ASSESSMENT OF INFORMATION DISSEMINATION AND USE TO POST-NATAL MOTHERS ON IMMUNISATION AS PREVENTION TO CHILDHOOD KILLER DISEASES BY LIBRARIANS IN FMCs NORTH-CENTRAL, NIGERIA

BY

SAIDU, Amina Abubakar MTech/SICT/2017/6867

DEPARTMENT OF LIBRARY AND INFORMATION TECHNOLOGY FEDERAL UNIVERSITY OF TECHNOLOGY MINNA

AUGUST, 2021

ABSTRACT

The study assessed information dissemination and use to post-natal mothers on immunisation as prevention to childhood killer diseases by librarians in Federal Medical Centres, North-central, Nigeria. The study was guided by eight research objectives, six research questions and two research hypotheses. The objectives of the study were to: identify the available information resources and services in federal medical centre libraries in North-central, Nigeria, investigate the level of library use by post-natal mothers in federal medical centres in North-central Nigeria, determine ways librarians disseminate information on immunisation, find out how information on immunisation is used by post-natal mothers, ascertain which killer diseases are prevented as a result of information disseminated by librarians and to find out the factors affecting information dissemination and use to post-natal mothers on immunisation against childhood killer diseases. Survey research design was adopted for the study. The total population for the study was seven thousand, seven hundred and sixty-four (7,764) librarians working in Federal Medical Centre Libraries and post-natal mothers attending federal medical centres in North-central Nigeria. A sample size of four hundred and nine (409) was used based on the Krejcie and Morgan (1970) Table for determining sample size from a given population. Observation checklist and questionnaire were used as the instruments for data collection; where 0.75 and 0.79 were obtained as the results for reliability test of the two sets of questionnaire. Four hundred and nine (409) copies of questionnaire were distributed, out of which three hundred and two (302) were filled, returned and used for the analysis. The analysis was presented using statistical tools such as frequency counts and percentages, mean and standard deviation. Pearson Product Moment Correlation (PPMC) was used for analysing research hypotheses. The study revealed among others that the information resources available were textbooks on medical lines, professional journals, newspapers, magazines, newsletters, manuals and on immunisation, medical standards and guidelines, guides dictionaries. posters/handbills, while library services available were reference services, current awareness services, selective dissemination of information, intra and inter-library loan services, library orientation services in the medical centre libraries studied. The study equally revealed that medical librarians mostly disseminate information on immunisation to post-natal mothers through radio/television messages, workshops/seminars and outreach services/programmes. The major factors identified as affecting the information dissemination and use on immunisation to post-natal mothers as revealed in the study are inadequate fund to sponsor library immunisation programmes, erratic power supply for effective dissemination of information on immunisation, others include: inadequate fund to acquire the ICT equipment to disseminate the needed information to post-natal mothers, post-natal mothers lack of interest of seeking information on immunisation and lack of government intervention towards the awareness of information on immunisation to post-natal mothers. The study, therefore, recommended among others, that the Federal Government of Nigeria in conjunction with the management of federal medical centres should as a matter of urgency finance the purchase of health information resources in order to carry out effective services particularly on immunisation programmes to post-natal mothers as well as the general public.

TABLE OF CONTENTS

| Conte | ent | Page | |
|------------|--|------|--|
| Title Page | | | |
| Declar | Declaration | | |
| Certifi | ication | iii | |
| Ackno | owledgements | V | |
| Abstra | act | vi | |
| Table | of Contents | vii | |
| List of | f Tables | Х | |
| List of | f Figure | xi | |
| List of | f Appendices | xii | |
| CHAI | PTER ONE | | |
| 1.0 | INTRODUCTION | 1 | |
| 1.1 | Background to the Study | 1 | |
| 1.2 | Statement of the Problem | 8 | |
| 1.3 | Objectives of the Study | 9 | |
| 1.4 | Research Questions | 10 | |
| 1.5 | Research Hypotheses | 11 | |
| 1.6 | Scope of the Study | 11 | |
| 1.7 | Significance of the Study | 11 | |
| 1.8 | Operational Definition of Terms | 12 | |
| CHAI | PTER TWO | | |
| 2.0 | LITERATURE REVIEW | 14 | |
| 2.1 | Conceptual framework | 14 | |
| 2.2 | Theoretical Framework | 20 | |
| 2.2.1 | Concept of Information Dissemination and Use | 21 | |
| 2.3 | Available Information Resources in Federal Medical Centre Libraries | 23 | |

| 2.4 | Level of Library Use by Post-natal Mothers | 26 |
|------|---|----|
| 2.5 | Information Dissemination on Immunisation to Post-natal Mothers | 28 |
| 2.6 | Use of Information on Immunisation by Post-natal Mothers | 32 |
| 2.7 | Killer Diseases Prevented as a Result of the Information Disseminated to Post-natal Mothers | 35 |
| 2.8 | Factors Affecting Information Dissemination and Use on Immunisation to Post-natal Mothers | 37 |
| 2.9 | Review of Related Empirical Studies | 41 |
| 2.10 | Summary of Literature Review | 48 |
| CHAI | PTER THREE | |
| 3.0 | RESEARCH METHODOLOGY | 49 |
| 3.1 | Research Design | 49 |
| 3.2 | Population of the Study | 49 |
| 3.3 | Sample and Sampling Technique | 50 |
| 3.4 | Data Collection Instruments | 51 |
| 3.5 | Validity of the Research Instruments | 52 |
| 3.6 | Reliability of the Research Instruments | 52 |
| 3.7 | Method of Data Collection | 53 |
| 3.8 | Method of Data Analysis | 53 |
| CHAI | PTER FOUR | |
| 4.0 | RESULTS AND DISCUSSION | 54 |
| 4.1 | Response Rate | 54 |
| 4.2 | Descriptive Analysis of Demographic Data | 56 |
| 4.3 | Data Analysis | 58 |
| 4.4 | Result of Tested Hypotheses | 72 |
| 4.5 | Summary of the Findings | 74 |

| 4.6 | Discussion of the Findings | 76 |
|-----|-----------------------------------|----|
| 4.7 | Findings of the Tested Hypotheses | 79 |
| СНА | PTER FIVE | |
| 5.0 | CONCLUSION AND RECOMMENDATIONS | 81 |
| 5.1 | Conclusion | 81 |
| 5.2 | Recommendations | 81 |
| 5.3 | Contribution to Knowledge | 83 |
| 5.4 | Suggestions for further studies | 83 |
| | REFERENCES | 85 |
| | APPENDICES | 94 |

LIST OF TABLES

| Table | Page | |
|-------|---|----|
| 3.1 | Population of the Study | 50 |
| 3.2 | Sample Size of the Study | 51 |
| 4.1a | Response Rate of the Respondents | 54 |
| 4.1b | Response Rate Based on Category of the Respondents | 55 |
| 4.2 | Classification of Respondents by Gender | 56 |
| 4.2 | Classification of Respondents by Qualification/Educational Background | 56 |
| 4.2 | Classification of Respondents by Age Range | 57 |
| 4.2 | Classification of Respondents by Year(s) of Experience (Medical Librarians) and Marital Status (Post-natal mothers) | 57 |
| 4.3 | Information Resources and Services Available in Bida, Keffi, Lokoja and Makurdi Federal Medical Centre Libraries | 59 |
| 4.4 | Level of Library Use by Post-natal Mothers | 61 |
| 4.5 | Ways Librarians Disseminate Information on Immunisation to post-natal Mothers | 63 |
| 4.6 | How Information Disseminated on Immunisation is used by Post-natal Mothers (Post-natal mothers) | 66 |
| 4.7 | Diseases Prevented as a result of the Information Dissemination on Immunisation Against Childhood Killer Diseases | 69 |
| 4.8 | Factors Affecting Information Dissemination and Use on Immunisation to Post-natal mothers (Medical Librarians) | 71 |
| 4.9 | Relationship Between Information Dissemination and Information Use on Immunisation to Post-natal Mothers | 73 |
| 4.10 | Relationship Between Information Use and diseases prevented as a Result of the information disseminated on Immunisation | 74 |

LIST OF FIGURE

| Figure | | page |
|--------|------------------|------|
| 2.2 | Conceptual Model | 14 |

| LIST | OF | APPE | NDICES |
|------|----|------|--------|
| | | | |

| Appendix | Page |
|---|------|
| A: Letter of Introduction | 94 |
| B: Questionnaire for Librarians in Federal Medical Centre Libraries | 95 |
| C: Questionnaire for Post-natal Mothers | 100 |
| D: Reliability Test Result | 103 |
| E: Sample Size Table | 106 |

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background to the Study

Prevention as popularly said is better than cure. Good health is indeed the foundation upon which individuals and families build long, healthy lives especially when unburdened by sickness and diseases. This occurs mainly when there is proper immunisation. Immunisation is the key to healthier childhood and it is one of the safest and most effective precautions to prevent disease and early childhood death. World Health Organisation (WHO) (2018) stated that good health of people in the community could not be only as a reflection of mental and social well-being but also absence of disease. However, to obtain the (WHO) goal of providing health for all, improvement in a community should aim not merely mental ill health and tension but also to reduce diseases to a worthy or moderate level. According to Global Vaccine Action Plan (GVP) (2018) immunisation is a central pillar of universal health coverage, providing an infrastructure on which effective and equitable health systems can be constructed and effective national immunisation system requires ongoing nurturing, political commitment as well as public support and there will never come a point at which immunisation is no longer required because every year more than 130 million new babies are born and each equally deserve protection against vaccine-preventable diseases.

Immunisation is simply the process of introducing weakened or killed germs (vaccines) into the body, which increases body immunity to protect one from a particular disease. These weakened or killed germs stimulate the body to produce antibodies that will fight or weaken any disease organism that attempts to enter the body. Immunisation is given

1

against infectious diseases that cause much illness, death and which if not given could make a child to become disabled permanently.

The National Programme on Immunisation (NPI) was introduced in Nigeria in 1979. From 1979-1997, the programmme was known and called Expanded Programme on Immunisation (EPI). To give a national outlook and show federal government commitment, the federal government established an agency called NPI under Decree 12 in August 1997 (NPI/UNICEF Security Report, 2003). This is to effectively control the occurrence of all vaccine preventable diseases through immunisation and provision of vaccine and other consumables. Focus was on prevention, control & eradication of the following vaccine preventable diseases in Nigeria. The diseases include: tuberculosis, measles, diphtheria, pertussis, neonatal tetanus, cerebrospinal meningitis, yellow fever and polio to mention but a few. These diseases are targeted through immunisation service delivery and this is done by administration of vaccine to susceptible target. NPI aims at the following group of people for immunisation: Children of age \leq 11months, all pregnant women and women of reproducing age group.

To corroborate this position, Adedokun *et al.* (2017) in their study on "Incomplete Childhood Immunisation in Nigeria: a multilevel analysis of individual contextual factors," asserted that more than three-quarters of the children (76.3%) were not completely immunised, about 83% of the children of young mothers 15–24 years and 94% of those whose mothers are illiterate did not receive full immunisation. In the fully adjusted model, the chances of not being fully immunised reduced for children whose mothers attended antenatal clinic. It was therefore concluded that the risk of children being incompletely immunised in Nigeria was influenced by not only individual factors but also community and state-level factors.

Similarly, according to (NPI/UNICEF Security Report, 2003) the National Programme on routine immunisation of children in Nigeria is carried out using the following vaccines: BCG (BacilliCalmette Guerin)—at birth or as soon as possible after birth; OPV (Oral Polio Vaccine)—at birth and at 6, 10, and 14 weeks of age; DPT (diphtheria, pertusis, tetanus)—at 6, 10, and 14 weeks of age; hepatitis B—at birth, 6 and 14 weeks; measles—at 9 months of age; yellow fever—at 9 months of age; and vitamin A—at 9 months and 15 months of age.

In the same vein, the Nigerian Federal Ministry of Health definition (2011) stated that a child is considered fully vaccinated if he or she has received a Bacilli Calmette Guerin (BCG) vaccination against tuberculosis; three doses of Diphtheria, pertusis, tetanus (DPT) to prevent diphtheria, pertussis (whooping cough), and tetanus; at least three doses of polio vaccine; and one dose of measles vaccine. All these vaccinations should be received during the first year of life, over the course of five visits, including the doses delivered at birth. According to this schedule, children aged 12–23 months would have completed their immunisations and be fully immunised. To keep track of the delivery of these immunisations, Nigeria also provides parents or guardians with a health card on which each dose is recorded.

Immunisation according to GVAP (2012) is and should be recognised as a core component of the human right to health and an individual, community and governmental responsibility because vaccination prevents an estimated 2.5 million deaths each year. When protected from the threats of vaccine-preventable diseases, immunising children have the opportunity to thrive and have a better chance of realising their full potential. The Global Vaccine Action plan (2012) stated further that immunisation is an essential investment in a country because it is a comprehensive package for disease prevention and control.

