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RESEARCH PAPER

KNOWLEDGE, ATTITUDE AND PRACTICE OF MOTHERS TO CHILDHOOD IMMUNIZATION IN KOSOFE LOCAL GOVERNMENT AREA OF LAGOS STATE, NIGERIA

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ABSTRACT

This study was carried out to determine the knowledge, attitude and practice of mothers in Kosofe Local Government Area of Lagos State, Nigeria, on childhood immunization. Descriptive cross sectional study method was employed. A multistage sampling was used to select two hundred mothers who participated in the study. Data was collected using interviewer-administered questionnaires. Mothers who were still in their reproductive age and whose children are under the age of 5 years were interviewed after they had been duly briefed about the study and informed consent was obtained. Results showed that awareness on various childhood immunizations was quite high in majority of the respondents. Out of the mothers interviewed, 89.5%, 85.5%, 78.5%, 71.0%, 73.5%, 42.0% and 6.5% of them knew about Bacille Calmette Guerin (BCG), oral polio, dipthteria, pertusis and tetanus (DPT), yellow fever, measles, hepatitis B virus (HBV), and meningococcal vaccinations respectively. However, not more than 54.5% of these respondents actually knew the diseases that these vaccinations prevent in their children even though almost all (95.5%) of them perceived immunization to be beneficial and showed good attitude. Although majority of the mothers demonstrated appreciable knowledge, attitude and practice on childhood immunization, more awareness programmes in developing countries are required.

Key words: Knowledge, Attitude, Practice, Childhood immunization.

INTRODUCTION

While advanced nations have achieved reduction in morbidity and mortality rates from communicable diseases through effective immunization programmes, infectious diseases remain a major contributory factor to the high infant and child morbidity and mortality rates in developing countries (Baqui *et al*., 1993). It has also been observed that every year, more than 10 million children die before they reach their fifth birthdays in low- and middle-income countries (Bulletin of World Health Organization, 2007). Most of these deaths are as a result of lack of effective interventions that would combat common and preventable childhood illnesses (Lee, 2003). In fact, about 30 million out of the 130 million children born every year worldwide are not receiving vaccination of any kind (WHO, 2000). Immunization is the greatest public health success story in history (Henderson, 1998). The two most effective means of preventing diseases, disability and death from infectious diseases have been sanitation and immunization (Walter *et al.*, 1995). Childhood immunization has been a great concern of the World Health Organization and the organization rates immunization as one of the interventions with a large potential impact on health outcome (WHO, 2000) as diseases have occurred whenever children remain unimmunized or under immunized.

Thus, the Expanded Programmme on Immunization (EPI) was established to fight against six vaccine preventable diseases which are measles, diphtheria, tuberculosis, poliomyelitis, tetanus and pertussis (EPI, 1993). The program aims at reducing morbidity and mortality associated with not immunizing the children. An important aspect of the

exercise was to ensure that every contact a child has with the health facility, should be utilized as an opportunity for vaccination (Richard, 2004).

Although, some successes have been achieved on this regard, there is still more ground to be covered in order to improve the current level of immunization coverage in the affected countries. The Global Alliance for Vaccines and Immunization (GAVI), a coalition of public and private interest that was formed in 1999, to ensure that every child is protected against vaccine-preventable diseases, revealed that protecting children against infectious diseases is not a moral imperative but an essential cornerstone of a healthy, stable global society (WHO, 2000).

Vaccines are generally quite safe. The protections they provide far outweigh the risk of serious problems from them. Still, some parents are reluctant to immunize their children due to fear of side effects (Yarwood *et al.*, 2005). Some consider it to be a threat to their children's lives as they themselves claimed not to have been immunized during childhood. Some even bluntly refuse immunization because of religious beliefs (EPI, 1998; Streefland *et al.*, 1999) while others refuse child immunization based on their preference for being "natural and pure" (Richard, 2004).

