Level of Awareness of Childbearing Mothers on Immunization of Children 0-5 Years in Maiha Local Government Area, Adamawa State Nigeria.

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Abstract:
This study was carried out to ascertain the level of awareness and knowledge of mothers on childhood immunization in Maiha Local Government Area, Adamawa State Nigeria. In order to successfully carry out the study, one research questions were raised. A self-structured questionnaire with a 0.78 cronbach alpha internal consistency score, was administered to 150 respondents but 140 was returned of which 139 was found valid for analysis (92.7% return rate). Data was analyzed using simple percentage count and presented in various charts. It was found that majority of the mothers are not aware of the vaccines given to children 0-5 years and the diseases they prevent but are aware of the time interval within which the vaccine is given to the children, as wells as the venues and personnel of immunization probably due to frequent visitation. The need for a well rooted awareness campaign in the local government area on the vaccines, the diseases they prevent and the time interval within which they are given to child aged 0-5 years among others were recommended.

Keywords: Key Words: Awareness, knowledge, immunization, children 0-5 years.

Introduction:
Immunization is processing whereby a person is made immune or resistant to an infectious disease, typically by administration of vaccine. Vaccines stimulate the body's own immune system, protect the person against subsequently infection or disease (WHO, 2015).
Immunization is a proven tool for controlling and eliminating life-threatening infectious disease and is estimated to avert between 2 to 3 million deaths each year. It is one of the most cost-effective health investments, with proven strategies that made it accessible to even the most hard-to-reach and vulnerable populations. It has clearly defined target groups, it can be delivered effectively through outreach activities; and vaccination does not require any major lifestyle change.
Similarly, Arinola and Arinola (2007), defined immunization as the key of preventing disease among general population. Vaccine benefits both the people who receive them and the vulnerable unvaccinated people around them, because the infection can no longer spread.
WHO (2000), stated that immunization uses the body's natural defense mechanism – the immune response to build resistance to specific infections. Nine diseases can be prevented by routine childhood

immunization – tuberculosis, diphtheria, pertussis, whooping cough, poliomyelitis (polio) measles, haemophiles influenza type b (Hib) and hepatitis B. all of these diseases can causes serious complications and death.
WHO programmed as cited by Olise (2012), on immunization stated that BCG is given at birth or soon after intradermally using a sterile needle and sterile syringe the site is generally the right arm just below the insertion of the deltoid. The dose is 0.05ml for children under the age of one year but 0.1ml if over one year old.
Similarly, the oral polio vaccine is given at birth (OPV0), at six weeks (OPV1), ten weeks (OPV2) and fourteen weeks (OPV3). On reach occasion, two drops of vaccine are carefully dropped into the baby's mouth. Apart from being a component of DPT, tetanus toxoid, exists as a separate vaccine. Tetanus toxoid, under expanded Program on immunization (EPI), is administered to women of reproductive age group with the hope that antibodies produced will be passed on to the baby in-utero. The passive immunity protects the child during its early days of life. Tetanus toxoid is given intramuscularly at the left upper arm. The dose is 0.5ml prior to the 1988 review of EPI by WHO, TT used to be administered to pregnant women only.
The standard three doses of DPT given at not less than four weeks interval during the first year of life counts as the first two doses of tetanus toxoid in the new five dose regimen. Below is the summary of Nigerians New Immunization Schedule for children:

Age	**Antigen**
Birth	BCG, OPV0, HePB0
6 weeks	OPV1, pentavalent1, PCV1
10 weeks	OPV2, pentavelent2, PCV2
14 weeks	OPV3, pentavalent3, PCV3
9 months	Measles, yellow fever