Similarly, Illinois Immunisation Programme (IIP)(2018) opined that immunisation protects against the following serious diseases which can cause disability and death. These diseases do strike thousands of children each year because some babies are not immunised thus, they cause serious health problems in young children. These diseases are varicella (chicken pox), tetanus (lockjaw), whooping cough (pertussis), polio (poliomyelitics), measles (rubeola), mumps (rubella hepatitis B) pneumonia and meningitis.

Furthermore, Mediclook.info (2018) stated that vaccination or immunisation gives a small amount of weak virus in a person, invoke an immune response that will prevent or reduce future infection by the same virus/bacteria. This means that antibodies produced in the body will enhance the person's immunity against those diseases because future exposure will be fought quickly by the body due to the vaccine which therefore reduces the severity or prevent the onset of the diseases. In a similar vein, to prevent oneself and the general public from getting sick, vaccinations are recommended for everyone because it is easier to prevent than treat a disease once an individual have it. Ophori *et al.* (2014) explained that immunisation against childhood diseases such as diphtheria, pertussis, tetanus, polio and measles is one of the most important means of preventing childhood mobility and mortality. Therefore, achieving and maintaining high levels of immunisation of post-natal mothers coverage should be a priority for all health workers including the information professionals.

According to Charlotte *et al.* (2006) the postpartum also known as post-natal period of a mother is defined as the first six weeks after birth and it is very critical to the health and

survival of a mother and her newborn. The most vulnerable time for both mother and child is during the hours and days after birth. This simply means that lack of care in this time period may result into death or disability as well as missed opportunities to promote healthy behaviors, affecting women, newborns, and children.

Post-natal mothers are regarded as those women who visit federal medical centres and other health institutions like hospitals, clinics, maternities which are usually owned by federal and state government or private individuals after a child is born for regular check-up. WHO (2014) described the post-natal period of a mother as the most critical and yet the most neglected phase in the lives of mothers and babies; most maternal and newborn deaths occur during the post-natal period. In addition, Kansky (2016) stated that postpartum (or post-natal) period begins immediately after the birth of a child as the mother's body, including hormone levels and uterus size, returns to a non-pregnant state. Similarly, Romano *et al* (2010) stated that postpartum period can be divided into three distinct stages; the initial or acute phase, 6–12 hours after childbirth; subacute postpartum period, which lasts 2–6 weeks, and the delayed postpartum period, which can last up to six months.

For effective immunisation services to be achieved among post-natal mothers, some variables such as information dissemination and use need to be in place as well as the federal medical centre libraries. Information dissemination according to Isibor and Fidella (2018) involves strategic efforts to reach out to individuals, organisations and communities with the right information, in the right format, using the right medium and at the right time. Therefore, the role of the federal medical centre library in information dissemination is fundamentally critical in health education and the provision of balanced perspectives to medical issues. They argued further that information dissemination in the context of healthcare provision is the careful collection, analysis,

matching and delivery of a message for a desired outcome by the medical librarians working in the federal medical centre libraries. The matching process is usually facilitated through a systematic approach, an appropriate media and using the right language. Information disseminated to post-natal mothers particularly on childhood killer diseases helps to clarify the rights and privileges of patients' thus promoting selfesteem and dignity of mothers.

Information dissemination is normally one of the services performed in various libraries including federal medical centre libraries in Nigeria. This service is usually provided to medical students, medical practitioners, pregnant and post-natal mothers. This is to enable them be aware of the medical libraries existence as well as provide them resources and information services to enhance and better their conditions. This service is necessary in every information centre because "Information" as popularly said is "Power"

Various ways of disseminating information particularly in information centres exist with each targeting a specific accomplishment to serve clienteles in the best possible ways presupposes that the services be focused on the needs of the customer and federal medical centres (FMC) is not an exception. However, the dissemination of information particularly in this contemporary period has taken a unique dimension, which could be either through the use of telecommunication systems or social media platforms such as Facebook, Instagram, Twitter, WhatsApp, Telegram through your smartphones, laptops, computers and palmtop etcetera. Dissemination of information could also be through interpersonal communication such as: face-to-face communication with persons involved through television, radio programmes, newspapers, magazines and pamphlets and these are all found to be useful in terms of dissemination of information to postnatal mothers by librarians. Another important variable for better immunisation process to be achieved among postnatal mothers is through information use. IGI Global Dissemination of knowledge (2019) defined information use from the user or cognitive perspective as the modification of the user's knowledge structure. Information use is concerned with understanding what information sources people choose and ways in which people apply information to make sense of their lives and situations (Encyclopedia.com, 2019).

Chimah and Nwokocha (2013) asserted that the efficacy of the principle of information utilisation is anchored on its ability to satisfy the needs of all seekers including the postnatal mothers. Similarly, Uhegbu (2007) simply described information use as the act of putting into appropriate use the information acquired. Post-natal mothers just like other women counterparts use information for life-long learning, solve their daily problems, to forge social relationships as well as use this information to better their health matters. The ultimate goal of information dissemination is its utilisation and for proper decisions to be made. The process of examining, searching and making good use out of a piece of information is regarded as information use or utilisation. Therefore, it is expected that when the librarians disseminate information on the importance or benefits of immunisation no children, the age brackets of those to be immunised, the period or immunisation routine of each vaccine and the consequences of incomplete immunisation on children, their mothers should adhere as well as comply and properly use the information disseminated.

Therefore, with regards to this study, information use refers to the process by which post-natal mothers make adequate and proper use of information provided to them against infectious childhood killer diseases; and one of the most effective ways to increase utilisation and to improve on the quality and relevance of health information to post-natal mothers particularly on immunisation is through proactive, regular dissemination of information by the librarians. This is why information dissemination and use as regards to immunisation becomes paramount to post-natal mothers to guide against childhood killer diseases.

1.2 Statement of the Problem

Immunisation of children has remained an outstanding preventive measure against vaccine preventable diseases (VPDs) all over the world, Nigeria inclusive. Access to quality information on immunisation by post-natal mothers is considered the most important factor for healthier childhood. Information on routine immunisation received by post-natal mothers may make or mar its successes. Proper communication and dissemination of information on immunisation to post-natal mothers as well as their use of information cannot be over emphasised.

The researcher, after some preliminary investigation, discovered that even with the recent advancement in technology in terms of information dissemination, some postnatal m others still have little or no information on immunisation, which deprived them the opportunity of explaining the benefits of immunising children against childhood killer diseases. Furthermore, the researcher through the information gathered from daily newspapers, one on one interaction with post-natal mothers in the study area and other literature has learnt the adverse effects of improper immunisation of children in Nigeria. For instance, according to the Nigerian Networks of NGOs (NNGOs) (2018), a survey conducted in Lagos 2017, using a Multi Indicator Cluster Survey (MICS) showed that only about 23% of children in Nigeria were fully immunised in the last one year leaving out 77%. This means that there is still a lot more work to be done to achieve 100% coverage in immunisation with the intention of leaving no child behind in Nigeria. This present situation is worrisome considering the fact that the rate of child mortality in Nigeria may be on the increase, if nothing is done fast. In order to improve and achieve proper routine immunisation among the post-natal mothers in Nigeria, the information professionals particularly the librarians are expected to disseminate the right information at the right time to post-natal mothers on the dangers of not immunising their children against diseases. Such knowledge is necessary in order to take appropriate steps in increasing the levels of use of information disseminated on immunisation by post-natal mothers in the overall interest of the children, mothers, the federal medical centres in North-central, Nigeria and Nigeria as a whole.

This, therefore, necessitates the need to assess the information dissemination and use to post-natal mothers on immunisation as prevention to childhood killer diseases by librarians in FMCs North- central Nigeria.

1.3 Objectives of the Study

The aim of the study is to assess the information dissemination and use to post-natal mothers on immunisation as prevention to childhood killer diseases by librarians in FMCs North-central, Nigeria. The specific objectives were to:

- 1. identify the available information resources and services in federal medical centre libraries in North-central, Nigeria;
- 2. investigate the level of library use by post-natal mothers in federal medical centres in North-central, Nigeria;
- 3. determine the ways librarians disseminate information on immunisation to postnatal mothers in federal medical centres in North-central, Nigeria;
- 4. find out how information disseminated on immunisation is used by post-natal mothers in North-central, Nigeria;

- 5. ascertain which killer diseases are prevented as a result of the information disseminated on immunisation to post-natal mothers in North-central, Nigeria;
- find out if there is any relationship between information disseminated to postnatal mothers and information use on immunisation as prevention to childhood killer diseases;
- ascertain if there is any relationship between information use by post-natal mothers and diseases prevented as a result of information dissemination on immunisation against childhood killer diseases and
- find out the factors affecting information dissemination and use on immunisation to post-natal mothers in North-central, Nigeria.

1.4 Research Questions

Based on the objectives of the study, the following research questions were answered:

- 1. What are the information resources and services available in federal medical centre libraries in North-central, Nigeria?
- 2. What is the level of library use by post-natal mothers in federal medical centres in North- central, Nigeria?
- 3. What ways do librarians disseminate information on immunisation to post-natal mothers in North-central, Nigeria?
- 4. How do post-natal mothers use information disseminated on immunisation in North-central, Nigeria?
- 5. What killer diseases are prevented as a result of the information disseminated on immunisation to post-natal mothers in North-central, Nigeria?
- 6. What are the factors affecting information dissemination and use on immunisation to post- natal mothers in North-central, Nigeria?

1.5 Research Hypotheses

The following null hypotheses were tested in the study at 0.05 level of significance:

- There is no significant relationship between information dissemination to postnatal mothers and information use on immunisation as prevention to childhood killer diseases.
- 2. There is no significant relationship between information use by post-natal mothers and diseases prevented as a result of information dissemination on immunisation against childhood killer diseases.

1.6 Scope of the Study

The study covered Bida, Keffi, Lokoja and Makurdi Federal Medical Centres all in North-central, Nigeria as well as the medical librarians and post-natal mothers found in the Bida, Keffi, Lokoja and Makurdi federal medical centres. It also determined the extent to which medical librarians dissminate information on immunisation to help the well-being of both post-natal mothers and their children and how information on immunisation is being used by post-natal mothers against childhood killer diseases in federal medical centres in North-central, Nigeria.

1.7 Significance of the Study

The study will be of benefit to the following people: medical practitioners, post-natal mothers, policy makers in government, federal medical centres and Medical librarians.

The study will be significant to medical practitioners in the federal medical centres as they will know the extent post-natal mothers are educated or informed on the importance of immunisation thereby make their work easy and better. It will also be of immense significance to post-natal mothers as they will adequately be informed on why their children should be immunised as well as the consequences or implications of improper immunisation and will therefore reduce childhood killer disease cases in the future. The study also will be of benefit to policy makers in government as it will assist them to develop policy suitable for all in terms of making available both the human and material resources necessary for adequate service delivery especially to post-natal mothers against the killer diseases.

Medical librarians will also benefit in the sense that they will identify their roles as information professionals and thereby protect childrens' lives. They will equally have unique opportunity to help overcome health literacy challenges by developing new and effective communication strategies for disseminating relevant information to audience with differing levels of health literacy. This is of particular importance to the post-natal mothers in Bida, Keffi, Lokoja and Makurdi federal medical centres in North-central, Nigeria.

1.8 Operational Definition of Terms

The following terms were defined as used in the context of the study:

Assessment is the evaluation of information dissemination and use to post-natal mothers on immunisation against childhood killer diseases in federal medical centres North-central, Nigeria.

Childhood killer diseases are diseases such as diphtheria, pertussis, tetanus, polio, whooping cough, pneumonia and measles that affect children in four federal medical centres in North-central, Nigeria.

Immunisation is a service provided by nurses to post-natal mothers and their children for a good health care in federal medical centres in North-central, Nigeria. **Information dissemination** is the method used by medical librarians in federal medical centres in conveying information to post-natal mothers on immunisation as prevention to childhood killer diseases in bida, keffi, lokoja and makurdi federal medical centres

Information use is the ability of post-natal mothers to use the information provided to them on immunisation by librarians to help prevent child mortality in the federal medical centres.

Medical Librarians are medical librarians in charge of making available the needed information resources and services as regards to immunisation to post-natal mothers in federal medical centres in North-central, Nigeria.

