KNOWLEDGE, ATTITUDE AND PRACTICE TOWARDS CHILDREN IMMUNIZATION AMONG MOTHERS IN THREE SELECTED PRIMARY HEALTH CENTRES IN OYO TOWN

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Abstract

This study explored the knowledge, attitude and practice towards children immunization among women in three selected Primary Health Centres in Oyo town. Immunization coverage rates in Nigeria have remained very poor especially in rural communities despite a plethora of programs and strategies. A survey research questionnaire made up of three trajectories (Attitude, knowledge and practice to children immunization) was used in this study. This study made use of descriptive statistic. The study indicates that more than 50% of the respondents had good knowledge of immunization, few of them were not able to vaccinate their children at the stipulated time due to non-availability of these vaccines and clashing of the day of vaccination with their work day. 75% of the respondents got BCG for their children at the stipulated time, while 4.16% of the respondents' children were not vaccinated and 3.34 % of the respondent's children were not vaccinated for yellow fever. Mothers could be motivated to have their children immunized at stipulated time by doubling efforts at enlightening them and by reiterating the benefits of child immunization to pregnant women during ante-natal clinics.

Keywords: Knowledge, Attitude, Practice, Immunization, Women

Introduction

Immunization of children against serious communicable diseases is the most cost-effective strategy to reduce overall morbidity and mortality among children. (Boëlle, 2007). In order to accomplish this strategy, high coverage of vaccination is essential to be maintained. (Boëlle, 2007 and Farag, Al-Mazrou, Al-Jefry, Al-Shehri, Baldo and Farghali, 1995). Expanded Programme on Immunization (EPI) was launched in 1974, less than 5% of the world's children were immunized during their first year of life against six killer diseases; Polio, Diphtheria, Tuberculosis, Pertussis (Whooping Cough), Measles and Tetanus (Novelli, Khalil, Metarwah, El-Baba, Nahar and Abu-Nahya). Immunization could be routine or supplemental. Routine immunization refers to the nationally scheduled regular administration of vaccine dosages to infants at specified ages. Children are usually taken to the health facility by their parents or care givers to receive age-appropriate doses of antigens. In most developing countries, this is only done on specific days of the week to reduce vaccine wastage since the vaccines are supplied in multi-dose vials to reduce cost. The main aim of routine immunization is to deliver a complete number of doses of potent vaccines in a timely, safe and effective way to all children and women (Zangeneh, Baracco, and AlTawfiq, 2011). Ultimately inducing immunity against targeted diseases (Manjunath, and Pareek, 2003). If implemented, the result is a drastic reduction in the burden of childhood vaccine preventable diseases (Sanford, 2002).

WHO estimates that current immunization programs save more than 3.2 million lives each year and the full utilization of existing

vaccines could save an additional 1.7 million lives per year (Tufenkeji and Kattan, 1994). Recent analysis from WHO showed failure of a large proportion of children to access immunization services or to complete their immunization schedule. Lack of services due to system weaknesses, low public awareness, or fears and misconceptions about vaccines were some of the influencing factors (8). Despite recent success in reducing health inequities in immunization rates in young children (CDC, 2007) among some communities and ethnic groups, immunization rates remain below optimal levels (Smith and Stevenson, 2008; Wooten, Luman, Barker, 2007).

Vaccination coverage can be affected by many other factors like low socioeconomic status and low education level. These factors can play a role in delay or finishing full set of vaccination (Schwarz, Gysels, Pell, Gabor, Schlie, Issifou S *et al.,* 2009). Adegboye (2014) reported that under-five mortality in Nigeria is alarmingly high, and many of the diseases that result in mortality are vaccine preventable. WHO/ UNICEF (2013) reported that the number of children under one year of age who did not receive DTP3 vaccine worldwide was 22.6 million in 2012 compared to 22.3 million in 2011. It was further revealed that more than seventy percent of these children live in ten countries: Democratic Republic of the Congo, Ethiopia, India, Indonesia, Iraq, Nigeria, Pakistan, Philippines, Uganda and South Africa.

The recent Multiple Indicator Cluster Survey conducted by the Government of Nigeria in 2016/17 shows that only 1 in 4 children in the country receive all the recommended vaccines. Immunization coverage for pentavalent vaccine* between the 36 states varies dramatically from 80% in Lagos to 3% in Sokoto and is still below the recommended global goal of 90% in all of them (UNICEF, 2018). In Nigeria, almost two third (62 percent) of the children aged 12-23 months have received BCG by the age of 12 months, but only 43 percent have received three doses of DPT and 46 percent have received the third dose of polio vaccine. The coverage for measles vaccine is about 49 percent and yellow fever is 40 percent. Twenty eight percent of children have received all their vaccines by the age of 12 months and one fifth (20 percent) have not received any vaccinations. Vaccinations of children vary according to the characteristics of the mother. Only 10 percent of children of mothers with no education have received all their vaccines while it is 45 percent when she has secondary level and more. In all, only a quarter of children had vaccination cards (Multiple Indicator Cluster Survey Nigeria, 2011).