* OPV0 and HePB0 must be given 2 weeks of delivery.
In a survey conducted by Sharma and Bhasin, 2008 at Pediatric OPD of AMDA hospital, Jhapa district, Nepal result shows that 37% of respondent are aware of the immunization days, 49.1% are aware of the age group for immunization, while 27.09% knows the number of visits required in the first year of life. The results which are below the borderline were associated with the low level of knowledge of respondents about routine immunization.
To be able to keep the country on track and reduce the death of children, Nigeria in 2014 introduced the pneumococcal conjugate vaccine (PVC) in its routine immunization programmed to substantially reduce child mortality from pneumococcal disease. The introduction of the PCV vaccine was estimated on avert 173,223 deaths by 2018 (Ado, 2014)
A study conducted by Adeyinka, Oladimesi, Adeyinka, Aimakhu on uptake of childhood immunization among mothers of under-five in south western Nigeria (2008), stated that almost all the women interviewed (99%) were aware of immunization with 65.7% obtaining information of antenatal clinics. A good proportion of children aged 12 to 33 months were fully immunized (76.99) 30% were partially immunized and 0.7% were not fully immunized.
This study when compared with the immunization outcomes of Maiha LGA, Adamawa State in last quarter of 2015 from cold chain office report generally the level of awareness of children mothers on immunization is low.

Materials and Methods:

Research Design:

The research design for the study is the descriptive survey design. This design allows for systematic collection of information from the respondents for the purpose of understanding the behavior and

attitude of the population under study (Tull, 1987). This would be appropriate in evaluating the level of awareness and knowledge of mothers on childhood immunization.

Population of the study:
The population of the study consist of childbearing mothers having at least one child under 5 years of age visiting child welfare immunization centers in Maiha Local Government. The sum total of this population is about 1385 childbearing mothers (Maiha Cold Chain Office Records, 2015). This local government comprises of Mayo-nguli district with five primary health care centers, Vokuna-pakka district with five primary health care centers, Sarou district with four primary health care centers, Maiha-gari district with four primary health care centers, Belel district with four primary health care centers and one comprehensive primary health care centers in each of the district.
The numbers childbearing mothers visiting each of these comprehensive health care centers for immunization are presented in the table below;

Districts	**Numbers of Mothers**
Mayo-nguli	303
Vokuna-pakka	210
Sarou	284
Maiha-gari	232
Belel	356
TOTAL	1385

Source: Maiha Cold Chain (2015)

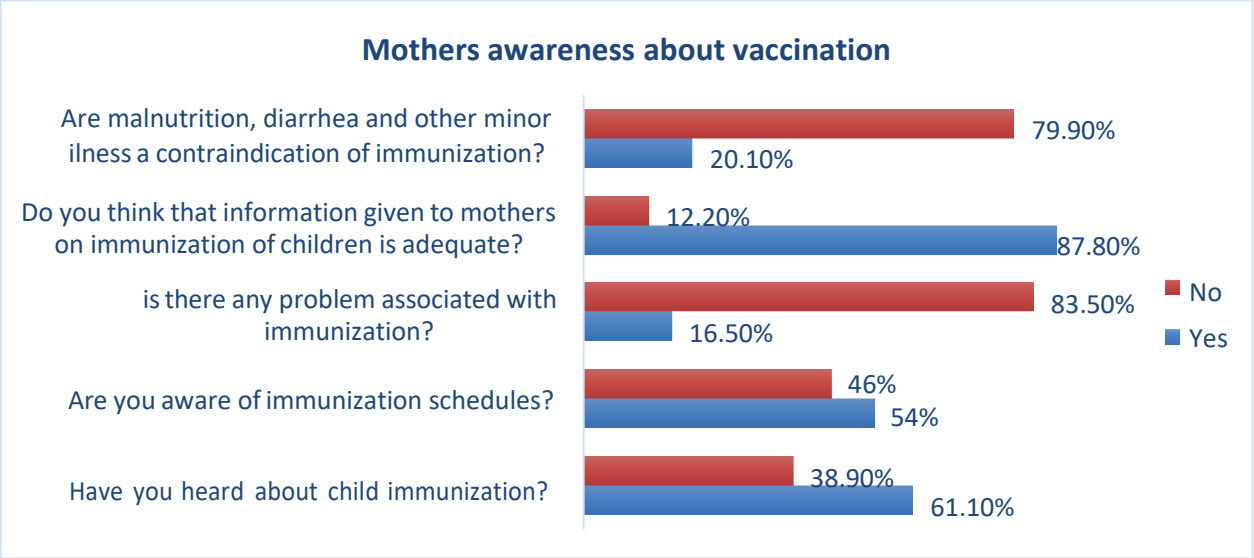
The researcher will draw his respondents from each of these comprehensive health centers. This record is obtained during the researcher's feasibility study