Post-natal mothers refer to those women who visit federal medical centres after a child is born for regular check-up.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Conceptual Framework

The conceptual model for the study is an original construct of the researcher. The essence of the conceptual model is to explain how the variables are connected to each other as well as the flow among them as presented in the model below:

Conceptual Model



Figure 2.2: Conceptual Framework of the study. (Authors Construct)

The model presents the interconnection between federal medical centre Library, information resource availability, information dissemination to post-natal mothers, information on immunisation as well as information use by post-natal mothers. It shows that information use on immunisation by post-natal mothers depends to a large extent on the information disseminated as well as the availability of information resources and services in the federal medical centre library. The model argues that the library is expected to provide all kinds of information resources and services regardless of formats to aid in promoting awareness on the importance of immunisation to prevent killer diseases among children. When information is adequately disseminated to post-natal mothers especially with the advent of Information and Communication Technology (ICT) facilities which encourage the creation and sharing of information which can lead to effective dissemination of health information immunisation to post-natal mothers; this will help to prevent future occurrence of diseases.

Immunisation is widely known to be a preventive measure taken to reduce childhood killer diseases. Ozawa *et al.* (2016) considered immunisation as one of the most costeffective public health interventions and remains one of the best things to obtain in public health. Similarly, Idris (2013) described immunisation as the process by which a person is made immune or resistant to an infectious disease by the administration of a vaccine. Vaccines stimulate the body's own immune system to protect the person against subsequent infection or disease. Vaccines act by inducing the production of pathogen-specific antibody as well as both B & T memory cells, which cooperate in a complex manner to protect the body against the pathogen. In highlighting the benefits of immunisation, Idris (2013) further stated that the World Health Organisation (2014) concluded that immunisation: is a proven tool for controlling or eradicating infectious diseases; is one of the most cost-effective health investments; has clearly defined target groups health investments; does not require any life style change; averts 2-3 million deaths annually; has proven strategies for access to most hard-to-reach populations; and can be effectively delivered through outreach activities;

Similarly, Ophori *et al.* (2014) described that the key benefit of routine immunisation includes the good health and survival of children, cost saving benefit of immunisation from a lower incidence diseases and less frequent visits to the hospitals. It was further explained by the Centre for Diseases Control and Prevention (CDCP)(2016) that immunisation is one of the best ways parents can protect their infants from 14 serious childhood diseases before the age of two (2); and that more than 17,000 cases of whooping cough were reported to Centre for Diseases Control and Prevention in 2016 which could have been prevented if all babies had received the first dose of immunisation on time at 2 months old. This means that vaccinating your baby according to the recommended immunisation schedule gives them the best protection against the following 14 serious childhood diseases; Haemophilus influenza type B(HIB), Diphtheria, Hepatitis A, Hepatitis B, Influenza, Measles, Mumps, Pertussis(whooping cough), Pneumonia (pneumoeoccal diseases), Polio, Rubella (german measles, Tetanus(lockjaw), Rotavirus and Varicella(chicken pox).

Nigeria is a signatory to all global immunisation targets of reaching 80% Diphtheria, pertusis, tetanus (DPT3) coverage in 80% districts in developing countries by the year 2005 and with Millennium Development Goals (MDG4) target of reducing child mortality by two-thirds by the year 2015 National Programme on immunisation (NPI)

2007; yet meeting these targets even beyond 2015 is still questionable. For instance, NNGOs conducted a survey in 2017 using a Multi Indicator Cluster Survey (MICS). The result showed that only about 23% of children in Nigeria were fully immunised in the last one year leaving 77% not fully immunised. In addition, statistics from the National Immunisation Coverage Survey (NICS) (2017) from Lagos State showed that 68% of children aged 12-23 months received full immunisation. This implies that although routine immunisation (RI) coverage in Lagos is impressive, there is still a lot more work to be done to achieve 100% coverage on immunisation with the intention of leaving no child behind in Nigeria. Also, a report released by InfoGuide Nigeria in May 2018, noted that "vaccines have always been problematic for Nigeria primarily because funds are insufficient or were not released on time which could affect the immunisation service delivery.

Immunisation of children in Nigeria according to Hagan and Plethlu (2016) has been a core public health function. This function includes a recommendation for a completion of several vaccinations for children and adolescents. The recommendations include vaccination for the Bacille Calmette-Guerin vaccine (BCG) which is given at birth against tuberculosis, a total of 4 doses of Oral Polio Vaccine (OPV) given at birth and then at 6, 10 and 14 weeks of age (OPV 0, OPV1, OPV 2 and OPV 3). In addition, 3 doses of the Diphtheria, Pertussis, Tetanus vaccine are given, along with the Hamophilus influenzae type B and the Hepatitis B (DPT/HiB/HepB) 5-in-1 vaccine at 6, 10 and 14 weeks of age. The recommended vaccinations for measles and yellow fever are given at 9 months. Uptake of these vaccinations, however, have not been up to expectations.

Shamsul *et al.* (2012) opined that consideration of limiting factors such as the adverse immunisation experiences inflicted on the babies and mothers, emotional distress by

permitting the infliction of pain on the babies and their dissatisfaction with the process of immunisation contribute to the default behaviour and forgetfulness among mothers, which is the commonest reason for defaulting immunisation and all these factors might have an influence on why immunisation has been neglected. Furthermore, some reasons influencing defaulting immunisation are mothers' employment status, family size, and mothers' age. Therefore, parents should realise the importance of bringing their children for immunisation according to the schedule. To reduce the prevalence of the immunisation defaulter, mothers with these profiles need to be given more support and should be monitored closely to avoid neglecting the right to immunise their children.

In a related study, Abdulkarim (2011) stated that immunisation is an important component of primary health care and in routine immunisation programmes, virtually all vaccines, except oral polio vaccine, are administered by injection. Vaccines against six childhood killer diseases are the most important vaccines to public health. Yet, diseases preventable by vaccine account for the deaths of a quarter of the 800,000 child deaths in Nigeria every year. This is a clear indication that post-natal mothers pay little or no attention to immunisation process in the society.

Moreover, immunisation could be routine or supplemental (immunisation campaign). Routine immunisation refers to the nationally scheduled regular administration of vaccine dosages to infants at specified ages. Children are usually taken to the health facilities by their parents or care givers to receive age-appropriate doses of antigens. In most developing countries, this is only done on specific days of the week to reduce vaccine wastage since the vaccines are supplied in multi-dose vials to reduce cost. The main aim of routine immunisation is to deliver a complete number of doses of potent vaccines in a timely, safe and effective way to all children and women. CBHS Health and Wellbeing Blog (2014) stated that immunisation is a simple and effective way to protect your child from serious diseases. By immunising your child, not only do you give them the best start to a healthy future but you help protect the broader community by minimising the spread of disease. Immunisation protects against a large number of childhood diseases considered dangerous. These include: Whooping cough (pertussis), measles, German measles (rubella), meningococcal C, pneumococcal disease, chickenpox (varicella), tetanus, mumps, polio, diphtheria, rotavirus and Each of these diseases cause serious health problems and can sometimes hepatitis. prove fatal. Furthermore, CBHS Health and Wellbeing Blog (2014) discovered five key things to consider about immunisation which are as follows: immunisation saves livesby immunising your child, you help protect them against potentially fatal diseases and illnesses; vaccination1 is safe and effective -while vaccines can cause slight discomfort and swelling, immunisation is the safest way to protect against harmful disease. Any discomfort is far less traumatic than any of the diseases immunisation protects against; immunisation protects those you love- by helping reduce the spread of disease, you lower the risk of contact for those too young to be immunised. The young are the most vulnerable, so prevention is key in keeping them safe; mmunisation can save you money- some vaccine-preventable diseases can result in prolonged disabilities. This puts undue financial pressure on families as time is lost at work and medical bills roll in; mmunisation gives future generations the chance to live disease free- should vaccination be adopted by all, the risk of certain diseases could be removed for future generations. We have already seen it with smallpox, and many other diseases that are close to being wiped out. The more people immunise, the safer our future generations will be.

2.2 Theoretical Framework

19

The Health Belief Model is a theory that attempts to explain health-seeking behavior by examining how people perceive disease severity, their likelihood of contracting that disease, the benefits of taking preventive action, and the cost of taking preventive action (Strecher & Rosenstock, 1997). This theoretical framework is useful to this study because it has helped to explain findings generated from this study. This means that if parents do not perceive vaccine-preventable diseases as severe enough to warrant preventive measures or if they do not perceive any particular benefit to their childrens' health and well-being from vaccination/immunisation then there is likelihood that this will cause harmful diseases to their children.

Johnson and Meischke (1991) identified two main sources of health-related information, namely interpersonal and mass media sources. The interpersonal sources of health information include doctors, nurses, family and friends, health groups, voluntary organisations, and other professions including the librarians. These face-to-face information channels are preferred for information dissemination and the teaching of complex skills that need two-way communications between individuals (Parrott, 2004). The mass media sources include Television, Radio, Posters, Books, Magazines and Newspapers, Videos and the Internet. This means that librarians as custodians of information have a larger role to play in terms of making available the right information to post-natal mothers at the right time. Immunisation being a preventive measure taken against all these childhood killer diseases needs to be explained adequately to post-natal mothers to avoid future occurrences.

2.2.1 Concept of Information Dissemination and Use

Information dissemination is a powerful tool for national development and has been defined by many authors in different ways. Information dissemination is defined by Oluleye (2014) as the process of communicating knowledge from one person/source to

another. It also plays a vital role in achieving the purpose of that message because it describes practical methods of solving specific problems, when the right information is disseminated especially to post-natal mothers on immunisation, it will therefore improve utilisation as they would be informed about their rights to seek health care services as well as their responsibilities towards diseases affecting their children. Lomas (1993) termed "dissemination" as making an audience aware of new and relevant information, which literally means "to scatter, or sow". However, when the term is applied to achieving an effective flow of information between a source and audience, it is important that the process is not haphazard, like the scattering of seeds. The event should be more carefully planned, targeted towards, and tailored to the needs of its intended audience.

Similarly, information dissemination according to Oluleye (2014) could attract changes and development which if provided to post-natal mothers would improve the importance of immunisation rate and have a better understanding of why it is necessary to immunise their children. According to IGI (2018) information dissemination is the act of distributing and broadcasting information and a key element in health promotion efforts. Information when accurately and timely disseminated through the right channels could be very effective in the promotion of health and prevention of childhood killer diseases among post-natal mothers and their infants. Unobe (2015) stated that there is a shift from libraries that stand alone to library and information networks, from print collections to digital collections, and from ownership to access.

Furthermore, Unobe (2015) stated that this transition is as a result of the impact of ICT as well as the availability of the Internet and the web which are affecting all types of libraries. This will therefore enable librarians in the federal medical centres to remain relevant in the 21st century by responding timely and positively in all facets of their

services and especially, services rendered to post-natal mothers on immunisation against these killer diseases. ICT gadgets such as mobile phones, Internet, software packages etcetera, encourage the creation and sharing of information which can be used to perform certain activities in the special libraries. Obasola and Mabawonku (2018) opined that prior to the advent of ICT the dissemination of health information as a strategy for preventing pregnancy, birth complications and prevention of diseases were mainly based on print and oral communication approaches. Wangari (2011) stated that existing research on health outcome in developing countries has shown the important role the media in disseminating information on health-related issues. Three sources of information are usually used: radio, television and newspapers and magazines. Therefore, women exposure to information through the radio, television and newspaper significantly increases the utilisation of delivery and post-natal care services.

On the other hand, Information Utilisation as opined by Olalewe and Amana (2011) is viewed as a fraction of a specified period that is actually used to produce quality work. Similarly, Ofori-Dwumfuo and Addo (2012) maintained that the quality of decisions made by people is dependent on the quality and quantity of information at their disposal. Information use according to Cole (2008) is seen as an act of interpreting and codifying of environmental stimuli where the human organism creates knowledge adaptation.

Cox and Janti (2013) were of the opinion that the use of information is a great means to measure the importance of information materials available in an information system or library in an organisation. The only criterion that determines the retention and how important information materials are, is how it is used by the patrons of the organisation including Federal Medical Centres. Similarly, Unobe (2015) opined that the knowledge of the level and extent of utilisation of any information resource is a vital component of

the planning process which provides librarians and the library administrators with feedback information on services delivery, response to users' needs and preferences.

The principle of information use or utilisation according to Chimah and Nwokocha (2013) is classified into four broad premises stated:

-goal-that every use of data and information is goal oriented and that it must be aimed at solving a problem or enhancing a better understanding of an already known situation. The purpose of seeking information is central to its demand and use.

-availability-this entails not only that information is provided but also it must be accessible and devoid of socio-economic and environmental impediments.

- process (Channel of Communication)-that whatever medium is used, effective utilisation of information is possible if the processes of availability are cheap, unambiguous, relevant, nearer to the people and in line with their level of sophistication, literacy and understanding.

