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Knowledge Beliefs and Practices Regarding Immunization among Nursing Mothers in Nigeria

[1*]Kio JO; [2]Agbede CO and [1]Mkpuruoma EJ

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

Abstract

Immunization has been recommended for reducing infant morbidity due to communicable diseases like tetanus, diphtheria, whooping cough, poliomyelitis, measles, tuberculosis, hepatitis and yellow fever. This study investigated the knowledge, beliefs, and practices (KBP) of nursing mothers concerning utilization of immunization in Ogun State, Southwest Nigeria. Structured pretested questionnaire was used to collect data from 120 nursing mothers of under 5 children. Data gathered were analyzed using descriptive statistics. The findings of the study revealed that 51% of mothers have at least secondary school education, 60% were of the Yoruba tribe and 65% were Christians. As a result of mothers' KBP, 51% had children with incomplete immunization status. Respondents' had inadequate knowledge especially regarding the number times vaccines must be administered to their infants even though 93% believe that childhood immunization is generally a good initiative. The risk of not having their child adequately immunized and on schedule eludes majority of the respondents, thus, the study recommends that health education campaign highlighting importance of complete schedule of childhood immunization should target nursing mothers to improve the child health status.

Key words: Immunization, infant, nursing mothers, knowledge, belief, practice, Nigeria

1. Introduction

Communicable diseases constitute the burden of cause of morbidity and mortality, particularly for children of under 5-years in developing countries of the world. World Health Organization/United Nations Children's Fund (WHO/UNICEF) (2003) estimated that 2.1 million people died of diseases preventable by vaccines such as measles (610,000 deaths), hepatitis B (600,000), Haemophilus influenza type B (388,000), pertussis or whooping cough (294,000), tetanus (213.000) and others such as yellow fever (36,000), diphtheria and polio. Out of the 2.1 million, 1.4 million were children under the age of five.

Following the introduction of Primary Health Care (PHC) by the WHO and with immunization as a key component in achieving health for all, theoretically it is possible to significantly reduce, if not, completely eradicate communicable disease affecting children of under 5-years. The economic burden of control of disease in the developing countries by treatment, especially among the vulnerable group such as infant, is enormous and immunization has been recommended as a cost effective measure for interventions in preventive healthcare.

Immunization activities started in Nigeria in 1956 prior to the small pox eradication campaign. The Expanded Program on Immunization (EPI), responsible for routinely delivering immunization, started in the late 1970s (USAID, 2007). Since then, the Federal Government of Nigeria through the Federal Ministry of Health continued to place high priority on immunization and implementation with the aim of providing immunization service to all children of below 24 months of age against the childhood killer but immunizable diseases such as Tuberculosis, Whooping Cough, poliomyelitis, Diphtheria, Measles, Yellow Fever, Tetanus, Neonatal Tetanus, Cerebro-Spinal meningitides, Hepatitis B and Diseases of women of child bearing age. Nigeria joined other global communities in achieving the goal of Universal Child immunization (UCI) by attaining 80% immunization coverage in December 1990. The highest coverage was maintained for about two years before the decline nationwide. There was resurgence of communicable disease such as measles. The decline prompted the federal government (into deciding) to re-launch EPI (to NPI) in 1996. The reason was that EPI was foreign and NPI will be supported by Nigerians and reflect national commitment and ownership for immunization charged with the mandate to effectively control vaccine preventable diseases through immunization and the provision of vaccines (WHO, 2005).

In recent times, there has been renewed global interest in the reduction of infant and child mortality and morbidity rate. Various ways have been suggested and tried in order to achieve this goal yet increased cases of infection and transmission of most of the communicable diseases from one child to the other still persist. For example, recently, the World Health Assembly reported a dramatic increase in type 1 polio cases in Nigeria,

because of poor immunization. It was also stated that Nigeria is one of only four countries in the world where polio is yet to be eliminated (Writer, 2008).

The impact of immunization on the reduction of childhood morbidity and mortality in Nigeria has been remarkable, however, it is yet to reach its full potential despite the objectives of WHO and all efforts by the government as well as health workers in the promotion of National programme on Immunization (NPI). Some communities in Nigeria are still ignorant of the importance, benefit and effectiveness of immunization. It is against this backdrop that this paper accessed the knowledge beliefs and practices of immunizations among mothers of child bearing age in Ikenne local government, Ogun state, south west Nigeria.

