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Knowledge and Perception of Mothers in Iseyin to the Integrated Measles and Polio Vaccine Campaign Held in 2013

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Abstract: This study evaluated the knowledge and the perception of mothers in Iseyin Local Government area of Oyo State to the integrated measles and polio campaign held in 2013. Result obtained revealed Mothers as the main decision makers regarding vaccination of the child in both urban and rural setup. 580 (58%) of women from rural area and 180 (18%) from urban area were found to be illiterate ($p<0.05$). When the awareness level regarding reason for vaccination was assessed, it was found that approximately 78% and 21.3% of mothers from the urban and rural area respectively ($p<0.05$) were succinctly aware of vaccination and its advantages. Also, findings from our survey revealed that a considerably higher number of participants from the places classified as urban in Iseyin Local government of Oyo State, Nigeria knew the correct age of children eligible for the integrated measles and polio campaign. This study have shown that there is a strong correlation between knowledge and vaccination coverage rate.

Key words: Knowledge · Perception · IMC

INTRODUCTION

The integrated measles and oral polio vaccination campaign was held in 2013 to ensure that all children 0-8 months and 9-59 months of age were immunized with two drops of potent Oral Polio Vaccine (OPV) plus a dose of measles vaccine for the latter in a bid to ensure polio eradication and measles elimination. This call become imperative because measles is the fifth leading cause of under-five child mortality in Nigeria [1], while Nigeria remain one of the entrenched reservoirs of polio virus in the world. Continues transmission in seven of Nigerian northern states has led to the reintroduction of the virus in atleast 12 African countries previously declared polio free repeatedly dashing hopes that the global targets for eradication first in 2000 and 2005 could be met. Recurrent setback including a resurgence of cases in 2011, have introduced an element of skepticism that the global campaign can ultimately be successful [2]. Despite the comprehensive WHO and United Nations International Children Emergency Fund's (UNICEF's) measles-reduction strategy and the partnership of international organizations supporting measles mortality reduction, certain states continue to face recurrent epidemics [3]. The optimal age for infantile measles vaccination is an important health issue since maternal antibodies may neutralize the vaccine antigen before a specific immune response develops. Delaying vaccination on the other hand may increase the risk of complicated disease [4]. In Nigeria, children are given monovalent measles vaccine at 10 months of age. In 2005 and 2006, the Federal Government of Nigeria (FGN) through the National Programme on Immunization (NPI) conducted an integrated catch-up measles campaign in the south and north, respectively [5] and a nationwide follow-up campaign in 2008 [6], this was in collaboration with local and state governments. This current study evaluated the knowledge and perception of the mothers in Iseyin Local government area of Oyo State, Nigeria to the integrated measles and oral polio vaccine campaign conducted in 2013.

MATERIALS AND METHODS

This cross sectional descriptive study was conducted on mothers that brought their children for the integrated measles and polio campaign in Iseyin Local government, Oyo State, Nigeria. The sample population

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was classified into two groups namely urban and rural settings. A semi structured pre validated questionnaire designed to assess the knowledge and perceptions about vaccination was administered to all the mothers that brought their children for vaccination. The data collected through this questionnaire includes: mother's age, educational status, occupation and socioeconomic status, number of children in the family, place of delivery and place of vaccination, immunization status of their child/children, knowledge of vaccines and the diseases they prevent, age of vaccine administration, distance of the health facility from home and travel time, the source of the information regarding vaccination and the parental attitude towards vaccination. Confidentiality was maintained in the study.each of the questions were interpreted to local dialects for illiterate mothers.

Statistical Analysis: Frequency distribution was used for the analysis of data. The significance of the difference of mean was calculated by both student t test and ANOVA while the level of significance set at $P < 0.05$.

Among the 1000 participants each from both the urban and rural set up, 580 (58%) from rural area and 180(18%) from urban area were illiterate, the difference being statistically very significant ($p<0.05$). Majority of the participants from urban set up were traders while those from the rural set up were housewives (59%). This observation was also found to be statistically significant.

Mothers were the main decision makers regarding vaccination of the child in both urban and rural setup. The main source of information regarding vaccination in Iseyin local government of Oyo State, Nigeria was through the town crier (Table 1).

