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Maternal Socio-demographic Characteristics Associated with Under-five Care Practice among Internally Displaced Persons in Abuja, Nigeria

Oloyede Busola Loveall[1*] and Ajike Saratu Omagbemi[1]

[1]*Department of Public Health, Babcock University, Ilishan-Remo, Ogun, Nigeria.*

*Corresponding author <busolaloveall@gmail.com>

Abstract

The insurgency in the north-eastern part of Nigeria has led to the displacement of people thereby leading to various health situations and children under-five are not left behind. This study investigated maternal socio-demographic characteristics associated with under-five care practice among Internally Displaced Persons (IDPs) in Abuja, Nigeria. A cross-sectional study was conducted among 312 women in five purposively selected IDP camps in Abuja. A validated structured interviewer-administered questionnaire was used to collect data. Data were analyzed using descriptive statistics, Chi-square and Binary Logistic Regression at 5% level of significance. The mean age of the 312 respondents was 29.6 ± 6.72 years. Majority of the participants had poor care practice (62.8%; n = 196). There was no significant association between age (OR = 1.06, CI = 0.85 – 1.32, p = 0.630), marital status (OR = 1.06, CI = 0.79 – 1.41, p = 0.700), religion (OR = 0.99, CI = 0.61 – 1.60, p = 0.960), parity (OR = 1.23, CI = 0.97 – 1.53, p = 0.070), previous child death (OR = 0.89, CI = 0.71 – 1.12, p = 0.311) and under-five care practice. However, a significant association existed between educational attainment (OR = 1.77, CI = 1.28 – 2.44, p = 0.001), ethnicity (OR = 2.44, CI = 1.50 – 3.97, p = 0.000) and under-five care practice. The socio-demographic factors associated with under-five care practice were maternal education and ethnicity. Effort should be directed at improving the educational status of internally displaced women and girls.

Keywords: Internally Displaced Persons, Socio-demographic characteristics, Under-five, Under-five care practice

Introduction

One of the most important measures of the health status of children and an indication of the overall health of a country and the world at large is the under-five mortality rate (Adetoro & Amoo, 2014; UNICEF, 2016). Since 1990, the world has witnessed a drastic drop in the rate of under-five mortality. Although, the Under-5 Mortality Rate (U5MR) has decreased from 93 per 1,000 live births in 1990 to 37 per 1,000 live births in 2020, Sub-Saharan Africa continues to battle with this issue of public health concern. Nigeria is currently the world capital for under-five mortality, with U5MR of 114 deaths per 1000 live births. In 2020, 844,321 children under the age of five died in Nigeria, with this burden being higher in the North-East Region (UNICEF, 2021). The existence of IDP camps in Nigeria adds to this burden and national rates of mortality.

Nigeria is one of the 38 countries categorized as being in fragile and conflict affected situations (World Bank Group, 2021). This triples the risk of under-five mortalities in Nigeria when compared to other countries (UNICEF, 2021). The conflict and insurgency occurring mostly in the Northeastern part has led to the displacement of over 2.9 million IDPs (UNHCR, 2021). Of the 2.9 million people who have been internally displaced, 60% are children, with 1 in 4 being under the age of five (Adelakun, 2021; UNICEF, 2020). This translates to the likelihood that 11% of under-fives who live in internally displaced persons' camps in Nigeria may die before the age of five, and this may increase as they live within a high-risk environment (Owoaje et al, 2016). This is unacceptably high as it is far from the SDG3 goal targeted at, at most 2.5% in every country by 2030 (UN IGME, 2018).

Internally displaced persons are often a vulnerable and neglected population of a country with various emotional, mental, financial and health needs (Cantor et al., 2021; Kaiser et al., 2020; Muguruza & Amado, 2017). Children are the most vulnerable to diseases in these settings due to their unique health needs (Salami et al., 2020). Childhood mortality among IDPs is not often connected to direct impacts of conflict such as trauma but rather, mostly to conditions that have prior been established as the main causes of child mortality (Dunn, 2018). Of these conditions, infectious diseases remain the leading cause of death among under-five children in these IDP camps (UN IGME, 2021). Majority of such deaths are preventable or can be averted if there is timely access to quality health care (Liu et al., 2016).

