERY OUTCOMES OF AFRICAN REFUGEE VERSUS U.S.-BORN WHITE VERSUS U.S.-BORN BLACK WOMEN IN ERIE COUNTY, 2007–2016

	<i>Refugee (N=789)</i>		<i>U.S.-born White (N=59,615)</i>		<i>U.S.-born Black (N=17,487)</i>		<i>p</i>
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>	
Labor and delivery outcomes							
Preterm birth ^a	51	6.3	5,421	8.9	2,432	13.6	0.001
Low birth weight ^b	44	5.5	4,243	7.0	2,399	13.4	0.002
Delivery method							<0.001
vaginal	579	73.4	38,952	65.3	11,648	66.6	
primary CS ^c	104	13.2	11,409	19.1	3,193	18.3	
repeat CS ^c	106	13.4	9,254	15.5	2,646	15.1	
Medical intervention during labor							
Induction	151	19.1	17,697	29.7	4,469	25.6	<0.001
Antibiotic use	55	7.0	14,845	24.9	2,054	11.7	<0.001
Meconium staining	197	25.0	8,439	14.2	2,599	14.9	<0.001

% Are within group.

^aPreterm birth, <37 weeks.

^bLow birth weight, <2,500 g.

^cCesarean sections.

refers to a phenomenon where immigrants experience healthier outcomes than native populations and is considered paradoxical given the increased number of health risk factors immigrants face compared to native-born people.^{22,23} The healthy immigrant effect, and the related healthy migrant theory, credits the positive outcomes of immigrant populations compared to native populations to their baseline healthier lifestyle, with better nutrition and less health-risk behaviors, such as smoking or drug use.²⁴ This effect has been seen in a variety of health outcomes and is believed to be explained, in part, by self-selection for migration, meaning that only the healthiest, most resilient, and motivated individuals emigrate and/or are selected for immigration by the host country.²⁵

However, available research also provides conflicting information as to whether the healthy immigrant effect in African refugee women extends to the reproductive health sphere. In a systematic review by Gagnon et al., in which they examined migration to Western countries and perinatal health, Sub-Saharan population migrants were at greater risk of feto-infant mortality and preterm birth compared to the native-born majority.²⁶ In a review by Merry et al. looking at international migration and cesarean section rates, Sub-Saharan African and Somali women were among those with significantly higher rates of cesarean sections compared to nonmigrant women.¹⁴ Dyer and Baksh compared birth outcomes between African-born women and U.S.-born White women in Utah and found that African-born women were more likely to experience poor reproductive health outcomes, including labor and birth complications, high rates of initial cesarean section, prolonged dysfunctional labor, and excessive bleeding, with subsequent high rates of infant complications, including meconium staining.²⁷ It is however noteworthy in the aforementioned study that results could have been affected by their comparison of African-born women to U.S.-born White population, as this reflects the dominant culture in the state.

In contrast, in a study by Miller et al. that looked at perinatal outcomes among immigrant and refugee women in Syracuse, NY, refugee mothers had decreased risks of pre-

term birth compared to U.S.-born mothers when controlling for race and prenatal care utilization.²² Although Miller et al. did not exclusively examine African refugee women, their similarly positive results may reflect comparable aspects of the study setting, in terms of health insurance coverage, extended support for pregnant women, and potentially easier health care access given the urban environment.²²

Another theory that could potentially explain the healthier outcomes seen in our study is that of the possible disadvantageous role of acculturation and the integration of unhealthy behaviors and practices from the host country. This theory discussed by Wingate and Alexander refers to poor health outcomes due to acculturation.²⁴ It is often thought that refugees immigrating to the United States from war-torn nations will experience a better quality of life once here. However, some of the elements of U.S. life such as eating processed food, an increased reliance on cars or buses for transportation, extended inclement weather, a more individualistic society, and drug and alcohol use may in fact contribute to African refugee women having poorer reproductive health outcomes.²⁴

Our study extends the presence of the healthy immigrant effect to African refugee women and select reproductive health outcomes, including prepregnancy maternal health, rates of vaginal birth, and rates of preterm birth and low birth weight neonates. Despite these overall positive outcomes, prenatal care initiation and utilization were found to be lacking among African refugee women in this sample. These results may relate to differing prenatal care expectations between the United States and the women's country of origin.²⁸ Low prenatal care use may also reflect trends of poor reproductive health care utilization more generally. For example, later prenatal care initiation and less favorable prenatal care utilization rates are common among women with a history of prior pregnancies or women with unintended pregnancies.²⁹ Both of these scenarios were found among our sample of African refugee women at rates higher than U.S.-born comparison groups.