- users' satisfaction-the ultimate goal of using information is to satisfy the seekers' needs because needs varied, their satisfaction amounts to a high level of achievement. Users' satisfaction is influenced by means of accessing information. This means that without good information communication channels, accessibility will be difficult and its utilisation impaired. Therefore, effective channels of communication is paramount in the utilisation of information for user satisfaction.

2.3 Available Information Resources in Federal Medical Centre Libraries

A well-informed society is considered as an enlightened and developed one and as such, the importance of libraries as an efficient 'vehicle' for acquiring, organising and making information available, cannot be overemphasised. Special libraries according to Ramadan (2016) is defined as those libraries that are not meant for every member of the public but exclusively for users operating within or working for the specialised organisation. This means that libraries located in federal medical centres are special libraries established to serve the needs of special clients such as medical practitioners as well as patients including post-natal mothers.

According to Eniwonmi (2018) on the "Influence of information resources usage and services on job performance by health practitioners in federal medical centre libraries in North-central, Nigeria" stated that information resources and services available in Federal Medical Centre Libraries includes Professional journals, Conference proceedings, Magazines, Newsletters, Professional Handbooks, Encyclopedias, Dictionaries, Databases, Reference Services, Document Delivery Service, Searching Medical Databases, Reprographic Services, Medical standards and Guidelines, Computerized Literature Search, Current Awareness Services, Selective Dissemination of Information, Inter-library loan and intra-library loan services. When adequate resources are provided and made available to patrons particularly the Post-natal Mothers, it will aid in achieving the goals of the library and the Medical Centres.

All types of libraries are established to provide a variety of information resources and services which are geared towards satisfying the information needs that enhances the efforts in achieving the objectives of the parent organization. The libraries located in federal medical centres are not left out of this objective of providing resources and services that will lead to tremendous transformation in information dissemination to not only post-natal mothers but other patients as well. This transformation is as a result of the changing pattern in the information needs of individuals including post-natal mothers on immunisation against those killer diseases found to be affecting children.

In a similar study, Popoola and Haliso (2009) defined information resources as those information-bearing materials that are in both printed and electronic formats, such as textbooks, journals, indexes, abstracts, newspapers and magazines, reports, CD-ROM databases, the Internet/E-mail, video tapes/cassettes, diskettes magnetic disk, computers, microforms and so on. These information materials are the raw materials that libraries acquire, catalogue, stock, and make available to their patrons. The availability of these resources determines the success of utilising the library including the Federal Medical Centre Libraries. Information resources according to Chimah and Nwokocha (2013) is referred to as the vast collection of information materials we see and use, be it print or electronic format. Thus, information resources denotes materials where information or service is derived or obtained from. These encompasses all forms of information carriers and it could also be seen as means of information supply.

In another study, Edem and Egbe (2016) stated that availability of library facilities as well as physical information resources within the library includes books (soft and hard copies) journals, dictionaries, dissertations, encyclopedia, Internet facilities, audio visual materials and government documents. This implies that all library-based information resources published and unpublished materials, printed and non-printed materials, audio-visual materials which may ordinarily not be immediately located elsewhere are available in the medical library and are ready for use. According to Nwachukwu, Abdulsalam and Salami (2014) availability of information resources is regarded as the existence of information materials in an institution especially library. This entails acquiring and also providing means by which users such as post-natal mothers could get necessary information resources needed to satisfy their information curiosity.

Similarly, the development and advancement in technology according to Rangananthan and Surendra (2012) has paved way for different information resources like electronic journals, e-books, electronic databases, pre-prints, numerical and graphical data, library catalogues, educational materials, patents, standards etcetera to be available on the web and the availability of these resources in medical libraries has created an opportunity for more effective service delivery of not only the health workers but also the librarians. Furthermore, Hadley School Committee (2014) argued that information resources are those materials both in print and non-print, found either in library and information centres with the aim of supporting the curricular and personal information needs. These resources include books, magazines, journals, newspapers, pamplets, encyclopedias, handbooks, guides and other electronic information resources such as films, disc records, filmstrips, slides, audio tapes, video tapes, compact discs, and computer softwares etcetera. The availability of all these resources in a library particularly the FMC libraries will determine the effectiveness of service delivery especially to postnatal mothers.

On the other hand, Anyaoku and Nwosu (2017) argued that significant number of patients including post-natal mothers should have access to library health information resources such as books, journals, guides and services such as internet services, mobile library services among others. Mohammed and Abule (2014) in their study revealed that information resources and services available in FMC libraries are publications from professional bodies such as conference proceedings, SDI, CAS, reference services, information searching services, mobile phone services, Internet services, referral library services and library user education services.

Similarly, Okeke *et al.* (2017) also disclosed that information resources and services available in FMC libraries are mostly textbooks and journals. Services such as SDI,

CAS, reference services, circulation/lending services, ICT, cataloguing, indexing and abstracting service, recreation/leisure were provided at a high standard level, while other services such as document delivery, biblio-theraphy, play-theraphy, inter-library loan, documentation, unified medical language information theraphy, digital library, translation and library 2.0 services were not provided at a standard level.

2.4 Level of Library Use by Post-natal Mothers

The major aim of every library is for it to satisfy the information needs of the clientele, post-natal mothers are not an exception and the availability and accessibility of information resources in a library are the key variables that facilitate information use. The library is known and trusted as custodian of information resources all over the world with a duty of acquiring, organising, preserving, storing and making information available to those who need it. Through these activities, the library has always served as a change agent throughout history to date, this means that men and women who could not afford a formal school became great individuals by reason of their access to library, post-natal mothers inclusive (Akparobore, 2011).

Cox and Janti (2013) identified use of information as an activity which measures the worth of an item in a library or any organisation. Therefore, use is a single criterion used to determine the purpose for retaining an information material within the collection of the federal medical centre libraries. Use also justifies the need for organisations particularly FMC libraries to adequately finance their libraries or not. This therefore necessitates the need for post-natal mothers to use the library for a better immunisation rate, Aryee (2014) stated that an individual's access to health information especially is considered one of the ways of minimising the social and economic impact of preventable and non-preventable diseases and illnesses. Adeleke and Nwalo (2017) believed that awareness is an integral part of availability which in turn leads to

utilisation. Furthermore, the awareness of information resources indicates the extent to which Post-natal Mothers have adequate information and knowledge of the presence of print and electronic information resources in the library. This awareness urges and encourages them to utilise the information resources.

Abdulraheem *et al.* (2011) in a similar study revealed that the main sources of information on immunisation are health workers 72.7%, town announcers 10.3%, radio 5.1%, family members 4.9% and friends 3%. The study equally revealed that 97(14.1%) knew that the vaccination against childhood killer diseases should be completed at the age of nine months with the yellow fever and measles vaccines. Less than one-fifth 12.8% of mothers knew that BCG is being given at birth while only 41 (6%) knew that Hepatitis B vaccine could also be given at birth, and these mothers were the teachers and other educated staff of the LGA. Immunisation was mentioned by 138 (20.1%) as a means of prevention against childhood killer diseases. Less than half 37.2% of the mothers completed routine immunisation schedules for their children by the age of 9 month. This is evident that post-natal mothers do not use or depend on the library for information seeking on immunisation.

Furthermore, Odujirin (2011) opined that pregnant women want the best for themselves and their foetuses. This takes into account that every woman is at risk of experiencing sudden and unexpected complications during pregnancy, childbirth and following delivery. However, scientific information through health practitioners as well as information professionals, if utilised, can reduce the risk of illness and death (both maternal and infant) considerably. In the same vein, Ojewole and Oludipe (2017) in their study discovered that more than half 52.2% of the respondents depend on their doctors for information, followed by their mother-in-laws 48.7%, while the least source of information is books/magazines. This means that post-natal mothers do not use the
library as they mostly use other sources, librarians therefore, need to do more in terms of creating awareness on the importance of library use.

2.5 Information Dissemination on Immunisation to Post-natal Mothers

Information dissemination has been universally accepted as an essential developmental tool and of course a basic resource on which the improvement in living condition of people is dependent upon, post-natal mothers are not left out too. The Special Libraries Association (2002) describes special librarians as "information resource experts who collect, analyze, evaluate, package and disseminate information to facilitate accurate decision-making in corporate, academic, and government settings. Legesse and Dechasa (2015) on the other hand stated that health workers agree that health information dissemination sessions which were given in mass do have problems because mothers or caregivers level of understanding and educational background were not well recognised in particular. So, this could not motivate mothers for return. Annune (2012) ascertained that access to disseminated information is an essential condition for development of any individual including the post-natal mothers.

Bethan and Gulema (2018) in their study on level of knowledge and associated factors of Post-natal Mothers towards essential newborn care practices at governmental health centres in Addis Ababa indicated that 96.1% of mothers were aware of the need to vaccinate their neonates, only 38.9% of mothers were aware of disease prevented by vaccine given on left forearm at birth (BCG), only 48% of mothers were aware of disease prevented by vaccine given orally at birth (OPV) to newborns. Mothers in this study scored poorly when asked to match vaccine given with the disease it prevented. This is as a result of poor dissemination of information on immunisation to mothers by librarians and health care providers. Similarly, Isibor and Whong (2018) concluded that quality health care begins long before consultation with a medical professional and the administration of prescriptions and effective health communication is interactive and adaptive, utilising many different channels of communication and operating across a number of different contexts. Partnerships between different health information specialists, health care providers, and consumers who desperately need relevant health information can help overcome the many problems related to health literacy. Library professionals have a unique opportunity to help overcome health literacy challenges by developing new and effective communication strategies for disseminating relevant health information to audiences with differing levels of health literacy.

Amolo *et al.* (2017) on "knowledge of post-natal mothers on essential newborn care practices at the Kenyatta National Hospital: a cross sectional study" revealed that almost all mothers were aware of the need to vaccinate their neonates but unfortunately none of the mothers knew of Hepatitis B vaccine, while only 17.8% knew of both BCG and OPV vaccine. Also, In Kenyatta National Hospital, nurses trained in immunisation visit the post-natal wards daily and offer both OPV and BCG vaccines to newborns. Hepatitis B vaccine is not routinely given in the hospital which could explain the lack of knowledge on this vaccine among the mothers. The researchers further concluded that there was poor dissemination of information on immunisation to mothers by librarians and healthcare providers.

A similar study by Darmstadt *et al.* (2005) showed that regarding the mothers knowledge on immunisation of their infants that 95% of the participants were aware of the need for immunisation of their infants. Among participants 76% were not aware of the names of the individual vaccines given for the newborn babies. Only 8% of the mothers had adequate knowledge on the different immunisation component even though

the immunisation coverage was good; these may be because of information gap on the name and advantage of each component of vaccine during immunisation.

In a similar study, Obasola and Mabawonku (2018) revealed that mothers' perception of maternal and child health (MCH) information dissemination was also positive. They reported the need for more MCH information products in local languages using acceptable ICT. It was therefore, concluded that mother's perception of preferred modes of delivery of maternal and child health information varies according to location. Saraswati (2016) added that globally 4 million newborns die every year before they reach the age of one month. Out of them 1.5 million newborns die 1ST 24 hours. Late death, i.e., after 24 hours, occurs in the rest 34% and this may be prevented if mothers have good knowledge about newborn care including danger signs of newborn and up-to-date information on the causes of child deaths is crucial to guide global efforts to improve child survival.

Education according to Beck (2010) by health personnel as well as information professionals has a key role in assisting new mothers in their parenting efforts. Schein *et al* (2010) stated that public health use of social media has largely concentrated on communications and health promotion strategies with one-way static messages to the public from public health agencies. However, there is growing acceptance that top-down dissemination of health information is unlikely to change health behaviour, and a need exists for more dialogue-oriented approaches. This is where librarians are expected to have one on one discussion with the post-natal mothers and buttress the need for immunisation in order to prevent childhood killer diseases.

Fuertes (2012) reported that preventive care and health education has been the advocacy of several hospitals due to the rapid increase in spreading illnesses. Consequently,

31

Fuertes (2012) is of the view that librarians and medical service providers are expected to device strategies on how to disseminate information about different kinds of diseases and their prevention, family planning, vaccination, hygiene etc. Waiswa *et al.* (2008) on "Acceptability of evidence-based neonatal care practices in rural Uganda - Implications for programming" revealed that information on danger sign was not adequately disseminated to mothers, 36.3% and 44.1% for both anti-natal and post-natal, respectively.

