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Predictors of Utilization of Immunization Programme among Nursing Mothers in Ogbomosho South Local Government Area of Oyo State

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Abstract

Immunization has brought sound health to many children in the world, reduced the agony experienced by parents during child rearing and reduced the mortality rate among children. This study examined the predictors of the utilization of immunization programmes among nursing mothers in Ogbomosho South LGA, Oyo State. The purpose of this study was to examine accessibility to health centres, cultural belief were predictor of utilization of immunization programmes among nursing mothers in Ogbomosho South LGA, Oyo State. Descriptive research design of survey type was adopted for the study. The population comprised of all nursing mothers in Ogbomosho South LGA, Oyo State. Four hundred respondents were selected for the study. A validated researcher developed questionnaire tested for reliability was used for the study. The data collected analyzed using descriptive statistics of chi-square to test the formulated hypotheses at 0.05 level of significance. The results indicated that accessibility to health centres and cultural believe were predictor of utilization of immunization programme in the study area (Cal. chi-square value > chi-square Table value) at 0.05 alpha level. The study concluded that accessibility to health centres and cultural belief are predictors of the utilization of immunization programmes among nursing mothers in Ogbomosho South LGA, Oyo State. It was therefore recommended that Federal, State and Local Government authority should make proper planning in relation to the distance of health care centers to residential area in order to encourage and motivate nursing mothers in using their service.

Keywords: Predictors, Utilization, Immunization, Programme, Nursing-mothers

Introduction

Immunization is the process whereby a person is made immune or resistant to an infectious disease, typically by the administration of a vaccine. Vaccines stimulates the body's own immune system to protect the person against subsequent infection or disease. It is a proven tool for controlling and eliminating life-threatening infectious diseases and is estimated to avert between 2 and 3 million deaths each year. It is one of the most cost-effective health investments, with proven strategies that make it accessible to even the most hard-to-reach and vulnerable populations. Delivery can be effective through outreach activities that does not require any major lifestyle change (World Health Organization, 2018).

Immunization remains one of the most important public health interventions and a cost-effective strategy to reduce both the morbidity and mortality associated with infectious



diseases. Over two million deaths are delayed through immunization each year worldwide. Even though vaccines were widely regarded as an effective tool to halt the burden associated with vaccine-preventable disease (VPD), across the world 26.3 million children below the age of one year had not been immunized with diphtheria-tetanus-pertussis vaccine (DTP3) in 2008. Global immunization coverage has never been higher. More than 100 million children are immunized each year against tuberculosis, polio, measles, diphtheria, tetanus, pertussis, hepatitis B, *Haemophilus influenzae* type B, and, in some countries, yellow fever. The benefits of vaccines go beyond protecting children from disease. One recent study in the Philippines showed that children who received vaccines were not just healthier throughout childhood but also scored significantly higher on language, math, and verbal reasoning tests (Omer, Salmon, Orenstein, de'Hart & Halsey, 2009). In 2016, routine immunization services such as DTP3 vaccine did not reach an estimated 19.5 million infants worldwide. Despite this recent success, more than 3 million people die from vaccine-preventable diseases each year. Approximately 1.5 million of these deaths are in children less than 5 years old from diseases that can be prevented by immunization. Risk factors associated with immunization rates below National averages includes low parental educational levels, culture influence, inability to access appropriate transportation, single-parent family, lack of parental care and a late start on the vaccination series (Anderson, 2014).

Increasing uptake of immunization and coverage for childhood diseases has become an important developmental issue and an area that requires more research (Greenwood, 2014). Based on WHO/UNICEF (2008) report, global immunization coverage continues to increase dramatically. Global data shows that infants less than one year of age immunized with DPT, (the three doses of the combined vaccine against diphtheria, pertussis and tetanus) increased from 20% in 1980 to 79% in 2006 (Burton, Monasch, Lautenbach, Gacic-Dobo, Neill, Karimov, & Birmingham, (2009). It was further state that percentage of children immunized with three doses of polio vaccine in 2006 rose from 22% in 1980 to 80%. Global coverage for measles increased from 16% in 1980 to 80% in 2006. However, these increases are still falling short of the 2010 target of 90% set by WHO/UNICEF Global Immunization Vision and Strategy. It is argued that further increases in coverage of DPT, Polio and Measles would save millions of infant lives. Although the current immunization coverage in Africa is 70%, the acceptable minimum coverage of 80% is yet to be reached. Inadequacies in immunization coverage are due to a variety of variables, including health workers' degree of sensitization and political leaders' unwillingness to mobilize and support immunization services, (Abdulraheem, Onajole, Jimoh, & (Oladipo, 2011).

