International Journal of Intellectual Discourse (IJID)
ISSN: 2636-4832 Volume 3, Issue 1. June, 2020

An access to health facilities and mother's immunization of their children against childhood killer diseases in Bauchi Local Government, Bauchi State, Nigeria

Abarshi Dauda Daniel

Department Of Sociology, Faculty Of Social And Management Sciences, Bauchi State University, P.M.B.65, Bauchi Campus, Bauchia State, Nigeria.

Email: daudaabarshi@gmail.com

Abstract

Access to everything in life determines its usage, therefore the increase rates of child mortality resulting from inability of mothers to effectively accept the immunization of their children against childhood killer diseases, such as poliomyelitis, measles, diphtheria, pertussis, whooping cough, tuberculosis, among others, in Bauchi Local Government Area of Bauchi State necessitates this study, which was aimed at investigating the mothers access to health facility towards the immunization of their children against the childhood killer diseases, as mothers finds it difficult to due to so many factors in Bauchi Local Government Area. The study adopted the rational choice theory as the theoretical framework because it best explain how mothers respond to health seeking behaviors in relation to the immunization of children against childhood killer diseases in the study area. The study made use of questionnaires and in-depth interviews as techniques for data collection. The data generated were analyzed using descriptive statistics, percentages and chi-square. The total sample size was three hundred and twenty-two (322) and this included three hundred and twelve for questionnaire and ten for in-depth interviews. The study used Descriptive statistic of frequencies and percentages in tabulation format; Pearson's chi-square with critical value approach and cross-tabulations were the methods used to analyze the quantitative data gathered while in-depth interview was transcript. The finding of the study revealed that distance to health facilities affects mothers' immunization of their children against childhood killer diseases. The research recommended that government should build health facility in each locality to encourage mother access to health facility for the immunization of their children against killer diseases.

Keywords: Immunization, Childhood, Access, Mothers, Health.

Background to the Study

There is an adage which says "Health is Wealth. Which means health is necessary ingredients that enable people embark on productive ventures. Children are future leaders, so their health should be given utmost priority by parents. To achieve this vital objective, mothers' access to health facilities toward health and nourishment for their children is very important. Healthy and active children can develop the economy of a country to a required level.

The preventive measure against diseases at childhood stage is immunization which is a complete course of injection that is administered to children soon after birth for the first five years. Mojoyinola and Olaleye (2012) assert that immunization of children is aimed at providing primary prevention against killer diseases during childhood. It

produces the anti-bodies inside the body against diseases. These diseases take several precious lives to death all over the world especially in the third world countries of African and Asian countries. There is a schedule by the health department for the immunization of children below the age of five. Vaccines are provided by expanded programme on immunization (EPI) and private companies. These vaccines play a vital role in controlling childhood diseases.

Immunization programme is more systemized in developed countries, but the situation is poor in most third world countries. In Nigeria, access to healthcare services is quite worrisome. Unfortunately, despite a lot of effort by the government to eradicate childhood diseases like polio, measles, tetanus, pertussis, whooping cough etc. The challenges still remain. Though, Nigeria was recently declared polio free by the United Nations, the problems still remains. The main reason behind these problems is lack of public awareness about the importance of immunization and lack of education.

Although under-5 mortality and mobidity has been relatively low of recent due to an increased awareness on the importance of childhood immunization. Women tend to be knowledgeable about childhood immunization probably not because of educational attainment but the power of mass media and other sources of information. However, for this to be sustained, more concerted effort by the governmenand other non-governmental organization needs to be intensified. Along with this, there are several obstacles that influence the of mothers toward the immunization of their children which are religious, social and cultural misconceptions. It is against the above background that this study tries to investigate of mothers access to health facilities towards the immunization of their children against childhood killer diseases.

Statement of the Research Problem

Based on available records, without the immunization against childhood killer diseases, such as poliomyelitis, measles, diphtheria, pertussis, whooping cough, tuberculosis, among others, hundreds of thousands of children in Nigerians die each year, and a significant number of them, liable to physical disability. Thus, child mortality is of a serious concern to various stakeholders, such as the United Nations- Sustainable Development Goals (SDGS), United Nations Children Fund (UNICEF), Federal and state governments, agencies, families and individuals. This is because the continuity of any generation depends on the ability to raise new ones and ensure their survival. In view of this, for instance the United Nations through MDG goals made it one of their goals to reduce by two-third child mortality rate by the year 2015. However, whether this has been achieved or not depends on so many factors which could be the responsibility of all the stakeholders.