Prenatal care underutilization among African refugee women may also reflect poor health care utilization by

refugees upon resettlement in general, in addition to avoidance of health care, and specifically reproductive health care, due to histories of trauma, including female genital cutting.^{30–34} Additional social and language barriers and experiences of discrimination both outside and within the health care system, especially related to reproductive health, may also worsen health care utilization among African refugee women.^{33,34} These findings are particularly relevant because of their implication for women's public health and for maternal health care providers who take care of African refugee women in the prenatal and birthing process.

Recommendations

The lead author of this article has the experience of being an African immigrant, in addition to engaging with the population for years, from a clinical and community perspective. As such, in this section we provide the four most practical recommendations to ensure that African refugee women continue to have optimal reproductive outcomes.

Our first recommendation is to continue to conduct research to gain a more nuanced understanding of African refugee women's experiences when seeking reproductive health care. Although this population continues to increase, and their current health concerns will have a multigenerational impact, there is limited research on this population, and even less funding for this work. Our research continues to rely on supporting evidence from countries outside the United States, with most background information originating from Canada and Europe.

In other qualitative studies conducted by the lead author, women have reported feeling ostracized and marginalized by the medical community, in regards to their culture, religion, language barriers, and other social factors.³⁵ As such, they are at times hesitant to seek care, and when they do seek care, it is typically at a time when the problem has escalated. It is also of note that this community typically thinks very highly of health care providers and, seldom, questions or inquires for more information about the decisions made regarding their treatment. In the clinical environment, this translates to patients who attend all appointments, but potentially do not follow-up with care or do not understand medical terminologies.

Second, culturally congruent reproductive health education is urgently needed, especially with issues such as prenatal care and family planning. Again, in previous qualitative work and in conversations with the population, prenatal care is at times not believed to be necessary. The women reflected on past pregnancies in their countries of origin where they had good outcomes with no prenatal care and deemed it unnecessary in the United States. Some women believed that doctors in the United States try to find medical problems as a way to charge more. This scenario was heard often in prior studies in which women had emergency cesarean sections.³⁵ In regard to family planning, the lead author has an ongoing study, which indicates that women want to space out pregnancies but are reluctant to use family planning methods due to cultural beliefs, such as birth control leading to infertility, among other concerns.

Third, we recommend a trauma-informed perspective when providing care to refugee women, with the understanding that refugees are likely to have histories of trauma,

including violence, in their lives.²⁰ The six principles of trauma-informed care within reproductive health care birth are also useful for application in this paradigm. These principles are: empowerment, choice, trust/transparency, safety, collaboration, and understanding of the intersection of their social identities which would provide assistance to women in their reproductive health and decision-making that may improve health care utilization rates.^{21,22}

Finally, we advocate for continued monitoring of the health status of women in the African refugee community to ascertain if the healthy immigrant effect persists in the face of increased exposure to poor health factors *via* the acculturation to the host country. In addition, we need to continue to nurture practices, both clinical and cultural, that contribute to these positive health outcomes among African refugee women and potentially extend these interventions to other at-risk groups.

Limitations

There are notably several limitations to this study. First, although we have data from a 10-year period, the perinatal data system does not collect information on length of time in the United States, which can be used as a proxy for several factors such as acquiring language, measuring access to health care, and integration into community. Second, large portions of data pertaining to pregnancy and prenatal history and behaviors were collected *via* self-report and are therefore subject to reporting bias. Prior experience working with the African refugee community has informed awareness of added cultural and social desirability bias in questions of reproductive health and health behavior. For example, much of this African refugee sample is Somali Bantu, for whom drug and alcohol use are culturally forbidden, which may lead to underreporting of such behaviors. It is however more likely that the culture of this population does not condone smoking and the use of drugs or alcohol, therefore resulting in lower rates of use and fewer pregnancy effects, which may potentially skew results of the data. Language barriers can also serve as a significant challenge to collecting information. In addition, using maternal birth country as a proxy for refugee status can be problematic. While it is a commonly used approach in identifying refugee populations when other information is not available, assessing refugee status from country of birth alone cannot differentiate refugees from asylum seekers or other migrant groups.³⁶

Conclusion

This article adds to the literature by extending the healthy immigrant effect to African refugee women's reproductive health outcomes upon resettlement into the United States. The positive reproductive health outcomes among African refugees, despite inadequate prenatal care utilization, warrant further exploration of the factors that most contribute to this healthy immigrant effect. As African women in the sample were generally healthier than their U.S. counterparts, insight into components of the healthy immigrant effect that are particularly salient may offer guidance for best practices for delivering reproductive health care to this population. In addition, interviews or focus groups with African refugee women could provide further information into their lived experiences with reproductive health care and reproductive

decision-making that contributes to this protective health effect and favorable health outcomes. A better understanding of this context may shape future interventions to improve care and reproductive health outcomes for other vulnerable groups of women.

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Author Disclosure Statement

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