The Government of Nigeria notes improvements in vaccination coverage since 2015 based on their review of the 2015 National Nutrition and Health Survey (NNHS) results and preliminary results of the 2019 NNHS, which suggests DTP3 coverage of 67 percent. The country further notes many activities to improve the reach and quality of service delivery, including the Optimized Integrated Routine Immunization Sessions (OIRIS), in support of the improvements and highlights recent interruption of wild polio virus transmission in the country. WHO and UNICEF estimates similarly suggest improvements in coverage during 2015 to 2019 (WHO and UNICEF, 2020). Even in areas with high coverage, it is important to know attitudes and behaviors toward immunizations in order to improve services and maintain high coverage. It has therefore become necessary to examine these maternal issues in relation to immunization as well as associated factors. The aim of the current study is therefore to assess Mothers' knowledge, attitude and practice of childhood immunization in Oyo.

Statement of Problems

As reported by WHO (2014), 22.4 million children were incompletely vaccinated at 12 months of age and remained at risk for vaccine-preventable morbidity and mortality.

The result was more disturbing when it revealed that more than half of all incompletely vaccinated children live in India (32%), Nigeria (14%), and Indonesia (7%). Vaccines are one of the best and most cost- effective public health interventions known to man. Nigeria is a large country with high child mortality and low immunization coverage rates. Of the 6 million Nigerian children born every year, more than 1 million fail to get fully vaccinated by their first birthday (IVAC, 2012). Current coverage rates for the various childhood vaccines in Nigeria are among the lowest in the world (Babalola & Aina, 2004). For instance, Measles was responsible for 5 percent of the child deaths in Africa (Bryce, Boschi-Pinto, Shibuya & Black, 2005), of an estimated 282 000 deaths in 2003 (Stein, Birmingham, Kurian, Duclos & Strebel, 2005; WHO, 2003); half of these occurred in Nigeria (Hersh, 2005). NDHS (2013) Differentials in the coverage levels show that the proportion of children fully vaccinated is lower for children in rural areas (16 percent) than in urban areas (43 percent) and it is on the background that this study aims to assess mothers' knowledge level, attitude and practice to children immunization in three primary health centres.

Objective of the study

The objective of this study is to assess mothers' knowledge level, attitude and the attitude to childhood immunization in three primary health centres in Oyo town.

Research Questions

1. What is the mother's knowledge on immunization in Oyo town?
2. What is the attitude of mothers towards immunization in Oyo Town?
3. What is the practice of mothers on immunization in Oyo Town?

METHODOLOGY

Population of the Study

The study population comprised of mothers in three selected primary health care centres in Oyo town.

Sample and Sampling Technique

The samples for the study were mothers from three Primary Health Centers in Oyo town. Stratified sampling was used to select the Primary Health Centers while simple random sampling technique was used to select one hundred and twenty mothers from these centers.

Research Design

The design was a cross sectional survey.

Research Instrument

The Knowledge, attitudes and practice questionnaire (KAPQ), which was a researcher developed scale is divided into two sections. The first part dealt with participants socio-demographic details while the second part has 3 subscales measuring attitude, knowledge and practice to childhood immunization. This part was structured as a 4-point Likert-type rating scale.

Validity and Reliability of the Instrument

The instrument was subjected to face validity. To ensure this, it was given to experts to make corrections and for perfection. The reliability of the KAPQ was ascertained by employing the test-retest reliability method using the Cronbach's Alpha. The test-retest returned a coefficient of 0.71 which was considered adequate for the conduct of the study.

Method of Data Collection

The questionnaires were administered to the participants by the researcher. The questionnaires were administered and collected on the spot. This ensured 100% response rate.

Method of Data Analysis

The data were expressed as descriptive statistics, which include frequency counts and percentages.

Results

Table 1: Socio Demographic Data of the Mothers

Characteristics	Number (%)
Mother's age (years)	
<25	36 (30.00)
26-30	51 (42.50)
31-35	23 (19.17)
36-40	06 (5.00)
>40	04 (3.33)
Mother's education	
Primary	22 (18.33)
Secondary	60 (50.00)
Tertiary	35 (29.17)
None	3 (2,50)
Mother's occupation	
Trader 5)	78 (65)
Civil servant	42 (35)
Mother's marital status	
Single	18 (15.00)
Married	102 (85.00)

Responses from table 1 show that 42.50% of the mothers were between age 26-30, 85% were married and only 5% does not have formal education.

Research Question 1: What is the mother's knowledge on immunization in Oyo town?