The negative attitudes of health personnel also have affected the compliance of mothers to childhood immunization. Health workers who are considered to be professionals in handling health seekers, often times scare mothers from accessing childhood immunization. Most of the health personnel and volunteers such as nurses, CHEW (community health workers) are expected to exhibit professionalism by being (polite, hospitable and friendly), but contrary to this, some of them are being harsh, hostile and unfriendly to health seekers (mothers) on their quest for child survival. After reviewing relevant literature on childhood immunization, i discover that little or none has been written on the subject matter. Most literature centres on different subject matter not on the, Knowledge and attitude of

mothers on childhood immunization in Bauchi LGA, Bauchi State, Nigeria

Poverty is another factor that has affected the success of childhood immunization. In developing countries and by extension northern part of Nigeria (Bauchi), as millions of people are living below the poverty line which is one dollar a day. Consequently, the earnings of people are prioritized on daily sustenance, such as food, shelter rather than medical expenses for the survival of their children. Health facilities are mostly situated in the urban centers, this means for the rural dwellers to access health facility, they have to travel a distance, which many cannot due to transportation difficulty and other challenges. The patriarchy nature of our society also deepens the challenges of childhood immunization. This means that women are under the strict control of their husbands; their actions or inactions depends on the permission (approval) of their husbands. This especially in the northeastern part of Nigeria is the culture which is strictly observed. Even if mothers have the knowledge of childhood killer diseases and immunization, her movement to comply is determined by her husband. So the attitude of the husbands is determined by their knowledge and the importance of childhood immunization. Therefore, many mothers who are willing to immunize their children cannot unless permitted by the husband. Nevertheless, with these men domineering attitude, mothers are most times not allowed to immunize children. Why? Because men as the of the family always expect the women to obey in whatever they want.

Another lamentable situation is that most of our health facilities are out of drugs for administering to patient including childhood immunization vaccines. Most of the mothers find it discouraging after going to the hospital to discover that vaccines for childhood immunization is out of stock and will have come another day which there is no certainty of getting it. To add salt to injury, the costs for the drugs are always very expensive for the common man. This used to scare mothers from bringing their children to hospitals since they cannot afford the drugs that will be prescribed by the medical personnel.

Income is considered as one of the most important indices to allow access to health facilities for childhood immunization. A mother as care givers depends on their husbands to give money to take their children to hospital for immunization. But most of the men are either not having a substantial means of income. They go out daily seeking for what they will eat for that day and most times they don't even get let alone for other things such as health care.

Research Objective

To explore whether access to health care facilities influence mothers' toward the immunization of children against killer diseases.

Research Hypotheses

There Is No Relationship between distance to health care centers and mothers immunization of children against the childhood killer diseases

Literature Review and Theoretical Framework

Health Care Facility to Mothers for the Immunization of their Children

Rahji and Ndikom (2013) argue that Nigeria is making efforts to strengthen its routine immunization so as to reduce the burden of vaccine preventable diseases, especially in Northern Nigeria. Abdulraheem, et al. (2011) explored the factors influencing incomplete vaccination among rural Nigerian Children. They found that accessibility resulting to long distance walking and long waiting time at the health care facilities is the most common reasons for partial immunization. From the study conducted by Schimmer, et al (2006), the percentage of children who were fully

vaccinated in urban areas was higher than in rural areas. This is most likely related to the problems of accessing health facilities in rural areas compared to urban areas.

According to Anyene (2014), poor access to primary health care services as a result of unhealthy politics hampering the ability and capacity of States and LGAs to plan the location of services rationally. Political agendas have been pursued at the expense of getting the vaccines to the people who need them. Governments at state and local governments' levels have often been inclined to invest in obvious and visible projects such as large, urban, tertiary hospitals, neglecting primary health care services, which are not only extremely necessary but also cost effective and reduce need for secondary and tertiary care.

He also affirms that health centers built by hard pressed communities hardly get the needed support from the governments, as decisions without consultations or information to the communities. Also, the difference between rural and urban areas in immunization uptake remains wide as a result of many non-health factors including poor accessibility due to bad road networks, absence of rural location allowances, fewer good schools, employment for family members and other incentives considered by health workers in agreeing to work in rural areas.