Patients and parents' barriers to immunization include: parents may lack knowledge about childhood vaccinations, have unreasonable fears about vaccine safety, or lack transportation. They may not be aware of the threat of vaccine-preventable illness or that safe and effective vaccines are available against these diseases (Anderson, 2014). There are reports of studies that shows that mothers that reside around health facility providing routine immunization services within one-kilometer radius from their residence are more likely to fully immunize their children than those living in areas where there are no health facilities providing immunization close to them (Rahman & Obaida-Nasrin, 2010).

Similar studies in developing countries suggest that walking or travelling time and distance are the key factors that influence the utilization of healthcare services (Rahman & Obaida-Nasrin, 2010). In Kenya, distance to health facility was found to affect childhood immunization uptake among 298 respondents where children belonging to mothers or caregivers who travelled with-in short distance to health facility for immunization were 18



times more likely to be fully vaccinated compared with children whose mothers or caregivers travelled far away to health facility for their children immunization (Kiptoo, 2015).

In Nigeria, cultural beliefs against immunization are found to be destructive towards childhood immunization uptake (Duru, Iwu, Uwakwe, Diwe, Merenu & Emerole, 2017). This could probably be due to circulation of false information via the use of either family or religious networks. For instance, this false information might be related to negative beliefs towards vaccines, for example, believes that vaccines composed of anti-fertility drugs therefore, destroying the egg of females and damaging her reproductive system (Jegede, 2007). Traditional and religion leaders are highly respected and generally, they are regarded and accepted as the custodians and traditions entrusted to them to provide traditional guidance to their respective communities, therefore their involvement on immunization activities will help and increase immunization acceptance and uptake since their community have trust on them (Omotara & Okujagu, 2012).

Statement of the Problem

In spite of the global improvement and national immunization coverage rates with intensified efforts from the WHO, UNICEF, and other global partners, inequalities still exist in immunization uptake in many parts of the developing world to the detriment of children within the lowest socio-economic groups.

Under an ideal condition women are supposed to make use of the immunization and antenatal health care centers, however, the researchers observed and gathered while in a SIWES training that nursing mothers do not conform to immunization schedule due to unknown factors. The researcher also observed on a visit to a health facility within the locality, the researcher observed that there were cases of whooping cough (pertussis) which implies that, the few nursing mothers attending postnatal care do not judiciously follow the immunization schedule / programme and do not attend immunization days regularly, hence leads to incomplete immunization of the children, it is on this premise that the researchers intended to carry out a study on the Predictors of utilization of immunization program among nursing mothers in Ogbomosho South Local Government Area (LGA) of Oyo State.

Research Questions

The following questions were answered:

1. does accessibility to the health centers be a predictor of utilization of immunization program among nursing mothers in Ogbomosho South LGA of Oyo State?
2. does cultural background be a predictor of utilization of immunization program among nursing mothers in Ogbomosho South LGA of Oyo State?

Research Hypotheses

The following research hypotheses were formulated and tested at 0.05 level of significance.

1. Accessibility to the health centers does not significantly be a predictor of utilization of immunization program among nursing mothers in Ogbomosho South LGA of Oyo State.
2. Cultural background does not significantly be a predictor of utilization of immunization program among nursing mothers in Ogbomosho South LGA of Oyo State.



Methodology

A descriptive research design of survey type was used for this study. The population for the study comprised of all nursing mothers attending antenatal clinics in Ogbomosho South LGA, Oyo State. The population for the study was made up of all nursing mothers attending NPI centers in Ogbomosho Local Government Area, Oyo State. Multi-stage sampling technique used for the study consists of simple random sampling; proportionate sampling techniques and accidental sampling were used to select the 400 respondents as sample size for the study. Simple random sampling technique of fish bowl method was used to select six (6) wards that provide immunization services out of the ten (10) wards within Ogbomosho South Local Government Area. Proportional sampling technique was used to select 7% of the entire population (6440) in this order: Akata (1203, sample size was 84), Alapata, (968, sample size was 68) Arwomole (870, sample size was 61), Ibapon (794, sample size was 55), Ilogbo (1025, sample size was 72) and Ijeru 1 (863, sample size was 60) while accidental sampling technique was used to select the actual 400 respondents for the study.