In order to reduce the risk and severity of negative health conditions that children under-five are prone to, WHO in collaboration with UNICEF, World Bank, UNESCO, and USAID developed the evidence-based and cost-effective Child Survival Strategies (CSS) (Edet, Effiong, Udoh, Bassey & Enem, 2020; Etoikedem & Johnson, 2016). They include Growth monitoring, Oral Rehydration, Breastfeeding And Immunization, Female Education, Family Planning, Food Fortification, Use Of Ready-To-Eat Therapeutic Food, Vitamin A Supplementation, Health Education, Use Of Insecticide Treated Nets and Environmental Sanitation (Edet et al., 2020; Sanusi & Gbadamosi, 2009). Despite the favourable results recorded by the practice of CSS, mothers may face barriers in carrying out these strategies to increase the chances of their child's survival.

There is evidence in literature of personal and environmental level factors that have huge impact on care practices and survival of children under-five. These factors include but are not limited to maternal age, level of education, religion, sex of the child, birth interval, and the presence of skilled birth attendants during delivery (Abimbola, Adebukola & Samuel, 2016; Antai & Moradi, 2010; Kimani-Murage, et al., 2014; Morakinyo & Fagbamigbe, 2017, Sofekun & Atulomah, 2020).

Studies have shown that in developing countries, care practice for the survival of children under-five years is poor (Abimbola et al., 2016; Etokidem & Johnson, 2016; Yaya et al, 2017). Despite these findings, literature on the under-five care practice of women living in IDP camps remain limited. There is little or no evidence on

the sociodemographic characteristics associated with the care practice of these mothers. Therefore, this study aimed at filling this gap in existing knowledge of under-five survival in disadvantaged situations.

The Federal Capital Territory, Abuja, houses many of the IDPs who have fled from Yobe, Borno and Adamawa since 2013, due to the Boko haram conflicts. The growing insurgency in the country calls for protecting the health and safeguarding the lives of under-five children who have been displaced. Thus, this study sought to identify the maternal socio-demographic determinants of under-five care practice among IDPs in Abuja, Nigeria.

Methodology

Study design

A cross-sectional study was carried out in five selected IDP camps in Abuja Nigeria namely: New Kuchigoro, Durumi, Karmajji, Wassa and Waru IDP Camps. These camps were selected because they were reported as the most populous and recognized camps in Abuja, Nigeria. From an estimated population of 1065 women, a sample of 312 was derived using Cochran formula for small populations (Cochrane, 1977). Thus, 312 women were selected as respondents. The eligibility criteria for this study were women who had children under-five in their care, had lived in the camp for at least 6 months, and were willing to participate in the study. Women who were sick, visiting the camp, had no children or had children above 59 months of age were excluded from the study.

Research instrument and data collection

Data were collected with a validated structured interviewer-administered questionnaire designed using the CSPro version 7.1 software for Computer Assisted Personal Interviewing (CAPI). Items in the questionaire were adapted from existing literature and the research instrument was pre-tested in Malaysia garden IDP camp to ensure its reliability. The Cronbach's alpha coefficient for the dependent variable was 0.77. The English and Hausa versions of the questionnaire were used to collect data during the study so that participants could carry out their interview in their most preferred language. Incentives in the form of Bouillon cubes and salt were given to the participants as compensation for participating in the study. After each day of data collection, all CAPI devices were inspected to ensure that every questionnaire was completely filled and saved successfully.

Study Variables

The independent variables in the study were the socio-demographic characteristics of the women. The dependent variable for the study was under-five care practice.

Data Analyses

Data derived from this study were computed and analyzed using the IBM SPSS version 25.0. Under-five care practice was measured on a 24-point rating scale which was divided into dichotomous levels; poor and good practice. Descriptive and inferential (chi square and binary logistic regression) statistics at 5% level of significance were used to analyze data.

Ethical Clearance

Ethical clearance with the approval number (BUHREC313/22) was obtained from Babcock University Health Research Ethics Committee (BUHREC) and permission to conduct the study was also taken from the leaders of the IDP camps. The researcher issued an informed consent to every participant before the questionnaire was administered to them.

Results

Demographic Characteristics of Participants

The socio-demographic characteristics of the participants is presented in Table 1. The mean age of the respondents was 29.6 ± 6.72 years. Slightly more than half of the respondents were young women aged 23-32 (n=174; 55.8%), and most were married (n=245; 78.5%;). More than half practiced Islam (n=184; 59%), followed by Christian adherents (n= 115; 36.9%), while the remainder were affiliated to other religions (n=13; 4.2%). Furthermore, 39.4% (n=218) had primary school education, 26.3% (n= 82) had secondary education, 4.2% (n= 13) attained tertiary education and about a third, 30.1% (n= 94) had no formal education. In addition, 65.7% (n=205) of the participants were Hausa/Fulanis,

while other ethnicities comprised 30.4% (n= 95) of the sample. Majority of the respondents (n= 256; 82.1%) had more than one child while the remainder were primiparous (n= 56; 17.9%). A little more than half (n=158; 50.6%) reported the loss of at least one child prior to the study.