According to Mojoyinola and Olaleye (2012), compliance with immunization schedule implies that mothers will bring their children for immunizations at the specified period or interval which will definitely help in reducing rates of infant mortality. However, non-compliance with immunization schedule may predispose the children to the risk of childhood killer diseases that are preventable by vaccines, thereby enhancing increase child mortality.

Rahji and Ndikom (2013) assert that several factors are responsible for maternal non-compliance with immunization against the childhood killer diseases. For instance, mothers are less likely to complete immunization schedules if they are poorly informed about the need for the exercise. Thus, Opayemi (2005) affirms that education has also been found to be one of the socio-cultural characteristics predisposing an individual to utilize health care facility, including immunization programme. In a study carried out in Benin City, Edo state of Nigeria, Onyiriuka (2005) found that the default rate for the entire series of immunization was 27.6%, which was lower because a greater proportion of respondents had tertiary education.

Accessibility is very important to mothers for easy compliance to childhood immunization. However, the attitude of health personnel toward mothers should be addressed. Health workers attitude tend to discourage mothers from bringing their children for immunization. For childhood immunization to be successful, health workers need to be oriented to behave within their professional ethics to encourage mothers on childhood immunization.

Patriachal Influence on Mothers Immunization of Their Children

According to Anyene (2014), cultural practices and beliefs may be responsible for some of the disparities in immunization uptake. For instance, males are more likely to receive full immunization compared to girls, emphasizing cultural attitudes to gender, where male children are often more highly regarded and desired than females. However, it has been stated that the disparity is generally not significant. These gender disparities also affect education. Cultural practices, like religion and politics, play a key role in uptake of routine immunization. Immunization directly affects the issue of

childrearing and child care and these are issues that have a cultural foundation.

Anyene (2014) affirms that certain cultural practices though acceptable for many years, have however, been found to be detrimental to immunization uptake, child survival and development. While this has been recognized and efforts to counter detrimental cultural practices are undertaken in different parts of the country, they have not always been successful, partly because these cultural practices are sometimes deeply entrenched and other times because there is insufficient engagement with the community and therefore inadequate sensitivity to the issues and education on their harms. One of such cultural practice which tends to occur in many parts of Nigeria is that a woman should remain indoors for 40 days after giving birth. This prevents her from accessing both post-natal cares for herself and immunization services for her child against the childhood killer diseases.

Ubajaka, et al.(2012) argue that in some communities, having babies at home is still the norm. In such situations, the opportunities for immunization, especially the early ones such as BCG and OPV1, given right after birth and six weeks after respectively, may be missed. In some communities, a husband's permission is required in order for a woman, typically the primary caregiver, to leave the house as well as to give any form of medical treatment or obtain any health services for the child.

Distances of Health Facilities and Mothers Immunization of their Children

Another reason by parents for their children not to be fully vaccinated could be because of distance to the health Centers. Mcllvennys and Barr (2007) confirmed that long distance and high cost of transportation to and from the clinic were associated with completion of immunization. Thus, the closer the infant lived to the hospital, the more likely it is to be fully immunized. Distance to the health post which is an alternative measure of accessibility has been found to affect immunization coverage in Kenya (Ndiritu, et'al., 2006). Close proximity to the clinic was associated with an increased likelihood of immunization, with immunization coverage declining with increasing distance from vaccination clinics in Egypt (Reichler et al., 1998). A possible explanation for this could be that visibility of a clinic may attract a parent's attention and/or act as a reminder to the parent concerning the immunization status of the child**.**

Theoretical Framework

Rational Choice Theory

The basic idea of rational choice theory is that patterns of behavior in societies reflect the choices made by individuals as they try to maximize their benefits and minimize their cost. To put it differently, people make decisions about how they should act by comparing the costs and benefits of different courses of action, as a result, patterns of behavior will develop within the society which results from those choices. It is therefore, held that mothers decide to seek for healthcare for their children after careful consideration of the costs and benefits of behaving in a certain manner. By taking their children to a health facility, they must first of all consider economic or financial factors, which include need for money for transporting them to the clinic, money for opening a register, consultation fees, and finally money to buy the prescribed medicine. On the other hand, buying drugs over the counter will cut down the costs; as such she may decide to go to the patent medicine shop.