Abdulraheem et al. (2011) stated that lack of adequate information from vaccine providers regarding the vaccination status of each child to whom they should administer the recommended vaccines can significantly influence vaccination coverage, and it has been shown that the use of computerised, population-based systems that collect and consolidate vaccination data is essential to this end. Etana and Deressa (2012) also revealed in their study on "Factors associated with complete immunisation coverage in children aged 12-23 months in Ambo District, Central Ethiopia" that almost all, 97% of mothers have heard about immunisation. More than three fourth 83.6% of mothers knew Vaccine Preventable Diseases (VPDs). Majority of the mothers 91.8% heard from radio, which might indicate that mothers had access to media. In a village called Kebeles Ethiopia, leaders in collaboration with the librarians participated in Expanded Programme on Immunisation (EPI) by giving information to habitants, motivating mothers and community on health service utilisation also showed improvement in immunising their children. This in turn might reveal the importance of political commitment to improve immunisation status of children. From this study, over half of the respondents knew at least more than six VPDs. This result is better compared to the study carried out in Ambo District which revealed that majority of the mothers knew only about three VPDs.

2.6 Use of Information on Immunisation by Post-natal Mothers

Post-natal mothers should be provided with relevant and useful information to manage this specific period of their lives. Kamali *et al.* (2017) stated that as pregnant women need extensive information to be able to take care of themselves and their babies, their information needs should be identified and taken into consideration when planning educational programmes for this group of women. Obasola and Mabawonku (2018) discovered that to effectively promote MCH) information through ICT, there is need for information professionals and developers of ICT based projects to always put into consideration the perception of MCH mothers. The content of MCH information product also needs to be reviewed to enhance mothers' understanding of the messages being disseminated. Future ICT based projects should adopt more than one ICT tool and more consideration should be given to the development of more MCH information products in local languages to ensure the effectiveness of the use of ICT for MCH information dissemination.

Also, Mba (2016) stated that the modern ICT gadgets have made generation and utilisation of information lesser problem for man through the aids of technology and it's tools like computer, mobile phones excetera. This means that Post-natal Mothers can effectively utilise information disseminated to them on immunisation through any method of communication if adequately aware. Wangari (2011) Stated that post-natal care is a key strategy for reducing maternal mortality, but millions of women in developing countries do not receive it. The main reason identified for the non-utilisation of post-natal care is lack of awareness, cultural beliefs among others. Most maternal deaths occur during postpartum period and these deaths can be prevented if post-natal care services and health facilities are utilised.

Somefun and Ibisomi (2016) noted that the higher the educational level of women the better they utilise post-natal services especially for immunisation against childhood diseases. Legesse and Dechasa (2015) indicated that the post-natal mothers studied were also asked for symptoms of VPDs and majority of them, 460(98.1%) reported rash of measles, 452(96.4%) cough and 446(95.1%) paralysis in case of polio. Overall more than two-third, 421(71.2%) of the study subjects were knowledgeable (have good knowledge and scored above the mean i.e. 4.9, whereas 170(28.8%) were completely non-knowledgeable (poor knowledge) regarding immunisation. The summarised attitudinal index indicates that 587(99.3%) of the total respondents have favorable attitude towards immunisation services utilisation; while the remaining 170(28.8%) have unfavorable attitude.

Fikirte *et al.* (2014) discovered that the majority of mothers demonstrated an awareness of immunisation, family planning, and counseling on nutrition. Mothers reported that Health Extension Workers (HEW) and community health agents informed them of the existence of PNC services. However, those who knew about the services did not have adequate information on when post-natal clinics are offered, or for whom. Most mothers assumed that the services were only given for children and vaccination 45 days after birth.

Doctor *et al.* (2011) stated that women who attended ANC delivered their most recent birth at a facility. Nevertheless, the low utilisation of ANC and high proportions of women delivering at home call for more effective ways to communicate the message of risk and the feasibility of reducing this risk through skilled attendants or delivery at a health facility. Findings on low immunisation coverage underscore the importance of further strengthening the programme initiatives to raise immunisations through increased community mobilisation and outreach to build knowledge and social support for immunisations by the librarians and information health providers. Attention is also needed in the rural areas to offset the educational and urban advantages in immunisation knowledge, influences, and practices.

Monebenimp *et al.* (2013) stated the burden of neonatal death is still high in developing countries where most of the causes could be prevented if proper and adequate information is being conveyed to post-natal mothers. According to Lomoro *et al.* (2008) in his study shows that women are dissatisfied with the information they get from the health providers and they wish for standardized basic information instead of only getting the information they ask for individually. Immunisation strategies selected to reduce vaccine-preventable diseases in mothers and young. Women's inability to access health and education services has a significant impact on child welfare.

Similarly, Hearly *et al.* (2013) while adducing to the knowledge and attitudes of postpartum women toward immunisation during pregnancy and the peripartum period concluded that mothers and their young infants remain at risk for morbidity and mortality from vaccine-preventable diseases. Maternal immunisation is safe and has resulted in maternal and neonatal tetanus elimination in many resource-poor nation and reduces maternal and infant influenza-related illness. This means that mothers who do not use information on immunisation are at risk of these killer diseases. Black (2010) opined that up-to-date information on the causes of child deaths is crucial to guide global efforts to improve child survival.

2.7 Diseases that could be prevented as a Result of the Information Disseminated on Immunisation to Post-natal Mothers

The major aim of disseminating information on immunisation is for post-natal mothers to avoid possible occurrences of vaccine preventable diseases. Mcnair (2014) stated that when childhood vaccines are delivered at the right time, they increase the protection of children from vaccine preventable diseases, minimise the risk of children getting infected and decrease the chances of outbreaks of the diseases. Childhood immunisation is a key method of reducing childhood morbidity and mortality and a way of reducing the number and severity of communicable disease outbreaks.

Similarly, Healy (2012) stated that the benefits of immunisation to the infants have direct passive transfer of maternal antibody and indirectly prevents transmission of disease via an infected mother. Bethan and Gulema (2018) stated in their study on level of knowledge and associated factors of post-natal mothers towards essential newborn care practices at governmental health centres in Addis Ababa", that 96.1% of mothers were aware of the need to vaccinate their neonates. Some 38.9% of mothers were aware of disease prevented by vaccine given on left forearm at birth (BCG) and some 48% of mothers were aware of disease prevented by vaccine given orally at birth (OPV) to newborns. This is a clear indication that post-natal mothers lack the knowledge of the diseases prevented as a result of information dissemination on immunisation.

Meseka (2016) showed that 91.7% of mothers were aware of the need for immunisation at birth, while 81% knew that vaccine prevents diseases. Some 20.8% and 20.6% of mothers knew BCG and OPV respectively. Legesse and Dechasa (2015) discovered that almost all, 579(98.0%) have replied that immunisation prevents communicable diseases and 494(83.6%) of them knew VPDs. As far as age at which children will receive BCG vaccine is concerned, 193(43.8%) said at birth, 226(51.2%) at 2 weeks after birth and 21(4.8%) at six weeks for BCG vaccine, whereas for measles, 362(77.7%) reported at six months, 102(21.9%) at nine months and 2(0.4%) at twelve months. Out of the 518 who knew about when the child should complete the immunisation, 509(98.3%) reported the completion of immunisation (i.e. before a year).

Saraswati (2016) indicated that globally 4 million newborns die every year before they reach the age of one month. Out of them 1.5 million newborns die in four countries of South Asia. Approximately 3.4 million newborns die within the first week of life. Of these deaths, 66% occur during the 24 hours. Late death, that is, after 24 hours, occurs in the rest 34% and this may be prevented if mothers have good knowledge about newborn care including danger signs of newborn.

Andre (2012) stated that the benefits of immunisation extended beyond prevention of specific diseases in individuals. They enabled a rich, multifaceted harvest for societies and nations. Vaccination makes good economic sense and meets the need to care for the weakest members of societies. Reducing global child mortality by facilitating universal access to safe vaccines of proven efficacy is a moral obligation for the international community as it is a human right for every individual to have the opportunity to live a healthier and fuller life. Achievement of the MDG4 (two-thirds reduction in 1990 under-5 child mortality by 2015) will be greatly advanced by, and unlikely to be achieved without, expanded and timely global access to key life-saving immunisations such as measles, Hib, rotavirus and pneumococcal vaccines. Andre (2012) therefore, concluded that a comprehensive vaccination programme is a cornerstone of good public health and will reduce inequities and poverty.

2.8 Factors Affecting Information Dissemination and Use on Immunisation to Post-natal Mothers

There are many factors associated with the information dissemination and use on immunisation among these factors according to Luthy *et al.* (2009) are client factors such as age of mothers, parental health literacy, knowledge of the importance of immunisation, socioeconomic status, employment status, family size and birth order. Other factors include provider factors such as waiting time, motivation of service

providers, suitability of the timing of immunisation sessions, attitude of service providers, reaction to side effects and charges for the services. The challenges and barriers to achieving high immunisation coverage in Nigeria include inadequate planning, poor implementation of planned activities, inadequate supportive supervision, lack of monitoring for action, inadequate involvement of the community in immunisation activities, and poor funding of planned Routine Immunisation (RI) activities as well as lack of understanding in some communities (National Polio Eradication Initiative Plan for Nigeria, 2012).

Ojewole and Oludipe (2017) stated in their study that the major barriers to information seeking among pregnant women was the waiting for a long hour to see the doctor or healthcare professional, high confidence in their pregnancy knowledge level, and unavailability of healthcare personnel as well as the librarians that could assist with information as the need arises. This implies that when information is made available to post-natal mothers at the right time, it will solve the problem of waiting long hour to see the doctor, or any health care professional. Other factors according to Rudman and Waldenström (2007) include, lack of time, lack of staff continuity, overcrowded wards, absence of routine care, lack of standardised basic information, poor health workers' attitude and failure to follow set guidelines among others

Furthermore, Shamsul *et al.* (2012) stated that the external or environmental factors which include logistic barriers, limited accessibility to health care due to poor roads or inadequate public transportation, preparedness of the community for immunisation sessions, information dissemination among the community and inter-sectoral collaboration can be considered in order to enhance immunisation services in Nigeria. Elias and Worku (2015) stated that even though, immunisation coverage of children in Sinana District, Southeast of Ethiopia gets improvement over national coverage, is

below governmental plan to increase the coverage, that is, 90%. Maternal health care utilisation and knowledge of mother about vaccine and vaccine preventable diseases are the main factors associated with complete immunisation coverage. It is therefore, vital that local programmatic intervention should be strengthened to upgrade awareness of the community on the importance of immunisation, antenatal care and working on advancing economic status of community is the way to optimise children's immunisation coverage.

Abdulraheem *et al.* (2011) stated that various reasons were adduced by the mothers for incomplete vaccination of their children. These include long waiting time at the health facility 15.2%, lack of vaccine on the appointment day 3.5%, absence of personnel at the health facility 5.4%, child ill-health at the time of immunisation 3.6%, lack of information about the days for vaccination 2.5%, forgetting the days of immunisation 1.5%, long distance walking 17.5%, mother's illness on the day of vaccination 0.5%, social engagements 0.4%, lack of money 10.6%, schooling mothers 0.5%, parents objection, disagreement or concern about immunisation safety 38.8% and other miscellaneous reasons 3.5%. These could affect the information dissemination to postnatal mothers on immunisation as well as its use and therefore require adequate attention in order to enhance better immunisation services.

Njeru *et al.* (2019) in their study on utilisation of immunisation services among children under five years of age in Kirinyaga, Kenya" concluded that the level of utilisation of immunisation services for performance antigens was low below the recommended target by WHO in Kirinyaga, Kenya. Social demographic factors that facilitate utilisation of immunisation services are high level of education, while formal employment, income levels, and age are barriers to immunisation utilisation. Family factors identified as barriers include myths and misconceptions, vaccine side effects, parity, and lack of information. Delaying or refusing some or all the immunisations puts a child's life and health at risk of contracting Vaccine Preventable Diseases could be addressed to achieve the objectives of immunisation.

Trip Report for DFID (2005) stated that there are several reasons for these low rates. Firstly, primary health care services are highly ineffective and have deteriorated due to lack of investment in personnel, facilities and drugs, as well as poor management of existing resources. There is also lack of confidence and trust by the public in the health services provided; resulting from the poor state of facilities and low standards of delivery. These problems have been exacerbated by "vertical" interventions undertaken by outside agencies which undermined the capacity of the local service providers to implement sustainable programmes. At the family/community level there is a low demand for immunisation due to a lack of understanding of its value.

Iyanda (2017) stated in her study stated that since one quarter of newborn deaths could be prevented through early PNC. Some other practices that can reduce neonatal mortality include hygienic umbilical cord care, early initiation and exclusive breastfeeding (EBF), recognition and care seeking for danger signs could be considered to address the death of newborn. So women who do not access PNC due to lack of information, cultural practices, distance, unavailability of services or lack of money are still some of the major challenges that need to be tackled for Nigeria to reach the Sustainable Development Goals (SDG) 3 by 2030.