Method of Data Collection:
A self-structured questionnaire was used for the study. The questionnaire comprises of five sections. Section "A" seeks demographic information. Section "B" contain items on the awareness of childbearing mothers on types of vaccines for immunization of children, section "C" on awareness of mothers on the time interval for immuration of children, section "D" is on the awareness of childbearing mothers on immunization centers and Section "E" is on the awareness of childbearing mothers on the personnel involved in giving vaccine to children in Maiha LGA Adamawa state.

Method of Data Analysis:
The returned copies of the completed questionnaire were properly cross-checked for completeness of responses. The information was coded and analyzed using International Business Machine Statistical Package for Social Sciences. The data were analyzed using frequencies and percentages to answer the research questions.

Results:
The following were derived from the data collected and were presented as shown on the Tables below.

Research Question: Are childbearing mothers aware of the vaccination given to children 0-5 years in Maiha LGA?



Source: Field Survey, 2016

Figure 1: Mothers awareness of the vaccination given to children 0-5 year

From figure 1 above, majority of the respondents, 86(62%), reported that they have heard about immunization, however it is worrisome to realize that 53(38%) of them still have not heard of immunization. Similarly, It was found that majority of the respondents, 75(54%), are aware about the immunization schedule in their area while a considerable number of them, 64(46%), are not aware (fig 5). From figure 8 above, majority of the respondents, 116(84%), reported that there are no problems associated with child immunization while 23(26%) of them reported that there are problems. Also, majority of the respondents, 122 (88%), agreed that the information given to mothers on immunization are adequate while 17(12%) of them pointed out that such information is not adequate (Fig. 1). While a majority of the respondents, 111 (79.9%), indicated that malnutrition, diarrhea and other minor illness like fever are not contraindication of immunization, a considerable number of the mothers, 28(20.1%), indicated that these health conditions are contraindications of immunization.