The instrument for data collection was researcher's structured questionnaire entitled 'predictors of utilization of immunization program among nursing mothers'. The questionnaire was divided into two sections, A and B. Section A deals with demographic data of respondents while section B elicited information from the respondents on predictors of utilization of immunization program among nursing mothers. The response mode of the questionnaire was based on a 4-point Rating scale format of Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD). In order to ensure the validity of the research instrument, it was validated by three experts in the Department of Health Promotion and Environmental Health Education, Faculty of Education, University of Ilorin for both face and content validity of the instrument. Their comments and suggestions in line with supervisor's comments was used to improve the quality of the research instrument. The reliability of the instrument was carried out using split-half method of reliability with Cronbach alpha with a correlation coefficient of 0.76 which was reliable enough for the study. The completed copies of the questionnaire were collected, collated, coded, entered and analyzed. Descriptive statistics of frequency count and percentage was used to analyze the demographic characteristics of respondents while Chi Square was used to test the hypotheses formulated for the study.

Results

Null Hypothesis 1: Accessibility to the health centers does not significantly be a predictor of the utilization of immunization program among nursing mothers in Ogbomosho South Local Government Area of Oyo State.

Table 1: Chi-square analysis showing Accessibility to the health centers does not significantly be a predictor of the utilization of immunization program among nursing mothers

S/N	ITEMS	SA (%)	A (%)	D (%)	SD (%)	Df	Cal. χ^2 Val.	Tab. χ^2 Val.	Decision
6.	Not attending immunization can be as a result of far distance to the NPI center	164 (41.0%)	187 (46.8%)	35 (8.8%)	14 (3.5%)				
7.	Lack of access to NPI center would affect regular immunization among nursing mothers	140 (35.0%)	210 (52.5%)	31 (7.8%)	19 (4.8%)				
8.	Inadequate means of transportation to NPI center can affects immunization appointment	143 (30.8%)	243 (60.8%)	19 (4.8%)	15 (3.8%)	12	558.80	21.03	H ₀ is rejected
9.	Distance to NPI center would cost a lot of money and affect regular immunization among nursing mothers	172 (43.0%)	183 (45.8%)	34 (8.5%)	11 (2.8%)				
10.	The distance to the immunization plays an important role in immunization uptake among nursing mothers	169 (42.3%)	189 (47.3%)	33 (8.3%)	9 (2.3%)				
	TOTAL	788	1012	151	68				

 $\alpha = 0.05$

Table 1 shows the result of the hypothesis which stated that accessibility to the health centers does not significantly be a predictor of the utilization of immunization program among nursing mothers in Ogbomosho South Local Government Area of Oyo State. The calculated Chi-square value of 558.80 is greater than Chi-square table value of 21.03 (cal. χ^2 val > tab. χ^2 val). Hypothesis one which stated that Accessibility to the health centers will not significantly be a predictor of the utilization of immunization program among nursing mothers in Ogbomosho South LGA of Oyo State. This implies that Accessibility to the health centers will significantly be a predictor of the utilization of immunization program among nursing mothers in Ogbomosho South Local Government Area of Oyo State.

Null Hypothesis 2: Cultural background does not significantly be a predictor of the utilization of immunization program among nursing mothers in Ogbomosho South Local Government Area of Oyo State.



Table 2: Chi-square analysis showing cultural background does not significantly be a predictor of the utilization of immunization program among nursing mothers.