Legesse and Dechasa (2015) asserted that being unaware of need for immunisation, unaware of need to return for second or third dose, unknown place and/or time of immunisation, fear of side effect, wrong ideas about contraindications, absence of faith in immunisation, inconvenient time of immunisation, absence of vaccinator and vaccine and long waiting time at health facility were reasons post-natal mothers for not fully immunising their children. Other factors are socio-demographic characteristics of mothers or caregivers and children, maternal health care utilisation, availability and accessibility of health care services, knowledge of mothers or caregivers on vaccination and vaccine preventable diseases (VPDs). This implies that when adequate and proper information on immunisation is disseminated to post-natal mothers, it will enhance the problem of not being aware of the need for imunisation among other factors discovered.

There are 10 problems according to Ikpat (2018) of immunisation which can be addressed to help improve on the immunisation services in Nigeria. These are: Inadequate Storage Facility: the availability of effective storage facility is another way of solving the problem of immunisation in Nigeria. The cold chain has become quite ineffective and has been unable to be repaired, despite the fact that Nigeria has received large quantities of this equipment. In some states in Nigeria, cold chain equipment are poorly stored or handled. Also, during the transportation of these vaccines from one place to another, some have been mishandled or improperly stored and has thereby reduced the potency of the vaccines which in turn can seriously affect a child's health, thereby confirming the fear of the rural people that immunisation kills children rather than protect them.

It is glaring that adequate storage facility has a vital role to play when it comes to immunisation services; Religion; Political Problems; Negative Beliefs; Lack of Confidence and Inadequate Facilities. Other major hindering factors from achieving universal immunisation include: low access to services, low number of trained manpower, high staff turnover, lack of fund donors, lack of information, lack of transportation, distance from health facilities, inadequate awareness of mothers/caregivers, others such as missed opportunities, and high dropout rates especially through routine approaches which when adequately addressed could enhance immunisation services (Federal Ministry of Health, 2004).

2.9 Review of Related Empirical Studies

Olugbenga-Bello *et al.* (2017) conducted a study on maternal characteristics and immunisation status of children in North-central, Nigeria. The objective of the study was to compare the mother' characteristics and the child's Immunisation status in some selected rural and urban communities in the North-central part of Nigeria using questionnaire as an instrument for data collection. A descriptive cross-sectional study, using a multistage sampling technique to select 600 respondent women with an index child between 0-12 months was used. The study revealed that, the immunisation coverage in urban community was better than that of the rural community. The result of this study has clearly indicated that mothers in Nigeria have improved although not satisfactorily on taking their children for immunisation in both rural and urban areas.

The challenge however is that children of women without education, that are poor in the rural areas and the middle class in the urban areas, were not fully immunised, thus affecting the immunisation picture in Keffi LGA. Women empowerment intervention is thus recommended, for women to utilise child health services better (including immunisation) and this has been linked positively with child survival practices. Appropriate information and education strategies should be put in place to further improve awareness about immunisation; this will ensure that mothers, especially the uneducated (since this is associated with mothers' lack of information on the importance of immunisation) will immunise their children since low coverage will always draw back the efforts of fighting vaccine preventable diseases. The immunisation schedule should be made frequent and more flexible. Outreach centres should also be created to accommodate busy mothers as "mother too busy' and 'place of vaccination too far' were

also important reasons for incomplete immunisation. The difference between this study and the current study is that, this study adopts descriptive cross-sectional study and a multistage sampling technique, while the current study adopts survey design and ramdom sampling technique based on Krejcie and Morgan (1970) table. The similarity between them is that both studies adopted questionnaire as an instrument for data collection.

Anum (2015) examined acceptability and utilisation of health care services among pregnant women in North-central, Nigeria. The objectives of the study was to assess whether there is difference in acceptability of health care services among pregnant women of different educational qualifications in North-central, Nigeria, to assess whether there is difference in the utilisation of health care services among pregnant women of different age range in North- central, Nigeria. Data was collected using closed-ended questionnaire administered to pregnant women who attended antenatal clinics in the randomly selected hospitals. The data were analysed using descriptive statistics of mean and standard deviation to answer the research questions and analysis of variance with alpha level of 0.05 to test the formulated hypotheses. The findings indicated that pregnant women of different educational qualification and age range do not differ significantly in the acceptability and utilisation of health care services in North-central, Nigeria.

The study recommended that the development partners in conjunction with concerned government parastatals should set up monitoring team charged with the responsibility to check and monitor periodically and provide updates for the activities of maternal health centres for improvement and possible updates on the available health outcomes. The similarity between both studies is that a closed-ended questionnaire and descriptive statistics such as frequency counts and percentages, mean and standard deviation were used to collect and analyse data. The difference between both studies is that the former study focused on pregnant women while the current study is focusing on post-natal mothers.

Njeru *et al.* (2019) conducted a similar study in Kirinyaga, Kenya. It was a descriptive cross-sectional study conducted among 388 participants in the five sub-counties of Kirinyaga Country through systematic random sampling. Data was collected using a structured interview. Data was analysed using SPSS and Chi-Square tests used to measure the association between independent and dependent variables. The study discovered that Age, gender, educational level and level of income were significant factors that affected timely information on immunisation. Other barrier factors to utilisation identified were myths and misconception, side effects, parity and lack of information. The study therefore recommended that for proper control and elimination of "Vaccine Preventable Diseases" which are killer and disabling diseases of young children under the age of five years, the provision of immunisation services and interventions should be put in place to ensure successful utilisation of immunisation services that ensures a "reach every child strategy".

The results and gaps generated from the study formed baseline information that would be used in policy advocacy towards improving immunisation in the country. It was a descriptive cross-sectional study conducted among 388 participants in the five subcounties of Kirinyaga Country through systematic random sampling. The difference between this studies is that, the current study adopted structured questionnaire as an instrument for Data collection, descriptive statistics such as frequency counts and percentages as well as mean and standard deviation and pearson product moment correlation (PPMC) will be used for analysing data, while this study adopted a structured interview as an instrument for data collection, data was analysed using SPSS

44

and Chi-Square tests used to measure the association between independent and dependent variables.

Gatero (2010) conducted a similar study using Kenyatta National Hospital. Semistructured qualitative interview was used in the study. Data was collected on individual occurrences of phenomenon. Grounded theory approach was used as an analytical tool. The study revealed several barriers to information access and use which includes lack of access to a hospital library and availability and location of information resources, lack of up-to-date and journal subscription, lack of computers and Internet facilities and relevance of Internet information to the local context, cost of materials, lack of computer and internet searching skills/computer literacy and, lack of general awareness of available information. The study therefore recommended that policy framework must be formulated in order to encourage and promote the use of ICTs as tools for health information access and dissemination. The difference between this study and the current study is that, this study adopted semi-structured qualitative interview for data collection, while the current study will use questionnaire. Also, grounded theory approach was used as an analytical tool in the study, while the current study will adopt descriptive statistics such as frequency counts and percentages, mean and standard deviation. The similarity is that both studies emphasised on the importance of health information.

Otunga (2017) carried out an assessment study among women in Webuye West, Bungoma, Kenya. The objective of the study was to determine the proportion of women utilising postpartum care services in the study area. The study adopted descriptive crosssectional design. The study population was all women of reproductive age with living children aged 6-9 months. The study composed of a sample of 384 women. The sampling techniques were purposive and simple random samplings. Data collection tools were a semi structured questionnaire, focus group discussions and interview guides. Data was analysed using Statistical Package of Social Sciences (SPSS) version 20. The findings showed that only 33.6% women utilised postpartum care services in the required timings and the attendance of mandatory visits was less than 40% which was below the recommendation. The study recommended that there is need to increase more awareness on postpartum care services utilisation by health care workers and community volunteers. The similarity between both studies is that, both studies assessed the utilisation of post-natal care services among women. The difference between both studies is that, the current study will use structured questionnaire as an instrument for data collection, while this study adopted semi structured questionnaire, focus group discussions and interview guides, Statistical Package of Social Sciences (SPSS) was used for data analysis, while the current study will adopt descriptive statistics such as frequency counts and percentages, mean and standard deviation as tools for data analysis.

Ajuwon (2015) conducted a similar study on healthcare institutions in Nigeria. Descriptive survey design was used and total enumeration technique was adopted to cover a total population of 1,280 resident doctors in 13 training health care institutions in South-western Nigerian. The population of the study are resident doctors undergoing professional training to qualify them as specialists. A pre-test self-administered questionnaire was used for data collection. Data was analysed using descriptive statistics including, charts, mean and standard deviation. The study therefore discovered that Internet health information resources that are very easily available and accessible to the respondents include Google and yahoo, others are e-mail, medline/pubmed, hinari, reference materials, online fulltext articles and e-books. Conference proceedings, essential health links, scopes, and African index medicus were occasionally accessible to the respondents. The similarity between these studies is that both studies adopted

descriptive survey research design, a questionnaire was used as an instrument for data collection and descriptive statistics such as frequency counts and percentages, mean and standard deviation was used as a tool for data analysis, while the difference between them is the inclusion of chart as a tool for data analysis in this study.

Berhan and Gulema (2018) carried out a similar study at governmental health centres in Addis Ababa, Ethiopia. The objective of the study was to assess the level of knowledge and associated factors of post-natal mothers towards essential newborn care practices at governmental health centers in Addis Ababa. Institutional-based cross-sectional study with internal comparison was conducted using multistage sampling method in Addis Ababa health centres from December 5 to January 30, 2016. The study revealed that a total of 512 mothers who came for post-natal visit were interviewed using structured pretest questionnaire. Knowledge was assessed using closed and open-ended questions.

The required sample size was determined by using a single population proportion sample determination formula considering certain assumptions. Questionnaire and interview techniques was used for data collection. Pre-test using semi-structured interviews/questionnaire was also carried out. SPSS version 20 was used for data analysis. Poor knowledge has strong association with women's occupation 95%, parity of the women was found as one of significant predictors for poor knowledge of essential newborn care. It was concluded that maternal education programmes should be given emphasis for the components of essential newborn care for mothers' knowledge gaps. Special emphasis needs to be placed when educating vulnerable groups including those who failed to fully attend antenatal clinic visits. Source of population was all mothers in Addis Ababa who came for their post-natal visit within six weeks. The similarities between both studies is the instrument used for data collection as well as the respondents studied, while the difference is that, this study adopted institutional based cross-sectional study using multistage sampling method, while the current study will adopt survey research design and a random sampling technique based on Krejcie and Morgan (1970) Table.

Bitagi and Ozioko (2015) conducted a similar study on Agricultural Research Institutes in Nigeria. The methodology used for the research was descriptive survey research. Some 200 population was sampled from the total population of the study 1,002 using stratified proportionate sampling technique. From each of the research institutes 20% of the respondents were selected for the actual study. The suitable instruments found appropriate for required data collection for the study were observation checklist and questionnaire. The data constituted in research questions was organised accordingly. Internet services, materials, documents and conference proceedings, among others, were respectively rated between average and very high extent for their research by agricultural scientists according to this study. On the other hand, utilisation of memos and encyclopaedias respectively rated between low and very low extent for their research purposes by majority of the scientists.

The study also revealed the following as factors affecting utilisation of information resources for research: inadequate experienced and qualified librarians to process, provide, and make available library information resources and services, lack of libraries' funding and inadequate information resources. The recommendation was made based on the findings such that 20% fund allocation should be provided to all Agricultural Research Institutes by the Federal Government of Nigeria for the purpose of developing research library, necessary units and facilities for their research work. This study is similar to the current study in terms of the research design used as well as the instrument for data collection, while the difference is the sampling technique used in both studies.

2.10 Summary of Literature Reviewed

The literature reviewed covered assessment of information dissemination and use to post-natal mothers on immunisation as prevention to childhood killer diseases, the benefits of disseminating and utilising information on immunisation by post-natal mothers were also reviewed as well as factors affecting information dissemination and use on immunisation. From the review, it was also observed that there are other several factors affecting the effective dissemination of information on immunisation to postnatal mothers particularly in the Northern part of Nigeria. These include: personal beliefs, lack of confidence to mention but a few.

From the review, it is glaring that many studies have been carried out on immunisation as prevention to childhood killer diseases but none of these studies has considered assessment of information dissemination and use to post-natal mothers on immunisation as prevention to childhood killer diseases by librarians in federal medical centres in North-central, Nigeria. This is the gap the study will fill.

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Research Design

This study adopted survey research design. The survey research design was considered appropriate because it described and interpreted the assessment of information dissemination and use to post-natal mothers on immunisation as prevention to childhood killer diseases by librarians in four selected federal medical centres in North-central, Nigeria. Survey research design according to Ibrahim (2013) is used to assess a situation with a view to correcting inadequacies or effecting improvements. Moreover, survey research method is a type of descriptive research which could be used to sample data, describe and explain what is in existence or non-existence on the present status of a phenomenon that is undergoing investigation. Sharma (2017) stated that descriptive survey research method deals with describing the situation of a given population using some characteristics that are common among them. It is a process that involves a number of steps such as planning survey, questionnaire design, sampling, data collection, data processing and drawing conclusion.