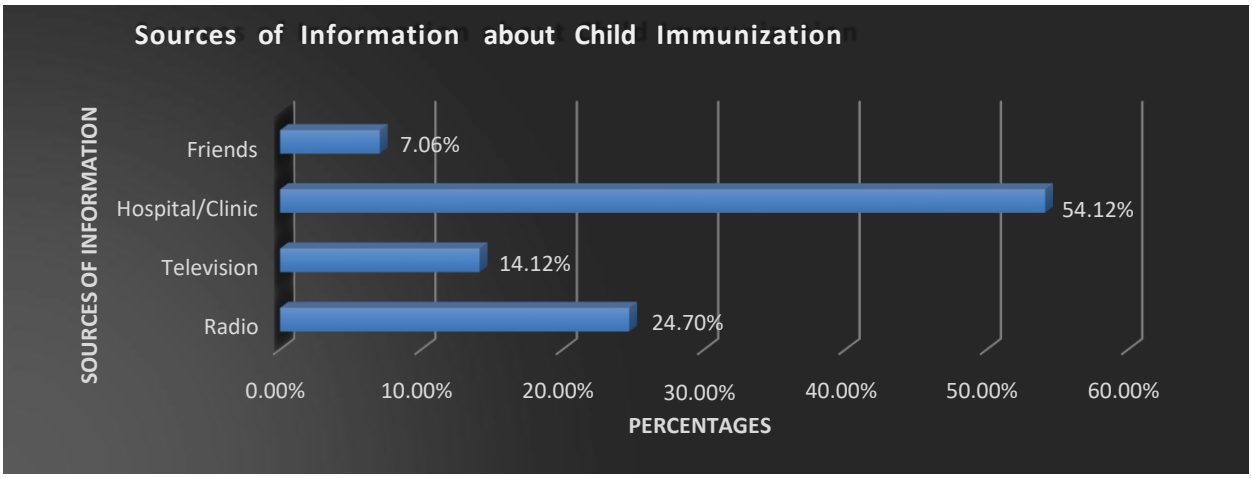
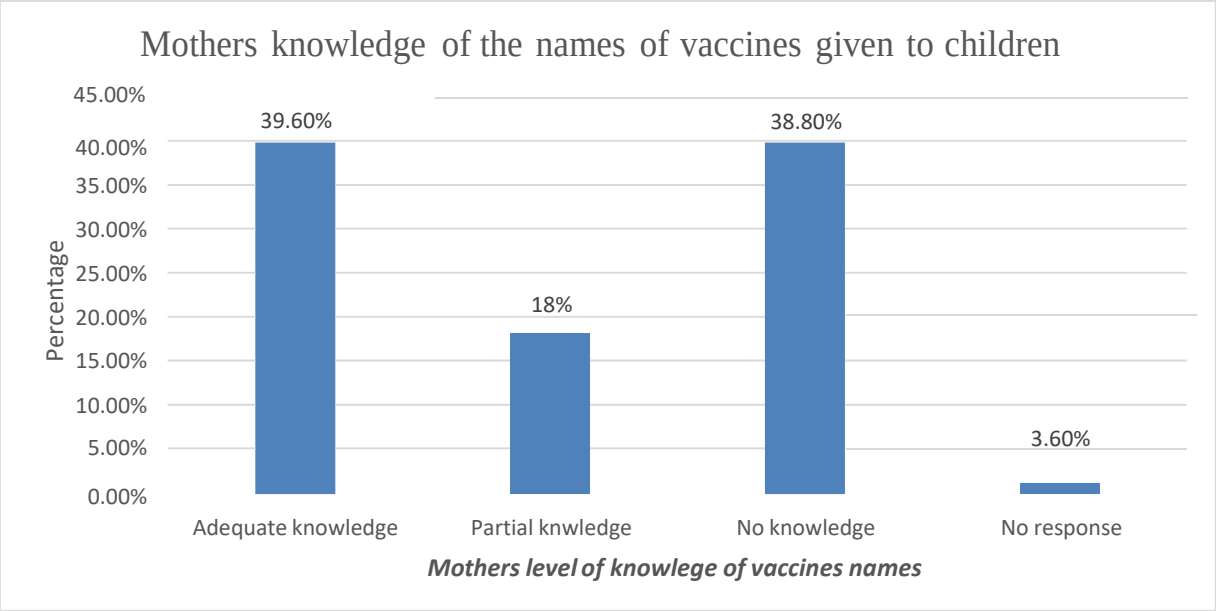


Figure 2: Sources of information about child

immunization among that have heard about it.

From figure 2 above, majority of the 85 mothers, 46(54.12%), who reported to have heard about child immunization get the information from hospitals/clinics, 21(24.7%) from radio, 12(14.12%) from television while a few numbers of them, 6(7.06%), heard from friends.



Source: Field Survey, 2016

Knowledge scoring scale: **Adequate knowledge** = mothers mention 4 and above names of vaccines given to children.