Table 1: Socio-demographic details of the mothers

	Urban		Rural	
Characteristics	Number	Percentage	Number	Percentage
Education				
Illiterate	180	18%	580	58%
School	380	38%	330	33%
Pre degree	320	32%	60	6%
Graduate	120	12%	30	3%
Occupation				
Housewife	160	16%	590	59%
Artisan	220	22%	20	2%
Trader	340	34%	293	29.3%
Farmer	200	20%	79	7.9%
Others	80	08%	18	1.8%
Decision maker (in matters of immunization)				
Mother	410	41%	890	89%
Father	320	32%	31	3.1%
Both	270	27%	79	7.9%
Sources of information regarding immunization				
Nurses	80	8%	382	38.2%
Town crier	920	92%	618	61.8%

When the awareness regarding reason for vaccination was assessed, it was found that approximately 78% of mothers from the urban area of Iseyin were aware about the reason for childhood vaccination while only 21.3% of the rural mothers were aware about childhood vaccination and this disparity was found to be statistically significant ($p<0.05$) (Table 2). Also, findings from our survey revealed that a considerably higher number of participants from the places classified as urban in Iseyin Local government of Oyo State, Nigeria knew the correct age of children eligible for the integrated measles and polio campaign as

Table 2: Knowledge of the mothers about the integrated measles and polio vaccine in Iseyin Local government, Oyo State, Nigeria

Survey questions Urban Rural	N	%	N	%
Mothers who knew the reason to vaccinate a child	777	77.7	213	21.3%
Mothers who did not know the reason for vaccination	223	22.3	787	78.7%
Mothers who knew the correct age of the IMC	621	62.1	112	11.2%
Mothers who did not know the appropriate age of the IMC	379	37.9	888	88.8%
Are vaccines harmful?			300	30
No	489	48.9	221	22.1
Yes	218	21.8	479	47.9
Don't Know	293	29.3		
Can child with cold be vaccinated?				
Yes	32	3.2	0	0
No	67	6.7	29	2.9
Don't Know	901	90.1	71	7.1
Can child with fever be vaccinated?				
Yes	118	11.8	0	0
No	212	21.2	0	0
Don't Know	770	77.0	1000	100

well as safety of the vaccines in vivo. However, a larger proportion of the rural participants (88.9) do not know about the age eligible children. Some of them even said they cannot allow the children take it except they take too. This was why when they were asked wether the vaccine is safe, majority of them (47.9%) answered they don't know. Hundred percent of the rural dwellers as well as very high proportion of the urban mothers do not know if their children can take vaccine when they have fever or cold.

DISCUSSION AND CONCLUSION

This study shows significant wide gap exist between the level of education for both the rural and urban dwellers. This observation might have influence the reason for the low understanding of the reason for vaccinating an eligible child in the rural settings. Singh *et al.* [7] had reported in their study that mothers had fair knowledge regarding the need for immunization. Kapoor *et al.* [8] found that awareness and knowledge about Vaccination increase with education status of mothers. In a cross sectional study conducted by Siddiqui *et al* [9] in peri-urban Karachi significant better vaccination status was found among children with both parents literate as compared to children with both parents illiterate. It is therefore important to address such trend in order to improve knowledge about vaccination strategies and its advantages, as most mothers are the primary caretakers and decision makers regarding vaccination in their families. Our findings disclosed that the major source of information was through the town crier. This was not surprising as different town crier were appointed as part of the teams from each of the eleven wards that make up the local government area. These town crier were trained to disburse awareness up to the doorstep of the population.

Knowledge about vaccination was assessed and it was found that a significant difference was seen between urban and rural mothers regarding the importance of vaccination as well as the age of initiation and completion of vaccination schedule. These lacunae need to be filled in order to attain 100% vaccination coverage in the country especially in the rural areas. Further into the knowledge about vaccination most mothers from both urban and rural areas believed vaccines were safe, however a large proportion of mothers both from urban and rural setting would delay vaccinating their child in the circumstances of simple childhood illnesses. These myths must be abolished and mothers must be assured regarding the safety of vaccines. Mothers' inability to name or identify diseases other than poliomyelitis indicates that health education should be emphasized to enhance knowledge about the complete programme. This was emphasized in many studies. [8, 10, 11]. In conclusion, it is imperative to create a massive awareness campaign on vaccination and its importance especially to women in order to up the vaccination coverage rate in the studied area.

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