Table 1: Socio-demographic characteristics of participants

Demographic characteristics	Number of participants = 312	
	Frequency	Percentage (%)
Age		
18-22	42	13.5
23-27	92	29.5
28-32	82	26.3
33-37	55	17.6
38-42	32	10.3
43-47	6	1.9
48-52	1	0.3
Above 52	2	0.6
Marital Status		
Married	245	78.5
Single	6	1.9
Widowed	35	11.2
Divorced	26	8.3
Religion		
Christianity	115	36.9
Islam	184	59.0
Others	13	4.2
Educational attainment		
Non-formal	94	30.1
Primary	123	39.4
Secondary	82	26.3

Tertiary	13	4.2
Total	312	100
Ethnicity		
Yoruba	5	1.6
Igbo	7	2.2
Hausa	205	65.7
Others	95	30.4
No of children		
One	56	17.9
Two	61	19.6
Three	68	21.8
Four	49	15.7
More than four	78	25.0
No of Children Lost		
None	154	49.4
One	75	24.0
Two	40	12.8
Three	27	8.7
Four	10	3.2
More than four	6	1.9

Under-five care practice

More than half of the respondents reported that they rarely/do not take their children for immunization when due. Less than a tenth (n= 18; 5.8%) of the participants reported taking their child for immunization very often, (n= 39; 12.5%) reported that their child sleeps under a mosquito net very often, (n= 39; 12.5%) claimed not to use traditional herbs as cure for their sick child. Thirty (9.6%) respondents reported washing their hand before feeding the child very often, (n= 42; 13.5%) reported they always ensure the utensils for feeding their child is clean. Only (n= 6; 1.9%) of the respondents stated that they take their child for growth monitoring very often, (n= 29; 9.3%) reported they always keep their surrounding free from dirt and (n= 60; 19.2%) administered ORS for diarrhoea very often (Table 2).

Table 2: Descriptive statistics of Under-five care practice

Under-five care practice	Number of participants= 312			
	Not at all	Rarely	Occasionally	Very Often
I take my child for Immunization when due	62(19.9%)	102(32.7%)	130(41.7%)	18(5.8%)
My child sleeps under a mosquito net	45(14.4%)	109(34.9%)	119(38.1%)	39(12.5%)
I use traditional herbs as cure for my sick child	39(12.5%)	74(23.7%)	115(36.9%)	84(26.9%)
I wash my hands before feeding my child.	40(12.8%)	100(32.1%)	142(45.5 %)	30(9.6 %)
I ensure the utensils I use in feeding my child is clean	46(14.7 %)	109(34.9%)	115(36.9%)	42(13.5%)
I take my child to the hospital to check his/her weight and monitor their growth	136(43.6%)	126(40.4%)	44(14.1%)	6(1.9%)
I always keep my surrounding free from dirt	15(4.8%)	105(33.7%)	163(52.2%)	29(9.3%)
I give my child ORS when he/she has diarrhea	22(7.1%)	86(27.6%)	144(46.2%)	60(19.2%)

To determine the level of under-five care practice among the women, respondents were assessed using a 24-point rating scale. The under-five care practice of the respondent was further divided into two categories; Poor and Good practice. Participants who scored between 0 - 12 were categorized under poor practice while those with scores above 12 were classified under good practice. Majority (62.8%) of the respondents had poor under-five care practice (Table 3).

Table 3: Categories of under-five care practice

Under-five care practice	Number of Participants = 312	
	Frequency	Percentage
Poor practice	196	62.8
Good practice	116	37.2

Total	312	100

Association between variables

To test the association between the independent and dependent variables, Chi-square test was performed. It was found that no association existed between the age of women and under-five care practice (χ^2= 10.792, p = 0.148), marital status and under-five care practice (χ^2= 2.027, p = 0.567), religion and under-five care practice (χ^2= 2.401, p = 0.301), parity and under-five care practice (χ^2= 8.652, p = 0.070), and the number of children lost and under-five care practice (χ^2= 8.675, p = 0.123) (Table 4-8). However, results showed significant association between educational attainment and under-five care practice (χ^2= 15.943, p = 0.001), and between ethnicity and under-five care practice (χ^2= 28.575, p = 0.000) (Table 9-10). Further analysis carried out using binary logistic regression showed that the ethnicity of the women was the major significant predictor of under-five care practice followed by educational attainment (OR = 2.44, C.I = 1.50 – 3.97, p = 0.000), (OR = 1.77, C.I = 1.28 – 2.44, p = 0.001) respectively. Other socio-demographic characteristics that included age (OR = 1.06, C.I = 0.85 – 1.32, p = 0.63), marital status (OR = 1.06, C.I = 0.79 – 1.41, p = 0.70), religion (OR = 0.99, C.I = 0.61 – 1.60, p = 0.96), parity (OR = 1.23, C.I = 0.97 – 1.53, p = 0.07), previous child death (OR = 0.89, C.I = 0.71 – 1.12, p = 0.311) were however not significant (Table 11). Thus, in the study population, under-five care practice was predicted by ethnicity and education.