Partial Knowledge = mothers mention 1-3 names of vaccines given to children

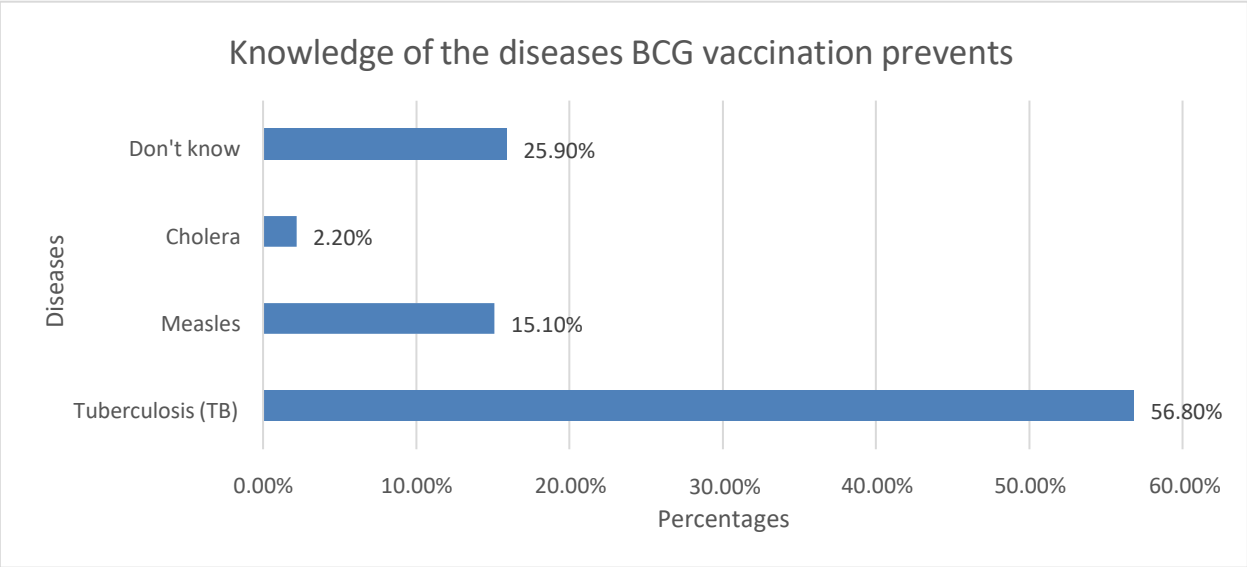
No knowledge = mothers that could not mention any.

No response = these mothers did not offer to attempt this question at all.

Figure 3: Bar chart showing the distribution of mothers' level of knowledge of vaccine names.

From figure 3 above, a huge number of the mothers, 54(38.8%), have no knowledge of the names of vaccines given to children meaning that they could not mention the name of any of the vaccines, closely related to this category of mothers are the mother, 5(3.6%), who skip this question item. On the other hand, 55(39.6%) of the mother have

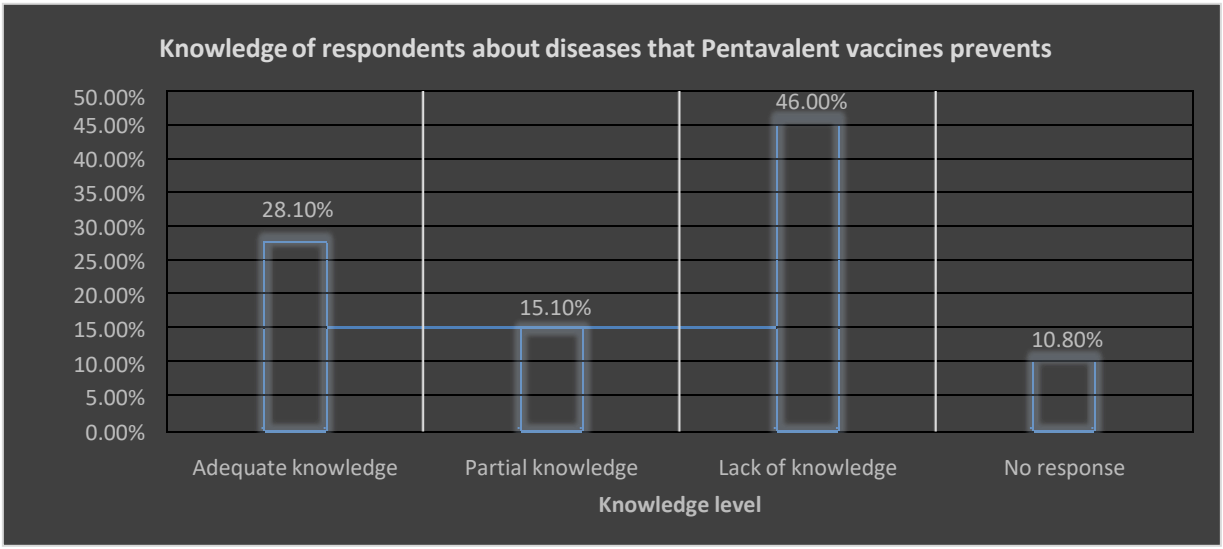
adequate knowledge meaning that they were able to mention 4 and above names of vaccines given to children while 25(18%) of them are considered to have a partial knowledge because they were able to mention from 1 to 3 names of vaccines given to children.