The focus of rational choice theory is on actors who are seen as being purposive in decision making. This means that actors have ends or goals towards which their actions are aimed. Mothers are seen as trying to

maximize their benefits by going for the best healthcare for their children at a lesser cost and that goal may involve assessing the relationship between the chances of achieving a primary end and what that achievement does for the chances of attaining the second most valued objective. Another source of constraint on the mother's action is the social institution. In this regard, the health center, distance to the health center, availability of health workers, waiting time, hours of work, and attitude of health workers are factors that are put into consideration in the decision making process. This institutional constrain provide both positive and negative sanctions that serves to encourage certain actions and discouragement to health seekers.

The Justification of Rational Choice Theory

Firstly, the pattern of human behavior in society reflects the choices made by individual. Childhood immunization is not a compulsory exercise but rather optional to mothers who have the knowledge of childhood immunization. So, for mothers access to health facilities for childhood immunization have the opportunity to make an informed choice as to whether to immunize their children or not which has it attendant benefit or consequences as the case may be. Also, the importance of information in making rational choice in relations to mothers healthcare seeking behavior for common childhood illnesses. Also Information about health providers helps in making purposive choice among the alternative courses open to them.

Secondly, the rational choice theory talks about social constraint that could encourage or discourage mothers to access health facilities. This is related with health institution such as the distance to health centers, availability of health workers, attitude of health personnel and availability of drugs, income of parent, cost of drugs etc. Here, mothers may be willing access health facilities for childhood immunization but may be discouraged due to the distance to the health centers, inadequacy of health personnel or the attitude of the health personnel could serve as barrier to childhood immunization.

Health Belief Model

Health belief model was one of the first, and remains one of the best known social cognitive models. It is a health behavior change and psychological model developed by Irvin Rosenstock in 1966 for studying, promoting and the utilization of health services and why some people do not use health facilities and services such as immunization and screening. The health belief model (HBM) was furthered by Becker and colleagues in the 1970s and 1980s. Originally, the model was designed to predict behaviour response to the treatment received by acute and chronic patients, but in recent years the model has been used to predict more general health behavior.

The HBM seeks to explain preventive health behaviour of individual and groups. The model assumes that people's action towards health measures are based on their belief and attitudes. It also acknowledges that beliefs and attitudes are not spontaneous; rather they are a function of the processional experience of the individual. Hence, in a general sense, the model does not only look at the individual as a unit of analysis, but considers the socio-cultural environment which conditions the individual to adhere to certain beliefs and predisposes him or her towards behaving in a defined and culturally prescribed manner. The basic argument of this theoretical model is that an individual's attitudes and beliefs direct his line of action in health seeking both preventive and curative diseases. The model focuses on the factors and variables that are considered in the decision to seek or not to

seek health care and from what sources to seek for it.

There are four core constructs: the first two refer to a particular disease whereas the second two refer to a possible course of action that may reduce the risk or severity of that disease.

i. Perceived susceptibility (or perceived vulnerability) is the individual's perceived risk of contracting the disease if he or she were to continue with the current course of action.

ii. Perceived severity refers to the seriousness of the disease and its consequences as perceived by the individual.

iii. Perceived benefits refer to the perceived advantages of the alternative course of action including the extent to which it reduces the risk of the disease or the severity of its consequences.

iv. Perceived barriers (or perceived costs) refer to the perceived disadvantages of adopting the recommended action as well as perceived obstacles that may prevent or hinder its successful performance.

These factors are commonly assumed to combine additively to influence the likelihood of performing the behavior. Thus, high susceptibility, high severity, high benefits and low barriers are assumed to lead to a high probability of adopting the recommended action. Another factor that is frequently mentioned in connection with the Health Belief Model is cues to action (events that trigger behavior), but little empirical work has been conducted on this construct.