Table 4: Association between age and under-five care practice

	Under-five care practice			
Age	**Poor practice (%)**	**Good practice (%)**	**χ^2**	**P-value**
18-22	31	11	10.792	0.148
23-27	57	35		
28-32	45	37		
33-37	40	15		
38-42	16	16		
43-47	5	1		
48-52	1	0		
Above 52	1	1		

Total	196 (62.8%)	116(27.2%)

Table 5: Association between marital status and under-five care practice

	Under-five care practice			
Marital status	**Poor practice (%)**	**Good practice (%)**	χ^2	**P-value**
Married	149 (47.8%)	96(30.8%)	2.027	0.567
Single	4 (1.3%)	2 (0.6%)		
Widow	25 (8%)	10 (3.2%)		
Divorced	18 (5.8%)	15 (2.6%)		
Total	196 (62.8%)	116 (27.2%)		

Table 6: Association between religion and under-five care practice

Religion	Under-five care practice		χ^2	P-value
	Poor practice (%)	Good practice (%)		
Christianity	67 (21.5%)	48(15.4%)	2.401	0.301
Islam	119 (38.1%)	65 (20.8%)		
Others	10 (3.2%)	3 (1.0%)		
Total	196 (62.8%)	116 (27.2%)		

Table 7: Association between parity and under-five care practice

Parity	Under-five care practice		χ^2	P-value
	Poor practice (%)	Good practice (%)		
One	37 (11.9%)	19 (6.1%)	8.652	0.070
Two	46 (14.7%)	15 (4.8%)		
Three	41 (13.1%)	27 (8.7%)		
Four	24 (7.7%)	25 (8.0%)		
More than Four	48 (15.4%)	30 (9.6%)		
Total	196 (62.8%)	116 (27.2%)		

Table 8: Association between number of children lost and under-five care practice

	Under-five care practice			
No of children lost	**Poor practice (%)**	**Good practice (%)**	χ^2	**P-value**
None	89 (28.5%)	65(20.8%)	8.678	0.123
One	48 (15.4%)	27 (8.7%)		
Two	30 (9.6%)	10 (3.2%)		
Three	18 (5.8%)	9 (2.9%)		
Four	5 (1.6%)	5 (1.6%)		
More than four	6 (1.9%)	0 (0.0%)		

Table 9: Association between educational attainment and under-five care practice

	Under-five care practice			
Educational attainment	**Poor practice (%)**	**Good practice (%)**	χ^2	**P-value**
Non-formal	67 (21.5%)	27(8.7%)	15.943	0.001
Primary	84 (26.9%)	39 (12.5%)		
Secondary	41 (13.1%)	41 (13.1%)		
Tertiary	4 (1.3%)	9 (2.9%)		
Total	196 (62.8%)	116 (27.2%)		

Table 10: Association between ethnicity and under-five care practice

Ethnicity	Under-five care practice			
	Poor practice (%)	Good practice (%)	χ^2	P-value
Yoruba	3 (1.0%)	2 (0.6%)	28.575	0.000
Igbo	6 (1.9%)	1 (0.3 %)		
Hausa/Fulani	148 (47.4%)	57 (18.3%)		
Others	39 (12.5%)	56 (17.9%)		
Total	196 (62.8%)	116 (27.2%)		

Table 11: Binary logistic regression analysis showing socio-demographic characteristics as predictors of under-five care practice

Independent Variables	B	S.E	P-value	95% CI. for EXP(B)		
				Exp (B)	Lower	Upper
Age	.054	.114	.632	1.056	.845	1.320
Marital status	.056	.146	.703	1.057	.794	1.409
Religion	-.014	.248	.955	.986	.606	1.604
Educational attainment	.570	.164	.001	1.769	1.283	2.438
Ethnicity	.893	.248	.000	2.441	1.500	3.973
Parity	.205	.112	.066	1.228	.986	1.528
No of children ever lost	-.117	.116	.311	.889	.709	1.116
Constant	-5.490	1.209	.000	.004		