Source: Field Survey, 2016

Figure 4: Bar chart showing respondents' knowledge of the diseases that BCG vaccination prevents.

As shown in figure 4 above, a consideration number of respondents, 36(25.9%), reported that they do not know the diseases that BCG vaccination prevents while 79(56.80%) of them mentioned Tuberculosis, 21(15.1%) measles and 3(2.20%) of them mentioned cholera



Source: Field Survey, 2016

Knowledge scoring scale: **Adequate knowledge** = mothers mention the diseases that Pentavalent vaccine prevents

Partial Knowledge = mothers mention 1-2 diseases that Pentavalent vaccines prevents.

No knowledge = mothers that could not mention any.

No response = these mothers did not offer to attempt this question at all Figure 5: Bar chart showing respondents knowledge about diseases that pentavalent vaccines prevent.

The table above shows that majority of the mothers, 39(28.1%), demonstrated a lack of knowledge of the diseases that Pentavalent vaccine prevents as they were not able to mention any of them while 15 (10.8%) of them did not attempt this question item at all. On the other hand, 39 (18.1%) of the mothers were adjudged to have adequate knowledge of the diseases that Pentavalent vaccine prevents because they were able to mention them while 21 (15.1%) of them are considered to have partial knowledge because they were able to mention 1 to 2 of the diseases that pentavalent vaccine prevents.

Conclusion and Recommendations:

Conclusion:

Based on the findings, the following conclusions are made:

1. The child bearing mothers are not aware of the vaccines given to children 0-5 years and the diseases that they prevent but surprisingly know the time interval within which the various vaccines are given to the children due to regular visit.
2. The child bearing mothers are aware about the venues for immunization and the appropriate personnel qualified to handle the immunization in Maiha local government area of Adamawa State.

3. Recommendations

a. Based on the conclusion drawn from this study, the following recommendations are made:

4. The Maiha local government area should galvanize resources to carry out an awareness campaign in the local government area on the vaccines, the diseases they prevent and the time interval within which they are given to child aged 0-5 years.
5. Such awareness campaign should be deeply influenced by the social cognitive model in which local models as well as respected media models are utilized to ensure that resident acquire cognition that would lead them to take necessary actions.
6. The local government should work with the federal government and donor agencies to ensure that vaccines are always available any who approach the health centers for them and house to house immunization approach should be adopted extensively in this part of the country to reduce the distance barrier.
7. The local government should employ community health educators whose duty would be solely to conduct awareness research and campaign about the health services that the community members can enjoy from the various health centers.

Suggestions for Further Studies:

The researcher wishes to suggest that he following areas should be studied:

1. Beliefs about immunization among childbearing mothers in Maiha LGA.
2. The relationship between awareness of immunization and utilization of immunization services in Maiha LGA.

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