The Relevance of HBM to Childhood Immunization

The major propositions of this model are:

i. Perceived susceptibility of the child to contract childhood killer diseases,

ii. Perceived severity of the diseases when contracted by a child,

iii. Perceived benefits of adopting the alternative course of action- immunization.

iv. Perceived barriers or cost

These are determinants of possible course of actions that may reduce the risk of severity of disease. Based on this theory, there are factors that make an individual to take an action against a threat.

i. The perceived susceptibility of the children contracting the disease. Children that are under five years of age are vulnerable to contract childhood killer diseases because their immune system is weak at this stage. They are at high risk of contracting the disease if an alternative course of action is not taking.

ii. The perceived severity of the diseases by parents if a child contracted it, it is devastating. If a child contract any of the childhood killer disease could lead to permanent body damage example, being cripple or even death. When parents perceive such severity of the CKD and its consequences, they become motivated to immunize their children to avert the impending risks. So the pressure to adopt a health measure (childhood immunization) to reduce the severity of the diseases when it occurs becomes necessary.

iii. The perceived benefits are important factors that can determine the course of action toward health issues. A person weighs the benefits of embarking on any action including health care related issues. The benefit is that it will prevent or stop the child from being at risk of contracting Childhood Killer Diseases (CKD).

iv. The costs or barriers that could hinder parents from complying to immunize their children are numerous. These include the lack of knowledge of childhood killer diseases that will enable them to seek for immunization, their attitude due to religious affinity, culture, distance to health centers, husbands' permission to take the child for

immunization, poverty, the costs of accessing health service etc. These are few of the obstacles that could stand as a hindrance to complying to childhood immunization.

Population of the Study

The study focuses on whether access of health centers determines mothers' immunization of children in Bauchi LGA. The population of the study includes the mothers in the nineteen (19) political wards in Bauchi Local Government Area. According to National Population Commission (NPC, 2018), the population of mothers in the study area were 134,905 as projected.

Sample Size

The sample size which is an important feature of any empirical study in which the goal is to make inferences about a population from a sample. Therefore, using Krejcie and Morgan (1970) table for determining sampling size to get our sample size for the study is three hundred and twenty two (322). The table below shows that any given population that is within two thousand, the sample size will be three hundred and twenty two (322) as shown by the arrow.

Sampling Methods for the Survey

There are nineteen (19) political wards in the local government. The list of all the wards were written on the folded piece of papers and nineteen (19) persons stood each representing a ward. YES and NO inscription were written on the piece of papers. Only four pieces of the papers carried 'YES' inscription, the rest carried the 'NO' inscription. The pieces of papers were all put inside a container and then shuffled (properly mixed up) to ensure that each has an equal chance of picking the YES piece of papers. The names of the nineteen (19) persons were tag on them as proxy to the wards and each person picked a piece of paper from the container. The piece of paper picked was then handed to the research assistant to unfold it in the presence of all the representatives of the wards.

The piece of paper with 'YES' inscription was among the wards for the research and those carrying the 'NO' inscription were not included in the wards for the research. The research was only conducted in those wards that have picked the YES inscription which are Miri and Hardo wards, Zungur and Dawaki ward. Respondents for quantitative data comprised of three hundred and twelve (312). Secondly, seventy eight (78) numbers of mothers (respondents) was apportioned to each selected ward proportionately by dividing 312 by four wards based on the homogeneity of the study area. Thirdly, in each of the four sampled wards with more than fifteen (15) streets, six (6) streets using sample frame in each of the four selected ward and thirteen (13) household using sample frames in more than thirty (30) households was probability simple random sampling. The rationale for the use of sample frame was to ensure that all the respondents were given equal chance of being selected. Finally, one (1) mother was selected from each household using purposive sampling technique to ensure equal chances of being selected.

Methods for the Qualitative

Ten participants were purposively sampled for the qualitative; which comprised of two health officials, two traditional birth attendants, two religious leaders, two staff of Non-governmental Organizations (NGOs) working in health related areas and two traditional leaders (such as Mai Uguwa).The ten participants for in-depth interview were purposively selected because they can give more information on the topic of the study. Also, they are considered significant others, because their words and advices were accepted by the community on the topic of the study.

Methods of Data Collection

Primary data was used for the study using survey (questionnaires) and interview to collect information from the respondents. They were supplemented with the secondary data obtained from text books, journals, official gazettes and materials from internet sources. The questionnaire was divided into two sections. Section one was used to elucidate demographic and socio-economic characteristics of the respondents, such as age, religion, marital status, among others centered on the access to health facility of mothers toward childhood immunization. The questionnaire comprised of both open ended and closed ended questions, so as to give the respondents the opportunity to express their feelings rather than restricting them to particular options. The questions were designed in English and in some cases administered in local language by the researcher and his assistants.