3.2 Population of the Study

The population for the study was seven thousand, seven hundred and sixty-four (7,764). Seven thousand seven hundred and twenty-two (7,722) post-natal mothers who usually visit between the year 2018 and 2019 in the four (4) federal medical centres as well as forty-two (42) medical librarians from federal medical centre libraries in North-central, Nigeria studied. The detail is presented in Table 3.2. The population of post-natal mothers covered from January, 2018 to August, 2019.

| S/N | Name of Federal Medical Centre | Post-natal Mothers (For the period of the research) | Medical Librarians in FMC Libraries |
|-----|-----------------------------------|---|--|
| 1 | Federal Medical Centre, Bida | 2,463 | 12 |
| 2 | Federal Medical Centre, Keffi | 2,359 | 20 |
| 3 | Federal Medical Centre, Lokoja | 1,250 | 4 |

Table 3.1: Population of the Study

| 4 | Federal Medical Centre, Makurdi | 1,650 | 6 |
|---|---------------------------------|-------|----|
| | Total | 7,722 | 42 |

Source: Child Immunisation Register (2018 and 2019)

3.3 Sample and Sampling Technique

Total enumeration or census method was adopted to capture all the 42 medical librarians used for the study since the population is manageable, while random sampling technique was used to select 367 post-natal mothers making a total of 409. The sample size for post-natal mothers was adequate based on the Krejcie and Morgan (1970) Table for determining a sample size from a given population. The purpose of sampling was to obtain a part of the population from which some information of the entire population can be generalised. Ibrahim (2013) opined that, a small but carefully chosen sample size can be used to represent the entire population, if the population is too large for the researcher to survey all its members. The sample size was collected from the four (4) federal medical centres based on the population from January, 2018 to August, 2019 as presented in Table 3.2.

Table 3.2: Sample Size of the Study

| S/N | Name of Federal Medical | Samp | Grand | |
|-----|----------------------------------|-----------------------|--------------------------------|-------|
| | Centre | Post-natal Mothers | Librarians in FMC Libraries | Total |
| 1 | Federal Medical Centre, Bida | 117 | 12 | 129 |
| 2 | Federal Medical Centre, Keffi | 112 | 20 | 132 |

| 3 | Federal Medical Centre, Lokoja | 60 | 4 | 64 |
|---|-----------------------------------|-----|----|-----|
| 4 | Federal Medical Cenre, Makurdi | 78 | 6 | 84 |
| | Total | 367 | 42 | 409 |

3.4 Data Collection Instruments

The research instruments used for the study was self-designed questionnaire with adopted four (4) Likert's scale and Observation Checklist. The researcher considered the use of questionnaire as the main instrument for data collection because it is the most appropriate method for gathering opinion from a large population. Two (2) structured questionnaire titled "Assessment of Information Dissemination and Use to Post-natal Mothers on Immunisation as prevention to childhood killer diseases by Librarians in FMCs North-central Nigeria'' (AIDUPIPQ) was used for the post-natal mothers and librarians' respectively with each containing different sections. Questionnaire for the librarians has Section 'A' which contained demographic information, Section 'B' contained information on available resources and service, Section 'C' contained information on level of library use by post-natal mothers, Section 'D' contained information on ways used to disseminate information on immunisaton to post-natal mothers, Section 'E' contained diseases prevented as a result of the information dissemination on immunisation and Section 'F' contained information on the factors affecting information dissemination and use on immunisation to post-natal mothers . On the other hand, post-natal mothers have Section 'A' which contained demographic information, Section 'B' contained information on use of library, Section 'C' contained information on resources availability, Section 'D' contained use of information on immunisation.

Observation Checklist was used to determine the availability of information resources and services in the study which is in Section 'B' of the Librarians' questionnaire. The adopted four (4) Likert's scale consisted of SA-Strongly Agreed, A-Agreed, D-Disagreed, SD-Strongly Disagreed.

3.5 Validity of the Research Instruments

The data collection instruments used were subjected to face and content validation judging each item based on clarity and relevance. The researcher's supervisor was given the drafted copies of an observation checklist and questionnaire to cross check the content of the instruments with regards to the objectives of the study. The instruments went through critiques in accordance with the objectives of the study by a statistician and Two (2) other lecturers in the Department of Library and Information Technology, Federal University of Technology, Minna. Corrections were given thorough consideration based on their observations and therefore effected before reliability test was carried out.

3.6 Reliability of the Research Instruments

The reliability level of the research instrument was ascertained by conducting a pilot study with fourty (40) copies of the questionnaire in Federal Medical Centre, Abuja which is not part of the study area. Thirty-eight (38) copies of questionnaire was for post-natal mothers, while two (2) copies of questionnaire was for librarians. Responses of the questionnaire was analysed using Cronbach Coefficient Alpha formula. The overall reliability of both questionnaire tested was 0.75 and 0.79 for librarians in medical centre library and post-natal mothers respectively showing that the instruments were strong and reliable. The result is attached as Appendix D.

3.7 Method of Data Collection

The researcher collected and attached a letter of introduction from Head of Department, Library and Information Technology, Federal University of Technology, Minna to the medical centres studied. The questionnaire was administered and collected personally by the researcher with the help of two (2) research assistants in each of the federal medical centres in North-central, Nigeria. A convenient method of data collection was used for the post-natal mothers while an observation checklist was used by the researcher to personally ascertain the available information resources and services in federal medical centre libraries in North-central, Nigeria. The administration and collection of copies of the questionnaire was done within the period of six (6) weeks.

3.8 Method of Data Analysis

The data collected were analysed using descriptive statistics such as frequency counts and percentages as well as mean and standard deviation and Pearson Product Moment Correlation (PPMC). The descriptive statistics was used to measure demographic information of the respondents and research questions in the study, while Pearson Product Moment Correlation (PPMC) was used to test the null hypotheses in the study.

CHAPTER FOUR

4.0

RESULTS AND DISCUSSION

4.1 Response Rate

The response rate of the respondents is presented in Table 4.1a below.

| S/N | Name of Federal Medical | Copies | Copies | Percentage (%) of |
|-----|-------------------------|-------------|----------|------------------------|
| | Centre | Distributed | Returned | Copies Returned |
| 1 | Federal Medical Centre, | 129 | 95 | 73% |
| | Bida | | | |
| 2 | Federal Medical Centre, | 132 | 100 | 77% |
| | Keffi | | | |
| 3 | Federal Medical Centre, | 64 | 47 | 73% |
| | Lokoja | | | |
| 4 | Federal Medical Centre, | 84 | 60 | 71% |
| | Makurdi | | | |
| | Total | 409 | 302 | 74% |

Table 4.1a: Response Rate of the Respondents

Table 4.1a shows that in Federal Medical Centre, Bida, a total of 129 copies of questionnaire were administered to post-natal mothers and librarians in the medical centre library out of which 95(73%) copies of the questionnaire were properly filled and returned, while in Federal Medical Centre, Keffi 132 copies of the questionnaire were administered out of which 100(77%) were filled and returned, in Federal Medical Centre, Lokoja 64 copies of the questionnaire were administered out of which 47(73%) were properly filled and returned, in Federal Medical Centre, Makurdi 84 copies of the questionnaire were distributed and 60(71%) were properly filled and returned. Thus, out of the 409 copies of the questionnaire distributed, 302 (74%) copies of the questionnaire were properly filled, returned and used for the analysis.

Table 4.1b reveals the response rate based on the category of the respondents.

 Table 4.1b: Response Rate Based on Category of the Respondents

| S/N | Name of Federal Medical Centre | Librarians in FMC Library | | Post-natal Mothers | | | |
|-----|-----------------------------------|---------------------------|--------------------|--------------------------------|-----------------------|--------------------|--------------------------------|
| | | Copies Distributed | Copies Returned | Percentage (%) of Copies | Copies Distributed | Copies Returned | Percentage (%) of Copies |

| | | | | Returned | | | Returned |
|---|------------------------------------|----|----|----------|-----|-----|----------|
| 1 | Federal Medical Centre, Bida | 12 | 12 | 100% | 117 | 83 | 71% |
| 2 | Federal Medical Centre, Keffi | 20 | 13 | 65% | 112 | 87 | 78% |
| 3 | Federal Medical Centre, Lokoja | 4 | 4 | 100% | 60 | 43 | 72% |
| 4 | Federal Medical Centre, Makurdi | 6 | 6 | 100% | 78 | 54 | 69% |
| | Total | 42 | 35 | 83% | 367 | 267 | 73% |

Table 4.1b shows that, for librarians in federal medical centre libraries, a total of 12(100%) copies of questionnaire were distributed and were properly filled and returned from Federal Medical Centre Bida, while in Federal Medical Centre, Keffi a total of 20 copies of questionnaire were distributed and 13(65%) were filled and returned, in Federal Medical Centre, Lokoja 4(100%) of them were distributed, filled and returned, while in Federal Medical Centre, Makurdi 6(100%) copies of questionnaire were distributed.

For post-natal mothers attending Federal Medical Centre, Bida, a total of 117 copies of questionnaire were distributed out of which 83(71%) copies were properly filled and returned, in Federal Medical Centre, Keffi a total of 112 copies of them were distributed and 87(78%) were filled and returned, in Federal Medical Centre, Lokoja 60 copies were distributed and 43(72%) were filled and returned and in Federal Medical Centre, Makurdi 78 were distributed and 54(69%) were filled and returned. This means that, out of 42 copies of questionnaire distributed to the librarians in the federal medical centre libraries 35(83%) copies were retrieved, while, out of 367 copies of questionnaire distributed to post-natal mothers, 267(73%) copies were retrieved, from the four federal medical centres studied.

4.2 Descriptive Analysis of Demographic Data

The demographic variables considered in this study were: gender, qualification/educational background, age range, years of experience and marital status as presented in Table 4.2

| S/N | Gender | Librarians in FMC Library | | Post-natal Mothers | |
|-----|--------|---------------------------|-----------------|--------------------|-----------------|
| | | Frequency | Percentages (%) | Frequency | Percentages (%) |
| 1 | Male | 22 | 63% | - | - |
| 2 | Female | 13 | 37% | 267 | 100% |
| | Total | 35 | 100% | 267 | 100% |

Table 4.2: Classification of Respondents by Gender

Classification of Respondents by Qualification/Educational Background

| S/N | Qualification /Educational | Librarians | in FMC Library | Post-natal Mothers | | |
|-----|-------------------------------|------------|-----------------|--------------------|-----------------|--|
| | Background | Frequency | Percentages (%) | Frequency | Percentages (%) | |
| 1 | O'Level | - | - | 86 | 32% | |
| 2 | ND/HND | 11 | 31% | 151 | 57% | |
| 3 | BTechlit/BLS /Bsc/B.Ed | 15 | 43% | 21 | 8% | |
| 4 | MTech/MLS/ M.Sc | 7 | 20% | 9 | 3% | |
| 5 | Ph.D | 2 | 56% | - | - | |
| | Total | 35 | 100% | 267 | 100% | |

Classification of Respondents by Age Range

| S/N | Age range | Librarians in FMC Library | | Post-natal mothers | |
|-----|--------------------|---------------------------|-----------------|--------------------|-----------------|
| | | Frequency | Percentages (%) | Frequency | Percentages (%) |
| 1 | 20-30years | 9 | 26% | 138 | 52% |
| 2 | 31-40years | 21 | 60% | 110 | 41% |
| 3 | 41-50years | 4 | 11% | 19 | 7% |
| 4 | 51 years and above | 1 | 3% | - | - |
| | Total | 35 | 100% | 267 | 100% |

Classification of Respondents by Year(s) of Experience (Librarians)

| S/N | Year(s) of Experience | | Librarians in FMC Library | |
|-----|--------------------------|-----------|---------------------------|--|
| | Liperience | Frequency | Percentages (%) | |

| | Total | 35 | 100% |
|---|-------------------|----|------|
| 6 | 25years and above | - | - |
| 5 | 21-25years | 2 | 6% |
| 4 | 16-20years | 3 | 9% |
| 3 | 11-15years | 11 | 31% |
| 2 | 5-10years | 13 | 37% |
| 1 | 1-5years | 6 | 17% |

Classification of Respondents by Marital Status (Post-natal Mothers)

| S/N | Marital | Post-natal Mothers | | | | | |
|-----|----------|--------------------|-----------------|--|--|--|--|
| | Status | Frequency | Percentages (%) | | | | |
| 1 | Single | - | - | | | | |
| 2 | Married | 262 | 98% | | | | |
| 3 | Divorced | 5 | 2% | | | | |
| | Total | 267 | 100% | | | | |

Table 4.2 shows that 22(63%) of the librarians working in Federal Medical Centre libraries were males, and 13(37%) were females, while 267(100%) were for post-natal mothers. The table equally revealed that, 11(31%) of the librarians in medical libraries were ND/HND holders, while 15(43%) were BTechlit/BLS/ /B.SC/B.Ed holders, 7(20%) were MTech/MLS/M.Sc holders, while 2(6%) were Ph.D holders. Also, 151(57%) of the post-natal mothers had O'level, 86(32%) had ND/HND, 21(8%) had BTech/BLS/B.Sc/B.Ed, while 9(3%) had MTech/MLs/M.Sc qualifications.