Table 2: Knowledge of child bearing mothers about immunization

S/N	ITEMS	SA	A	D	SD
1	Immunization is a process of preventing children or adults from having infection	65 (54.17)	35 (29.17)	20 (16.67)	0
2	Immunization cannot be used to prevent diseases like malaria, HIV/AIDS and gonorrhea	20 (16.67)	25 (20.83)	35 (29.17)	40 (33.33)
3	I know how many times each vaccine is administered to my child	10 (8.33)	45 (37.50)	60 (50.00)	5 (4.17)
4	There is adequate immunization awareness programme in my area	25 (20.83)	50 (41.67)	35 (29.17)	10 (8.33)
5	There are cultural beliefs against immunization in my community	15 (12.5)	25 (20.83)	64 (53.33)	16 (13.34)
6	I believe immunization has an adverse effect	12 (10.00)	22 (18.33)	34 (28.33)	52 (43.34)
7	I feel satisfied with the immunization schedule provide in my community	24 (20.00)	60 (50.00)	22 (18.33)	14 (11.67)

Responses from Table 2 reveal that the respondents have the knowledge of items 1, 4 and7 since they have 50% and above for strongly agreed (SA) and Agreed (A).

Research Question 2: What is the attitude of mothers towards immunization in Oyo Town?

Table 3: Reasons for negative attitude towards immunization

S/N	Reason	Yes	No
1	Mother was too busy	42 (35)	78 (65)
2	There was a family problem	24 (20)	96 (80)
3	The vaccine was not available	54 (45)	66 (55)
4	The time for immunization was not convenient	78 (65)	42 (35)
5	I postponed going until another time	54 (45)	66 (55)
6	Don't believe in the vaccine	24 (20)	96 (80)
7	Long queue and waiting time	36 (30)	84 (70)
8	Strike	48 (40)	72 (60)

The percentage scores on Table 3 show that 65% of the respondents agreed that the time for immunization was not convenient while 20% agreed that there was a family problem and they don't believe in the vaccine.

Research Question 3: What is the practice of mothers on immunization in Oyo Town?

Table 4: Assessment of the Immunization Practice

Vaccine	Vaccinated at the stipulated time (A)	Vaccinated but not at stipulated time (B)	Vaccinated but incomplete doses are usually practiced (C)	Not vaccinated (D)
BCG	90 (75%)	20 (16.67%)	5 (4.17%)	5 (4.16%)
DPT	80 (66.67%)	30 (25%)	10 (8.33%)	0
Hepatitis	95(79.17%)	10 (8.33%)	15 (12.5%)	0
OPV	110(91.67%)	10 (8.33%)	0	0
Measles	105(87.5%)	5 (4.17%)	10 (8.33%)	0
Yellow fever	97(80.83%)	13 (10.83%)	6 (5%)	4 (3.34%)

75% of the respondents got BCG for their children at the stipulated time, while 4.16% of the respondents' children were not vaccinated and 3.34 % of the respondent's children were not vaccinated for yellow fever.

Discussion of findings

It is widely accepted that childhood immunization programmes have played a great part in the prevention of many diseases; hence, vaccination coverage is an indirect way to assess child health care from the point of view of public health (Tang, Huang, Weng, Ger and Hsieh, 2011). The results of the research offer insight into the knowledge, attitude and practices with regards to immunization among the women.

The study included mothers of 120 children. Table (2) presents the mothers characteristics. Mothers' ages ranges from <25 - >40 years. (ii) 102 (85%) of the respondents were married. The knowledge on mothers towards vaccination was generally positive in the present study. Over 80% of respondents knew that Immunization is a process of preventing children or adults from having infection. This finding is in line with those reported in other countries. (Al-Zahrani, 2013, Vannice, Salmon, Shui, Omer, Kissner, Edwards, et al., 2011 and Qidwai, Ali, Ayuband Ayub, 2007) in which

majority of respondents acknowledged the importance of Immunization, (Mansuri, and Baig, 2003). It is particularly important to note that 10% of the respondent in this study believes immunization has an adverse effect. Concerns about immunization safety are widely prevalent (Smith, Kennedy, Wooten, Gust and Pickering, 2006) as well as concerns regarding the adverse impact of possible side effects on immunization coverage have been reported earlier. (Buttery, La Vincente S, Andrews, Kempe and Royle, 2006).

Reason for negative attitude were that the time for immunization was not convenient, vaccine was not available. This result corroborates the work of Adekeye, Chenube, Ahmadu and Adekeye, (2015) and NDHS 2008. Information from the mothers on the reasons their children were not vaccinated includes lack of information (27 percent) and fear of side effects (26 percent), and the post being located too far away (13 percent).

Majority of the respondent's children got there vaccination as at when due. This shows the level of commitment of these mothers to immunization of their children. However, few of them were not able to vaccinate their children at the stipulated time due to non-availability of these vaccines and clashing of the day of vaccination with their work day. Adegboye, Kotze and Adegboye (2014) found that children of mothers who are gainfully employed and those of older mothers have higher tendency of embracing immunization.

Conclusion

From the result of this study, it was concluded that mothers have high knowledge of immunization exercise. However, some of them show negative attitude towards uptake of vaccines. The reason for negative attitude was largely due to non-availability of these vaccines and clashing of the day of vaccination with their work day.

Recommendation

Mothers could be motivated to have their children immunized at stipulated time by doubling efforts at enlightening them and by reiterating the benefits of child immunization to pregnant women during ante-natal clinics.

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