In the case of the interview, it was conducted using interview-guide. The interview was conducted in a place conducive and convenient to the interviewees. Tape recorder was used to record the voice of the participants on their permission and where not permitted, a note was taken as the participants give out information.

Methods of Data Analysis

The data obtained through quantitative technique was processed, presented and analyzed using descriptive statistics of percentages and frequencies obtained through the statistical package for the Social Sciences (SPSS version 19) and were presented in tabular format. Some variables were cross-tabulated to know their relationship. Pearson chi-square was used to establish whether there is a relationship between the variables. An inferential explanation was made at the bottom of each table to further elaborate and explain the figures in words. While the qualitative data gathered through an in-depth interview were transcribed, reported and discussed under appropriate sub-headings based on the research objective, so as to ensure flow in the presentation and to enhance proper understanding. The qualitative data was used to compliment and support the quantitative data.

Data Presentation And Analysis.

Data generated from the study are as follows:

Table 1: Whether the mothers Have Access to Health Facilities

Responses	Frequency	Percent
Yes	78	25.3
No	230	74.7
Total	**308**	**100**

Source: Field Survey, 2019

Table 1 shows the responses on whether the mothers have access to health facilities. It indicates that most of the respondents have no access to health facilities while only few of the respondents revealed that they have. The high percentage of mothers not having access to health facility could probably be due to inadequate health facility, poor road network, lack of transport fare and the long distance to health facility. A participant during the in-depth interview lamented on the inadequate health facilities in his area. He said:

In this community Doka, we don't have Hospital where mothers can take their children for childhood immunization. The distance to health centers is about five kilometers of which if a mother does not have transport fare she can't take her child for immunization (IDI: Pastor, 2019).

A nurse during the in-depth interview said:

The numbers of clinics/dispensaries are not commensurate with the number of people. The health personnel, hospitals/clinics, the entire health facilities in Bauchi Local Government are inadequate. WHO health staff ratio is one nurse for four patients. But in the hospital wards, you see over 60 patients

with only four nurses on duty (IDI: Nurse, 2019).

Table 2: Whether the Distance to Health Facility discourages the mothers from taking their Children for Immunization

Responses	Frequency	Percentage
Yes	230	74.7
No	78	25.3
Total	**308**	**100**

Source: Field Survey, 2019

Table 2 shows the responses on whether the distance to health facility discourages the mothers from taking their children for immunization. The table reveals that 74.7 % of mothers are discouraged for taking their children for immunization due to distance, while 25.3 % of mothers are not discourage due to distance. It indicates that most of the respondent's shows that distance to health facility discourages them from taking their children for immunization, while only few of the respondents revealed that the distance to health facility does not discourages them. Even though most mothers discouraged by the distance they cover, it could be because of the cost of transportation, poor income to afford mobility such as car or motorcycle. In the same vein, a participant during the in-depth interview said: If the hospital or clinic is far from the community and the parent does not have money for transportation, they might not be able to go for their Child's immunization (IDI: NGO Staff, 2019).

Another participant said: When a health facility especially the hospital is very far, it discourages mothers from taking their children for immunization. The transport fares, the pocket money and the time to be spent (IDI: TBA, 2019).

Table 3: Whether the Mothers Pay Money for Immunization Services

Responses	Frequency	Percent
Yes	120	39.0
No	188	61.0
Total	**308**	**100**

Source: **Field Survey, 2019**

Table 4 shows the responses on whether the mothers pay money for immunization services. Accordingly, only 39.0 of the respondents revealed that they pay money for immunization service while most of the respondents did not. Though immunization is free to some extent, mothers do pay user fee for the schedule card and sometimes when there is a shortage of syringe, they might be asked to pay a token to enable them purchase it to avoid missing immunization. Almost all the participants during the in-depth interview disclosed that childhood immunization is free. However, a participant particularly said: Generally all immunization is free. Primary Health Care provide all the vaccines to be administered free of charge to children. But there are instances that the vaccines are available but there are no syringes, so the mother may be asked to pay N10 for a syringe (IDI: Nurse, 2019).