Discussion of findings

Children under-five have been affected by various health situations resulting from the displacement of people which is caused by the insurgency in the north-eastern part of Nigeria. Data analysis on the demographic characteristics revealed that most of the children under-five are cared for by women between the ages of 23-32. This study found no significant association between age and the use of ORS. This finding is

contrary to a study by Ngechu, Ongeso, Atitwa, Okeyo and Kamau (2020) who found that maternal age was significantly associated with the use of ORS. Although, chi-square analysis signifies that younger women had better practice than older ones, age was not significantly associated with under-five care practice. This may be attributed to the fact that younger women make up more than half of the sample size and may be more educated, thus, having more knowledge of under-five care practice than the older women.

This study also revealed that women who were married had better under-five care practice than the single, widowed and divorced women. Similarly, Sofekun and Atulomah (2020) reported better care practice among married mothers. Results showed that there was a significant association between marital status and immunization practice. This may be as a result of married women having a source of encouragement around them especially from their spouses who are most likely to go with them to clinics for healthcare appointments for their children. Those who are single, widowed and divorced may live alone and not have adequate support. This reiterates the importance of support for women who are caring for children under-five. Overall, there was no statistically significant association between marital status and under-five care.

Findings also show that there was no statistically significant association between religion and under-five care practice, it was however observed that religion played a role in under-five care practice with Muslims having better practice than Christians. This may be attributed to the fact that Muslims made up 59% of the study participants. It also indicates that religious gatherings may be of great use in promoting information that will improve under-five care practice.

Furthermore, participants who had at least a primary school education had better care practice than those who had no formal education. Results showed that women who had at least secondary education had better immunization rates for their children and that educational attainment was significant to immunization uptake. This is similar to a study by Brown and Oluwatosin (2012) who found that children of women who had secondary or tertiary education had better immunization rates. In addition, the study found a significant association between educational attainment and under-five care practice. This is consistent with other previous findings who asserted that maternal education can improve health outcomes and increase uptake of health care services for under-five children (Abimbola et al., 2016; Adebowale, Fagbamigbe & Yusuf, 2012; Edet et al., 2020; Etoikedem & Johnson, 2017). Possible explanation for this may because education is one of the most important factors that increases have the chances of comprehension and utilization of health messages regarding under-five care, wellness and hygiene. This result was expected since female education has been listed as recent addition to the child survival strategies. This reiterates the need to continue and strengthen all campaigns to improve girl child education. Further analysis to examine predictive performance showed that educational attainment was a significant predictor of under-five care practice and educated women were 1.78 times more likely to engage in better care practice.

The study found a significant association between ethnicity and under-five care practice. This is in line with a US study in 2019 that reported ethnic and racial disparities in some components of under-five care practice (Chiang, Li, Ajnstey, & Perrine, 2019). In this study, results showed that the Hausa/Fulani's had better outcomes than other ethnic groups. This may be due to the fact that Hausa/fulanis dominated the study population and their culture plays a major role in the care practice of their under-five children. Further analysis also revealed that ethnicity was the most significant predictor of under-five care practice. Women from the Hausa/fulani ethnic group were 2.44 times more likely to have better outcomes than the other ethnicity. A possible explanation for this outcome in this study is that the Hausa/Fulani's made up 65.7% of the sample size.

Furthermore, a significant association was found between parity and the use of ORS and cleaning of utensils before child feeding. This is contrary to the finding of Wahed, Muhammed and Abbas (2020) who reported no significant association between parity and ORS. This may be due to the difference in geographical location of the participants. Overall, the study found no significant association between parity and under-five care practice, however, participants who had more than two children recorded better practice than others.

In addition, more than half of the respondents had experienced the loss of a child before the study. Although, there was no significant association between no of children lost and any of the under-five care practice, results showed that caregivers who had lost at least one child recorded poorer care practice.

Findings of the study shows that under-five care can be determined by maternal-level factors. Thus it is important to tailor efforts that can address these intrinsic factors among internally displaced women.

Conclusion

The care of under-five children has been established by the study to be determined by maternal sociodemographic characteristics. This study therefore concludes that to ensure better outcomes regarding the survival of under-five children, interventions targeted at tackling poor under-five care practice among internally displaced persons must encompass addressing the disparities in the maternal-level factors including improving the educational status of internally displaced women and girls.

Further research on other intrinsic and extrinsic factors that may be associated with under-five care practice among this population is recommended.

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