However, it has been documented that vaccination demands and acceptance depend largely on a number of factors that are quite broad and complex. Some studies attributed acceptability of immunization to the kind of relationship that exists between the vaccinators and mothers, stressing on the attitude of the health care providers when being approached by mothers for their children vaccination (EPI, 1998; Streefland *et al.*, 1999). Unfortunately, some children miss vaccination opportunity as a result of the parents' misperception on the competence of some of the vaccinators (EPI, 1998; Streefland *et al.*, 1999; Nichter, 1990).

Although, vaccines are believed to be administered free to children in government own health centres throughout the country, low immunization coverage currently being experienced, has also been attributed to the non-availability of these vaccines as well as their cost implication. It has been documented that children from parents who live below the poverty level have lower immunization coverage than those whose mothers live above poverty level (CDCP, 2012).

In addition, parental knowledge, attitude and practice to childhood immunization have been reported by researchers to play a key role in immunization coverage (Anand and Barnighausen, 2007; Rehman *et al.*, 1995; Wang *et al.*, 2007). In developing nations where illiteracy level is still on the high side, immunization coverage has been documented to be significantly affected by parental knowledge and attitude on childhood immunization (Odusanya *et al.*, 2008; Chhabra *et al.*, 2007; Manjunath and Pareek, 2005; Nisar *et al.*, 2010). Even in a population where high immunization coverage is reported, an assessment of maternal knowledge, attitude and practice on childhood immunization is believed to improve service delivery and further facilitates coverage (Gust *et al.*, 2004).

Hence, the need for this study to assess the knowledge, attitude and practice of mothers in Kosofe Local Government Area of Lagos State, Nigeria to childhood immunization so as to identify the areas where attentions are needed for better immunization coverage and to make appropriate recommendations where necessary to stakeholders.

MATERIALS AND METHODS

Study Area: Kosofe is one of the twenty Local Government Areas of Lagos State in South-West of Nigeria. It has its headquarters at Ogudu. It is a bustling commercial centre, being the terminal for all food items and fruits from different parts of the country, Nigeria. Kosofe is located at the northern part of Lagos State and bounded by three other local government areas. It also shares a boundary with Ogun State; one of the South-Western states in Nigeria.

It has ten wards with nine primary health centers and covers a total area of 81 square kilometers. The indigenous dwellers of Kosofe Local Government Area (KLGA) were mainly the Aworis whose major occupations then were mat weaving, farming and fishing. However, due to its location, Kosofe houses people from the northern and eastern parts of the nation who engage in commercial activities. Besides, there are civil servants and elites residing in the area. The population of KLGA based on 1991 population census was 325,522 people comprising 172,209 males and 153, 313 females but as at 2006 population census, the number had risen to 682,772 people (NPC, 2006). Using the 3.18% growth rate, the projected Kosofe population to year 2012 was documented to be 1,126,574 people (Michael *et al.*, 2013).

Study Population and Sampling Method: The study was a cross sectional descriptive one and was carried out among mothers whose ages were between 15 years and 49 years, whose children were under the age of 5 years and reside in Kosofe Local Government Area of Lagos State, South-West, Nigeria.

Multistage sampling method was used to select the 200 respondents. There are ten wards in the area. Out of these wards, two wards were chosen by simple random sampling. Three streets from the list of streets in each of the wards were selected by balloting. The houses in these streets were selected by using a systematic sampling method. Mothers whose children were under the age of 5 years were interviewed. No names were required in the questionnaires and all the information supplied, was kept confidential.

Ethical consideration: Mothers were duly informed about the study. Informed consent was obtained before the questionnaires were administered to the respondents and all information supplied was kept confidential.

Data Collection: Data was collected through pre-tested questionnaires administered by trained interviewers. It was collected on weekdays and at weekends so as to give room for working mothers to participate. Data collected was analyzed manually and expressed in frequencies and percentages.