Table 4: Whether the Clinic/Hospital the mothers attend for Childhood Immunizations Have Enough Medical Doctors

Responses	Frequency	Percent
Yes	116	37.7
No	192	62.3
Total	**308**	**100**

Source: Field Survey, 2019

Table 4 shows the responses on whether the clinic/hospital the mothers attend for childhood immunization have enough medical doctors. It indicates that most of the respondents revealed that the clinic/hospital they visit for childhood immunizations have no enough medical doctors while only 37.7 of the respondents disclosed that they have. Generally, there is the shortage of medical doctor across and this has tempered with their efficiency including childhood immunization. However, a participant during the in-depth interview said:

The ratio of doctor to patients,' nurses to patient and even the number of hospitals and clinics for childhood immunization are grossly inadequate. There is only one clinic per political ward which mostly have one doctor and two nurses. These facilities are inadequate for mothers in terms of childhood immunization in Bauchi Local Government (IDI: TBA, 2019).

Another participant said:

This is a major area of concern to mothers. Health facilities such as doctors, nurses and the hospitals are grossly inadequate in relations to childhood immunization in Bauchi Local Government. Hardly have you heard hospital in a political ward, so mothers have to take a long journey from their houses to a health facility (IDI: NGO Staff, 2019).

Bivariate Analysis (Cross tabulations)

Table 5a: Mothers Immunization of Children by Distance to Health Facility

Responses	**Whether the Distance to Health Facility Discourage the Respondents from taking their Children for Immunization**		**Total**
	Yes	**No**	
Yes	71 (91.0%)	222 (96.5%)	293 (95.1%)
No	7 (9.0%)	8 (3.5%)	15 (4.9%)
Total	78 (100%)	230 (100%)	308 (100%)

Table 5b

Statistics	**Value**	**DF**	**Cramer's V**	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	**3.798**	**1**	**.111**	**.000**
N of Valid Cases	**308**			

Source: SPSS Version 19 Chi-Square Extract, 2019

Table 5 shows the cross-tabulation on whether the distance to health facility discourages the mothers from taking their children for immunization. The table shows that most of the respondents that immunize their Children claimed that distance to health facility do not discourage them from taking their children for immunization. Based on the decision criteria, and the above statistics displayed, it can be observed that Pearson Chi-Square (calculated value) on table 5b is 3.798 with degree of freedom of 1 using the critical value of the chi-square (t-tabulated) of 0.05 level of significant is 3.841. This proves that, the chi-square value (3.798) is less than the critical value (3.841). Based on these statistics, the study accepts the null hypothesis that says 'there is no relationship between distance to health care centers and mothers immunization of their children against the childhood killer diseases.' This decision means that distance to health facility do not discourage mothers to take their children for immunization.

Access to Health Care Facilities Influence Mothers Immunization of Children against Killer Diseases

Furthermore, the study establishes that distance to health care facilities do not discourage mothers from taking their children for immunization against the childhood killer diseases, as attested to by 25.3 percent of the respondents. Also, the cross-tabulation of mothers immunization of children and responses on whether the distance to health facility discourages mothers from taking their children for immunization shows that 96.5 percent of mothers, who immunize their children claimed that distance to health facility do not

discourage them from taking their children for immunization. The Pearson Chi-Square on table 5 above shows that there is no relationship between distance to health care centers and mothers immunization of their children against the childhood killer diseases. In addition, some of the participants during the in-depth interview revealed that, they do not have hospital where mothers can take their children for childhood immunization and the distance to health centers is about five kilometers and if a mother does not have transport fare she can't take her child for immunization. They also said that the ratio of doctor to patients and nurses to patients hinders the accessibility to health care facilities and even the number of hospitals and clinics for childhood immunization are grossly inadequate, as there tend to be only one or no clinic per-political ward, one doctor and two nurses. Some wards do not have even a single clinic. These facilities are inadequate for many mothers for childhood immunization in the study area. Similarly, the number of clinic/dispensaries is not commensurate with the number of people. The health personnel, hospitals/clinic, the entire health facilities in Bauchi Local Government are inadequate. WHO health staff ratio is one nurse for four patients, but in the hospital wards, there may be over 60 patients with only four nurses on duty. These findings supported Abdulraheem, et al. (2011) assertion that accessibility resulting to long distance walking and long waiting time at the health care facilities is the most common reasons for incomplete childhood immunization.