1.1. Review of literature on beliefs and practices regarding immunization in Nigeria

Throughout history, immunization has been associated with myth and superstition. Immunization was believed to do more harm than good to children. It was believed that vaccines help in the prevention of some diseases which later cause impairment to children (i.e. Children developing hyperpyrexia resulting to convulsion, the formation of scars and keloids from sites where vaccines are given). In the 1960s, coldness of the extremities in children was thought to be is as a result of the children taking immunization most especially at age 24 months and below (Health and Medicine Encyclopedia). Some vaccines are made from animals such as pigs which are against Muslim mothers' religion and thus they believe it is a taboo to have their children given such vaccines. Vaccines are believed to affect the intelligent quotient of a child that is being vaccinated.

Bostrom (1999) found that many parents have misconceptions about vaccination risks. These include beliefs about the disappearance of diseases regardless of vaccine use or treatment and concern about overloading the immune system with multiple vaccinations given at the same time. In a study by Rossi (2000) on mother's knowledge, attitudes and behavior with regards to infant immunizations, he found that lack of knowledge prevents mothers from playing an effective role in the eradication of vaccine-preventable diseases. Further findings showed that the main reason for not vaccinating or not completing the vaccination schedule was low literacy level.

Studies have shown that the mass media are the major sources of awareness regarding immunization (Abbas *et al*., 2005). Despite the level of awareness created through these media, demand and uptake of immunization has remained below expectations in most rural and even some urban communities in Nigeria. These reports sprouted the need to investigate knowledge beliefs and practices of immunizations among mothers of child bearing age in Ikenne local government, Ogun state.

2. Methodology

The study adopted the survey research design. The respondents were nursing mothers in Ilara community of Ogun State. The choice of the survey research design was because of its usefulness in gathering data relating to peoples' opinion, practices, behavior and records of events.

Ilara Remo community (the study area) had a population of about 1,300 nursing women as the time of data collection. The convenient sampling technique was used to select 130 women who participated in the study. Structured questionnaire was administered to the respondents to gather useful data. The questionnaire was made up of three sections used to collect demographic information and information related to knowledge, belief, practices and compliance. The psychometric scale measure (5-point likert scale) was employed to elicit responses for measuring each construct in the questionnaire. Furthermore, the questionnaire was validated and subjected to reliability test using the Cronbach's Alpha test. Result of the test showed that the average Cronbach's Alpha value for all the constructs in the instrument was 0.78 which clearly indicated that the instrument was reliable

Data collected was analyzed using descriptive and inferential statistics. The consent of all the participant was sought prior to data collection and ethical clearance was obtained from the state teaching hospital (Olabisi Onabanjo teaching Hospital, Ogun state).

3. Results and Discussion

3.1 Respondent's personal statistics

The distribution of respondents' personal characteristics is shown in Table 1. The characteristics of importance considered include years of education, marital status, age, ethnicity, religious affiliation and child immunization

status.

Results in Table 1 shows that most of the respondents were between 21 and 30 years in age (53%) and are married (83%). Thus, majority of the women are within the reproductive age and are expected to pay more attention to issues relating to child health and care such as immunization. The majority of the women have at least secondary education (51%). With this literacy level, the women are expected to be aware of the need for child immunization and to participate in health related programmes. Some 65% were Christians and 60% of the respondents were of the Yoruba speaking tribe this is most likely due to the fact that the study area is in the south western part of Nigeria largely populated by the Yorubas. Furthermore, the result also suggests that the Yoruba cultural beliefs will likely be more entrenched among the respondents. Almost all the women claimed to have taken their children for immunization at one time or the other; however, only 46% had complete immunization status

Table 1: Distribution of respondents' basic personal characteristics

VARIABLES	N=120	
	Frequency	Percent %
Age distribution:		
< 20	29	24.2
21-30	64	53.3
31-40	22	18.3
> 40	5	4.2
Educational attainment:		
None	8	6.7
Primary	51	42.5
Secondary	43	35.8
Above secondary	18	15.0
Occupation:		
None/Housewife	34	28.3
Trading	54	45.0
Farming	13	10.8
Civil servant	19	15.8
Ethnic group:		
Yoruba	72	60.0
Igbo	20	16.7
Hausa	20	16.7
Other languages	8	6.7
Religion:		
Christian	78	65.0
Islam	42	35.0
Marital status:		
Single	20	16.7
Married	100	83.3
Child immunization status:		
complete	56	46.7
Incomplete	61	50.8
Never	3	2.5

Source: Computed from field survey, 2015

3.2 Respondents' Knowledge, Beliefs and Practices (KBP) with respect to child immunization

The distribution of respondents according to Knowledge, Belief and Practice (KBP) variables is presented in Table 2.