RESULTS

None of the respondents was less than 18 years old. The mean age of the mothers interviewed was 29.75 ± 6.26 years. Most (62%) of the respondents were between the ages of 26 – 35 years. Nearly all (97%) of them were married and 77% of the respondents were Christians. Two- third (61%) of the mothers had secondary school education and many (37.5%) of them were skilled workers while unskilled workers constituted about one-third (31%) of the study population.

Most (63.5%) of the respondents had less than three children. About half of the children (49.5%) are males and (50.5%) of them are females and (37%) of them were within one year. Most (87.5%) of the children were delivered in hospitals but 28.6% were not immunized before being discharged from the hospitals. The reason given by most (60%) of the respondents was that the nurses or doctors who attended to them did not give the vaccines.

Almost all (98%) of the respondents were aware of immunization and majority (95.5 %) perceived it to be good. Most (83%) of these mothers believed that immunization prevents children from illnesses. Only a few (2.6%) of the respondents did not know what it does.

On the various kinds of immunization known by the respondents, most (89.5%) of them knew about BCG while 85.5% and 78.5% of the respondents had knowledge of OPV and DPT, respectively. Few (6.5%) of the respondents knew about meningococcal vaccination (Table 1). However, based on knowledge of what vaccine protect against, about 54.5% of them knew what measles, OPV and yellow fever vaccines prevent. 36% of them knew what DPT vaccine prevents while only a few (9%) of them knew what meningococcal and HIP vaccines actually protect against (Table 2).

Table 1: Kinds of vaccines known by the respondents

Kinds of vaccines known	Frequency (n =200	Percentage (%)
Bacille Calmette Guerin (BCG)	179	89.5
Oral polio virus (OPV)	171	85.5
Diptheria, pertussis and tetanus (DPT)	157	78.5
Yellow fever	142	71.0
Measles	147	73.5
Hepatitis B	84	42.0
Meningococcal	13	6.5

Most (93.5%) of the respondents' children had received BCG. 87% and 82% of these children had been immunized against OPV and DPT respectively. Less than one-tenth (5%) had received meningococcal vaccine while only 2% of

them had been given HIP vaccine (Table 3). About two-third (59%) of these children, received immunization at the health centre. Only a quarter of them received theirs at the private hospitals while only 2% of them had theirs being given to them at home (Table 4). Majority (73.5) of the respondents revealed that all their children had received immunization up to expectation. Only a few (5%) of them, indicated that none of their children had received immunization up to expected level. A lot (91%) of these mothers received tetanus toxoid injection during pregnancy and more than one-third (39.6%) had a total of three doses. Only a few (11%) of the respondents were not sure of the number of doses they received. Out of the few number (7.5%) of the respondents who did not receive tetanus toxoid during pregnancy, two third (60%) had their own personal excuses for not doing so. One-tenth of them said they were not given where they received antenatal care while 13.3% revealed they did not even know the significance of immunization.

Table 2: Respondents' knowledge on diseases that various kinds of immunization prevent

Kinds of immunization (Disease prevented	Correct response frequency (%)	Did not know frequency (%)	Other opinions frequency (%)	Total
BCG (Tuberculosis)	51(25.5)	140 (70.0)	9 (4.5)	200
DPT	72 (36.0)	125 (45.0)	3 (1.5)	200
Measles	109(54.5)	90 (45.0)	1 (0.5)	200
OPV	109 (54.5)	90 (54.5)	0 (0.0)	200
Yellow fever	109 (54.5)	91 (45.5)	0 (0.0)	200
HBV	41 (20.5)	158 (79.0)	1 (0.5)	200
Meningococcal (Meningitis)	18 (9.0)	182 (91.0)	0 (0.0)	200
HIP	17 (8.5)	183 (91.5)	0 (0.0)	200

Table 3: **Immunization that the respondents' children have received**

Vaccines received	Frequency (%) n = 200
BCG	187 (93.5)
OPV	174 (87.0)
DPT	164 (82.0)
HBV	89 (44.5)
Measles	114 (57.0)
Yellow fever	105 (52.5)
Meningococcal	10 (5.0)
HIP	4 (2.0)

KEY: BCG = Bacillus Calmette Guerin; DPT = Diphtheria Pertussis and Tetanus; OPV = Oral Polio Vaccine; HBV= Hepatitis B vaccine; HIP = Haemophilus Influenza Pneumonia.