Also, considering the HBM, that distance to health facility does not discourage mothers from taking their children for immunization, implies that the cost or hindrances are nothing compared to childhood immunization. The mothers' knowledge about the perceived benefits of childhood immunization, which is to safeguard the child from the threat of contracting the killer diseases, makes them to consider five kilometers of walking to health facility as not an obstacle to childhood immunization. It is also a rational choice to consider suffering now for a future happiness. The distance covered walking by mothers to immunize their children is a temporary suffering to gain a future happiness for the child, family and the society at large

Conclusion

It is evident from the research findings that mother's access to health facility for the immunization of children against childhood killer diseases is a problem. Immunization is important in safe-guarding children against childhood killer diseases, which the mothers are crucial to its effectiveness. Thus, some factors, such as the access of parents, which this study has specifically investigated on mothers towards childhood immunization in Bauchi Local Government Area leaving that of husbands for future researchers in the area and other parts of the state, since the attitude of the husbands, have certain influence on immunization of children childhood killer diseases.

Recommendations

Based on the findings and conclusions reached, the following recommendations are hereby offered:

1. Based on the findings of the study, mothers are not discouraged by the distance to health facilities probably due to their knowledge and the importance of childhood immunization. Therefore, government should build more health centers and employ more health officials, such as nurses to meet the World Health Organization (WHO) health staff ratio of one nurse to four patients as the numbers is grossly inadequate.
2. More health facilities for immunization should be established and evenly

distributed across wards in Bauchi Local Government Area as other Local Government Areas, as the already existing ones are inadequate.

References

Abdulraheem, I. S., Onajole, A. T., Jimoh, A. A. G., And Oladipo, A. R. (2011) Reasons for incomplete vaccination and factors for missed opportunities among rural nigerian children. *journal of public health and epidemiology.*vol. 3(4): Pp.194-203.

Anyene, B. C. (2014) Routine immunization in nigeria: the role of politics, religion and cultural practices. *a journal of health economic.* Vol. 3(11), 1-9.

Jegede, A. (2007). What led to the nigerians boycott of the polio vaccination campaign? *journalpediatric medicine, 4*(3): 73-77

Mojoyinola, J. K. & Olaleye, B. A. (2012) Physical and psychological factors influencing maternal non-compliance with immunization schedule. *continental journal of nursing* science. Vol. 4 (2): 37 – 51

Mcllvennys, S. & Barr, J. (2007). Immunization coverage at a well-baby clinic in the united arab emirates. *the journal of the royal society for the promotion of health*. 119(4): 97-100.

Ndiritu, M. Cowgill, K. Ismail, A. Chiphatis, S. & Kamau, T. (2006). Immunization coverage and risk factor for failure to immunize within the expanded programme on immunization in kenya after the introduction of homophiles influenza type b and hepatitis b virus antegens. *journal of biomedical central public health, 6*(1), 132.

Nitchter, M. (1995). Vaccination in the third world: a consideration of community demand. Journal of social science medicine, 41(3):617-632

Opayemi, T. O. (2005). Determinants of utilization of maternal health care services in ibadan south east local government area of Oyo State, Nigeria. *unpublished m.sc. project*. university of ibadan, ibadan, nigeria.

Onyiriuka, A. N. (2005). Vaccination default rates among children attending a station immunization clinic in Benin City, Nigeria. *journal of medicine and biomedical research*. 4(1): 71-77.

Rahji, F. R. And Ndikom, C. M. (20-13). Factors influencing compliance with immunization regimen among mothers in ibadan, nigeria. *journal of nursing and health science.* Vol. 2(2): Pp.1-9.

Reichler, R. Aslanian, R. & Lodhi, Z. (1997). Evaluation of oral poloivirus vaccine delivery 1994 national immunization days in Pakistan. *journal of infectious diseases 4*(179):205-209.

Schimmer, B. &Ihekweazu, C. (2006). Polio eradication and measles immunization in Nigeria. *lancet infectious diseases 5*(6): Pp. 63-65.

Streefland, P. Chowdhury, A. & Ramos-Jimenez. (1999). Patterns of vaccination acceptance. J*ournal of social science medicine 6* (49):1705-1709.

Tagbo, B. N., Uleanya, N. D., Nwokoye, I. C., Eze, J. C. And Omotowo, I. B (2012) Mothers' knowledge, perception, and practice of childhood immunization in Enugu. *Nigerian journal of paediatrics* 39(3): 90-96.