Results showed that 95% of the respondents knew that immunization prevents infection, 92% of the respondents had good knowledge of the major childhood diseases that immunization is meant to prevent which is an indication that they have been exposed to health education regarding immunization at one time or the other. This

corroborate with the fact that 54% of the women claimed that adequate immunization awareness programme exists in their area. However, only 46% claimed to know how many times each vaccine was to be administered to their children. This is likely the reason why most of them failed to complete the immunization of their children. This has a lot of implication on their immunization practices.

Table 2: Distribution of respondents' according to Knowledge, Belief and Practice Variables

Variables/ statements	Freq	%
Knowledge variables:		
Immunization is a process of preventing children or adult from having infection	114	95.0
immunization cannot be used to prevented diseases like malaria, HIV/AIDS, epilepsy and gonorrhea	52	43.3
The childhood diseases which can be prevented by immunization are tuberculosis, poliomyelitis, whooping cough, tetanus, diphtheria, hepatitis and yellow fever.	110	91.7
I know how many times each vaccine is administered to my child	55	45.8
There is adequate immunization awareness programme in my area	63	52.5
Beliefs variables:		
There are cultural beliefs against immunizations in my community	66	54.2
I believe immunization has an adverse effects which has influenced my disallowing my children from getting it	49	43.8
Immunization is a good initiatives therefore I support it	112	93.3
1 feel satisfied with the immunization services (schedule) provided in your area	88	73.3
Routine immunization has nothing to do with communicable diseases therefore I don't have to get my child immunized	65	54.2
Practice variables:		
My children are immunized	82	68.3
My children are available for immunization if the schedule is convenient	62	51.7

Source: Computed from field survey, 2015

Further result in Table 2 shows that 54% of the respondents had cultural beliefs that are inimical to childhood immunization. Also, most of the respondents believe that routine immunization has nothing to do with communicable diseases (54%) and up to 44% of the respondents believe that immunization can have adverse effect on their children. These results might have contributed to the irregularity in immunization uptake among the respondents as earlier reported. However, the majority of the respondents believe that childhood immunization is generally a good initiative (93%) and that the immunization schedule provided by the health service provider in their area is satisfactory (73%). This result is consistent with the report of Angelillo, Ricciardi, Rossi, Pantisano, Langiano and Pavia (1999); Bonanni and Bergamini (2000) and Nisar, Mirza and Qadri (2010)

With respect to the practice variables, results showed that 68% of the respondents had taken their current baby for immunization. Since all the respondents were nursing mothers, whose baby ought to have been immunized, the 32% non-immunized is of concern and has a lot of implications for the effectiveness and efficiency of the public healthcare service providing the immunization services in the study area and consistent with previous study by Nisar et al. (2010). Furthermore, 52% of the respondents said that they will be willing to take their children for immunization at scheduled time as long as it is convenient. Apparently, the risk of not having their child adequately immunized and on schedule eludes majority of the respondents.

3.3 Sources of information relating to immunization and causes of incomplete immunization

Table 3 shows the various sources of information on issues relating to immunization which are available to the respondents. The respondents were asked to state their major source of information and 52% of the respondents said they get their information from the health workers. This confirms the importance of the public healthcare providers in creating awareness and influencing nursing mothers' practices regarding immunization. Further result in Table 3 shows that respondents' domestic work (35%) and non availability of health staff at the healthcare center (38%) were the major constraints to their completing immunization schedules for their children.

Table 3: Distribution of respondents by source of information for immunization and constraints to complete immunization

Variables	Freq	%
Source of information for child immunization (Major):		
Neighbors	23	19.2
Health Workers	62	51.7
Media	35	29.2
Causes of Incomplete Immunization Of Children		
Insufficient immunization center	10	8.3
Proximity to immunization center	23	19.2
Domestic work / conflict of interest	42	35.0
Non availability of health staff at center	45	37.5

Source: Computed from field survey, 2015

4. Conclusion and recommendations

This study showed that successful immunization of children depends highly on mothers existing knowledge and positive beliefs and practices regarding childhood immunization. Our findings revealed inadequate knowledge of mothers regarding immunization of child which leads to incomplete immunization status of child. The study also reported positive disposition of the nursing mothers towards the idea of childhood immunization. The study suggested that health education campaign highlighting importance of complete schedule of childhood immunization should target nursing mothers to improve the child health status.

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