DISCUSSION

This study assessed the knowledge, attitude and practice of mothers living in Kosofe Local Government of Lagos State, Nigeria to childhood immunization. Majority (62%) of the respondents were between the ages of 26 and 36 years and most (37%) of their children were less than one year. Most of these respondents had secondary school education. This might be a contributory factor as two-third (62%) of the mothers were aware of immunization and most (83%) knew that it protects against infectious diseases and showed good attitude towards it. The parental knowledge on immunization contributes largely to immunization coverage (Odusanya *et al.,* 2008; Chhabra *et al.,* 2007; Manjunath and Pareek, 2005; Nisar *et al.,* 2010). In this study, majority (83.3%) of the mothers knew that immunization protects against infectious diseases. This finding is slightly better than what was reported in a study conducted among mothers dwelling in urban areas of New Zealand where about 78.5% of the respondents interviewed knew what immunization does (Petousis-Harris, 2002).

Also, the respondents' knowledge about the different kinds of immunization was quite impressive as majority of them (89.5%; 85.5%; 78.5%; 71%; and 73.5%) knew about BCG, OPV, DPT yellow fever and measles vaccinations

respectively. These high knowledge percentages for BCG, OPV, DPT yellow fever and measles vaccinations, may be due to the fact that the vaccines are named by the diseases they prevent and to some extent, by the educational status of the respondents. Some (42%) of the respondents knew about HBV vaccination. However, very few (6.5%) of them had knowledge about meningococcal immunization. This may be due to non- integration of this vaccine into the national immunization programme in most of the developing countries.

Regarding the knowledge of the diseases prevented by these different kinds of vaccines, roughly half (54.5%) of the respondents knew what measles vaccine, OPV and yellow fever vaccines prevent and a fewer proportion (36%) of these mothers responded correctly to what DPT vaccines protect against. Although, more than three-quarter (89.5%) of the mothers were quite aware of BCG vaccination, only a quarter (25%) of them actually knew what it does. Worst still, a lesser percentage (9%) knew what meningococcal vaccine does and only 8.5% of the respondents knew what Haemophillus influenza vaccine prevents.

The respondents' attitude towards childhood immunization was quite positive as most (95.5%) of the mothers perceived it to be good for their children. This finding is however, contrary to what was previously documented in a study conducted on the knowledge, perceptions and beliefs of mothers on routine childhood immunization in a northern Nigerian village where roughly half (54%) of the respondents showed unfavorable attitude towards it (Kabir *et al.*, 2005). The higher percentage seen in this study may be due to the higher educational status of the respondents and more awareness on childhood immunization in KLGA of Lagos State. The respondents' practice regarding childhood immunization was also good. Based on the ages of the respondents' children, almost three-quarter (73.5%) of the mothers interviewed, revealed that all their children had been immunized up to desired expectation by health care givers.

On the benefits of immunization, majority (82.5%) of these mothers knew the role that immunization plays in disease prevention. However, a few (7%) of the respondents attributed its role to child's growth while a lesser percentage (5%) disclosed they did not know. This may be attributed to lack of health education on immunization. Antia- Obong and his colleagues suggested in their study that health education directed at mothers would go a long way to eradicate ignorance and misconception regarding childhood immunization (Antia-Oblong et al., 1993).

Conclusion and Recommendation

Most of the respondents studied showed appreciable knowledge, attitude and practice on childhood immunization. Nevertheless, more health education should be given to parents, especially the mothers during their antenatal clinics. Effort should also be made by the Ministry of Health to integrate meningococcal and haemophilus influenza vaccines fully into the National Programme on Immunization for more immunization coverage.

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AUTHOR(S) CONTRIBUTION

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