S/N	ITEMS	SA (%)	A (%)	D (%)	SD (%)	Df	Cal. χ^2 Val.	Tab. χ^2 Val.	Decision
11.	The nursing mothers' belief may affect uptake of immunization	152 (38.0%)	216 (54.0%)	29 (7.3%)	3 (.8%)				
12.	Nursing mother's cultural belief may go against her participation in immunization uptake	142 (35.5%)	208 (52.0%)	45 (11.3%)	5 (1.3%)				
13.	Existence of language barrier between the mother and the health workers may discourage the mother from taking part in immunization uptake	187 (46.8%)	156 (39.0%)	46 (11.5%)	11 (2.8%)	12	397.93	21.03	H ₀ is rejected
14.	Nursing mother may believe that immunization is not effective which may affect uptake of the NPI	180 (45.0%)	155 (38.8)	38 (9.5%)	27 (6.8%)				
15.	I prefer herbs to immunization for my children	119 (29.8%)	96 (24.0%)	99 (24.8%)	86 (21.5%)				
TOTAL		780	831	257	159				

$\alpha = 0.05$

Table 2 shows the result of the hypothesis which states that Cultural background does not significantly be a predictor of the utilization of immunization program among nursing mothers in Ogbomosho South Local Government Area of Oyo State. The calculated Chi-square value of 397.93 is greater than Chi-square table value of 21.03 (cal. χ^2 val > χ^2 tab. val). Hypothesis two which stated that that Cultural background does not significantly be a predictor of the utilization of immunization program among nursing mothers in Ogbomosho South Local Government Area of Oyo State is therefore rejected. This implies that Cultural background is a predictor of the utilization of immunization program among nursing mothers in Ogbomosho South Local Government Area of Oyo State

Discussion of Findings

Accessibility to the health centres and the utilization of immunization programme among nursing mothers

Hypothesis one revealed that calculated Chi-square value is 558.80 and the table value is 21.03 with the degree of freedom 12 at 0.05 alpha level. Since the calculated Chi-square value is greater than the table Chi-square (χ^2) value. Therefore, the null hypothesis which stated that accessibility to the health centers does not significantly be a predictor of the utilization of immunization program among nursing mothers in Ogbomosho South Local Government Area of Oyo State is therefore rejected. This implies that accessibility to the health centers is a predictor of the utilization of immunization program among nursing mothers in Ogbomosho South Local Government Area of Oyo State. This is in line with the reports of studies that shows that mothers that reside around health facilities providing routine immunization services within one-kilometer radius from their residence are more likely to fully immunize their children than those living in areas where there are no health facilities providing immunization close to them (Obregón, & Waisbord, 2010). The authors further stated that walking or travelling time and distance are the key factors that influence the utilization of healthcare services (Rahman & Obaida-Nasrin, 2010).



Cultural background and the utilization of immunization programme among nursing mothers

Hypothesis two states that calculated Chi-square value is 397.93 and the table value is 21.03 with the degree of freedom 12 at 0.05 alpha level. Since the calculated Chi-square value is greater than the table Chi-square (χ^2) value. Therefore, the null hypothesis which stated that Cultural background does not significantly be a predictor of the utilization of immunization program among nursing mothers in Ogbomosho South Local Government Area of Oyo State is therefore rejected. This implies that Cultural background is a predictor of the utilization of immunization program among nursing mothers in Ogbomosho South Local Government Area of Oyo State. This is similar to the report that many respondents (especially the older women and men) said that they did not believe this anymore having seen the benefits of immunization. However, some of them expressed that traditional ways could not be discounted completely, that the elders knew how to treat certain diseases better than the protection offered by the vaccines. Indeed, the issue of measles came up frequently in the interviews as an area of tension between orthodox and traditional medicine (Abdulraheem, Onajole, Jimoh, & Oladipo, 2011). Common beliefs in the communities about immunization which were mentioned by the nursing mothers include belief that immunization kills children; was the "white mans" way of achieving family planning and population control; cause deformities in children especially when given to pregnant mother; and could actually cause paralysis in children.

Conclusion

Based on the findings drawn from this study, the following conclusions were made:

Accessibility to the health centers is a predictor of the utilization of immunization program among nursing mothers in Ogbomosho South Local Government Area of Oyo State. Cultural background is a predictor of the utilization of immunization program among nursing mothers in Ogbomosho South Local Government Area of Oyo State.

Recommendations

Based on the result of the findings, the following recommendations were made:

1. Federal, State and Local Government authorities should make proper planning in relation to the distance of health care centers to residential area in order to encourage and motivate nursing mothers in using their service.
2. Ministry of health should consider all cultural backgrounds that will affect immunization uptake when making policy and recommendation about immunization.

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