On the other hand, the table revealed that 9(26%) of the librarians working in medical libraries were between the age range of 20-30years, 21(60%) were 31-40years, 4(11%) were 41-50years and 1(3%) was 51years and above. Post-natal mothers equally showed that 138(52%) were between the ages of 20-30 years, 110(41%) were 31-40years of age, while 19(7%) were between 41-50years old.

Table 4.2 shows that 6(17%) of librarians working in medical centre libraries have 1-5years of experience, 13(37%) had 5-10years experience, 11(31%) had 11-15years experience, 3(9%)16-20years experience, while 2(6%) had 21-25years of experience. Table 4.2 revealed that 262(98%) of the post-natal mothers were married, while 5(2%) were divorced.

4.3 Data Analysis

Observation Checklist: An observation checklist was used to answer research question 1 on the type of information resources and services available in the four federal medical centre libraries.

Research Question 1: What are the types of information resources and services available in Bida, Keffi, Lokoja and Makurdi Federal Medical Centre Libraries? Table 4.3 is an observation checklist of the types of the information resources and services available in the federal medical centre libraries studied.

Table 4.3: Information Resources and Services Available in Bida, Keffi, Lokojaand Makurdi Federal Medical Centre Libraries

| S/N | Types of Information | Name of Federal Medical Centre | | | | | | | | |
|-----|----------------------|--------------------------------|------|------|------|--|--|--|--|--|
| | Resources | FMC, Bida | FMC, | FMC, | FMC, | | | | | |

| | | | | Keffi | | Lokoja | | Maku | ırdi |
|----|---|--------------|----|--------------|----|--------------|----|--------------|------|
| | | AV | NA | AV | NA | AV | NA | AV | NA |
| 1 | Textbooks on medical line | | | | | | | | |
| 2 | Magazines | | | \checkmark | | \checkmark | | \checkmark | |
| 3 | Professional journals | | | \checkmark | | \checkmark | | \checkmark | |
| 4 | Newspapers | \checkmark | | \checkmark | | \checkmark | | \checkmark | |
| 5 | Posters/handbills | | | \checkmark | | \checkmark | | \checkmark | |
| 6 | Newsletters | | | \checkmark | | \checkmark | | \checkmark | |
| 7 | Dictionaries | | | \checkmark | | \checkmark | | \checkmark | |
| 8 | Internet resources | | - | | - | | - | | - |
| 9 | Medical Standards and guidelines | \checkmark | | | - | | - | | - |
| 10 | Conference proceedings | | | | - | | - | | - |
| 11 | Encyclopedias | | - | | _ | | _ | | _ |
| | Lineyeropedius | | - | | | | | | |
| 12 | Manuals and guides on Immunisation | \checkmark | | | - | | - | | - |
| | Library Information Services | | | | | | | | |
| 13 | Immunisation services | | - | | - | | - | | - |
| 14 | Email alerts to patients on health talk hour | | - | | - | | - | | - |
| 15 | Mobile phone alerts | | - | | - | | - | | - |
| 16 | Library website health information services | | - | | - | | - | | - |
| 17 | Reference Services | | | \checkmark | | \checkmark | | \checkmark | - |
| 18 | Document Delivery Services | | - | | - | | - | | |
| 19 | Current Awareness Services | | | \checkmark | | \checkmark | | \checkmark | |
| 20 | Selective Dissemination of Information Services | \checkmark | | \checkmark | | \checkmark | | \checkmark | |
| 21 | Inter and Intra-library Loan Services | \checkmark | | | - | \checkmark | | \checkmark | |
| 22 | Short Messages Services (SMS) | | - | | - | | - | | - |
| 23 | Library Orientation Services | \checkmark | | | | \checkmark | | \checkmark | |
| 24 | Internet browsing Services | | - | | - | | - | | - |

Key: AV=Available ($\sqrt{}$) NA=Not available (-)

Table 4.3 based on observation checklist revealed that information resources such as textbooks on medical lines, professional journals, newspapers, magazines, newsletters, dictionaries, manuals and guides on immunisation, medical standards and guidelines

and posters/handbills are available in the libraries studied. Similarly, reference services, current awareness services, selective dissemination of information services, intra and inter-library loan services, library orientation services are equally available. On the other hand, internet browsing, internet resources, conference proceedings, encyclopedias, immunisation services, email alerts to patients on health talk hours, mobile phone alerts, library website health information services, document delivery services, Short messages services (SMS) are the information resources and services not available in the medical centre libraries studied.

Research Question 2: What is the level of library use by post-natal mothers?

Table 4.4 below shows the response of post-natal mothers on the level of their library use in the federal medical centres studied

Table 4.4: Level of Library Use by Post-natal Mothers

| S/N | Statements | VHL 4 | HL 3 | VLL 2 | LL 1 | N | FX | \overline{x} | SD | Decision |
|-----|---|----------|---------|----------|---------|----|-----|----------------|------|----------|
| 1 | The post-natal mothers use the library on daily basis | 2(6 %) | 3(8%) | 24(69%) | 6(17%) | 35 | 71 | 2.02 | 0.48 | Low |
| 2 | The post-natal mothers use the library on weekly | 3(8%) | 7(20%) | 20(58%) | 5(14%) | 35 | 77 | 2.22 | 0.28 | Low |
| | basis | | | | | | | | | |
| 3 | The post-natal mothers use the library on monthly | 2(6%) | 7(20%) | 5(14%) | 21(60%) | 35 | 59 | 1.71 | 0.79 | Low |
| | basis | | | | | | | | | |
| 4 | The post-natal mothers use the library only during | 3(8%) | 2(6%) | 7(20%) | 23(66%) | 35 | 54 | 1.57 | 0.93 | Low |
| | post-natal visits | | | | | | | | | |
| 5 | The post-natal mothers use the library only when | 25(71.4 | 4(11.4% | 5(14.3%) | 1(2.9%) | 35 | 123 | 3.51 | 1.01 | High |
| | directed by a librarian | %) |) | | | | | | | |
| 6 | Post-natal mothers do not use the library at all | 2(6%) | 6(17%) | 3(8%) | 24(69%) | 35 | 56 | 1.6 | 0.9 | Low |

Keys: VHL=Very High Level, HL=High Level, VLL=Very Low Level and L=Low Level

Table 4.4 revealed that six statemennts were listed for librarians working in medical centre libraries to respond on the level of library use by post-natal mothers, a statement produced high mean score which was above the benchmark of 2.50. The statement is: post-natal mothers use the library only when directed by a librarian (\bar{x} =3.51; SD=0.01). On the other hand, five statements showed low mean scores below the bench mark of 2.50. These include: the post-natal mothers use the library on daily basis (\bar{x} =2.02; SD=0.48); the post-natal mothers use the library on weekly basis (\bar{x} =2.22; SD=0.28); the post-natal mothers use the library on monthly basis (\bar{x} =1.71; SD=0.79); the post-natal mothers use the library only during post-natal visits (\bar{x} =1.57; SD=0.93) and the post-natal mothers do not use the library at all (\bar{x} =1.6; SD=0.9).

Research Question 3: What ways do librarians disseminate information on immunisation to post-natal mothers?

Table 4.5 shows the various ways information is disseminated to post-natal mothers on immunisation by medical librarians

Table 4.5: Ways Librarians Disseminate Information on Immunisation to Post-natal Mothers

| S/N | Statements | SA 4 | A 3 | D 2 | SD 1 | Ν | FX | \overline{x} | SD | Decision |
|-----|---|---------|--------|---------|---------|----|-----|----------------|------|-----------|
| 1 | Information on Immunisation is disseminated to post-natal mothers through posters/fliers/handbills | 5(14%) | 4(11%) | 22(64%) | 4(11%) | 35 | 80 | 2.28 | 0.22 | Disagreed |
| 2 | Information on Immunisation is disseminated to post-natal mothers through weekly health talks | 6(17%) | 4(11%) | 18(51%) | 7(20%) | 35 | 79 | 2.25 | 0.25 | Disagreed |
| 3 | Information on Immunisation is disseminated to post-natal mothers through outreach Services/programmes | 21(60%) | 2(6%) | 7(20%) | 5(14%) | 35 | 109 | 3.11 | 0.61 | Agreed |
| 4 | Information on Immunisation is disseminated to post-natal mothers through workshops/seminar | 24(69%) | 3(8%) | 6(17%) | 2(6%) | 35 | 119 | 3.40 | 0.9 | Agreed |
| 5 | Information on Immunisation is disseminated to post-natal mothers through yearly conferences organized by the Federal Medical Centre | 4(11%) | 7(20%) | 19(55%) | 5(14%) | 35 | 80 | 2.28 | 0.22 | Disagreed |
| 6 | Information on Immunisation is disseminated to post-natal mothers through the library websites | 4(11%) | 6(17%) | 15(43%) | 10(29%) | 35 | 74 | 2.11 | 0.39 | Disagreed |
| 7 | Information on Immunisation is disseminated to post-natal mothers through librarians' health talks hour | 7(20%) | 5(14%) | 18(52%) | 5(14%) | 35 | 84 | 2.40 | 0.1 | Disagreed |
- 8 Information on Immunisation is disseminated to post-natal mothers 5(14%) 7(20% 21(60%) 2(6%) 35 85 2.42 0.08 Disagreed through email alerts/mobile phone SMS
- 9 Information on immunisation is disseminated to post-natal mothers 2(6%) 5(14%) 22(63%) 6(17%) 35 73 2.08 0.42 Disagreed through film/video shows
- 10 Information on immunisation is disseminated to post-natal mothers 26(75%) 4(11%) 3(8%) 2(6%) 35 124 3.54 1.04 Agreed through radio/television messages

Key: SA- Strongly Agreed, A-Agreed, D-Disagreed, SD-Strongly Disagreed

Table 4.5 indicated that three out of the ten statements listed to find out ways librarians disseminate information on immunisation to post-natal mothers have high mean scores above 2.5 benchmark of adopted 4 point likert's scale. These statements include: information disseminated is to post-natal mothers through outreach services/programmes (\bar{x} -3.11; SD=0.61); information on immunisation is disseminated to post-natal mothers through workshops/seminars (\bar{x} -3.40; SD=0.9) and information on immunisation is disseminated to post-natal mothers through radio/television messages $(\bar{x}$ -3.54; SD=1.04). On the other hand, six statements showed low mean scores below the bench mark of 2.50. These are: information on immunisation is disseminated to post-natal mothers through posters/fliers/handbills (\bar{x} -2.28; SD=0.22); information on immunisation is disseminated to post-natal mothers through weekly health talks (\bar{x} -2.25; SD=0.25); information on immunisation is disseminated to post-natal mothers through vearly conferences organised by the federal medical centre (\bar{x} -2.28; SD=0.22); information on immunisation is disseminated to post-natal mothers through the library websites (\bar{x} -2.11; SD=0.39); Information on immunisation is disseminated to post-natal mothers through librarians' health talks hour (\bar{x} -2.40; SD=0.1); information on immunisation is disseminated to post-natal mothers through email alerts/mobile phone SMS (\bar{x} -2.42; SD=0.08) and information on immunisation is disseminated to post-natal mothers through film/video shows (\bar{x} -2.08; SD=0.42).

Research Question 4: How do post-natal mothers use information disseminated on immunisation?

Table 4.6 shows the responses of post-natal mothers on how they use information disseminated to them by librarians on immunisation

Table 4.6: How Information Disseminated on Immunisation is used by Post-natal Mothers (Post-natal Mothers)

| S/N | Statements | SA 4 | A 3 | D 2 | SD 1 | N | FX | \overline{x} | SD | Decision |
|-----|--|----------|---------|----------|---------|-----|-----|----------------|------|-----------|
| 1 | I use information on immunisation to prevent | 157(58%) | 56(21%) | 23(9%) | 31(12%) | 267 | 873 | 3.27 | 0.77 | Agreed |
| | childhood killer diseases such as mumps, measles, | | | | | | | | | |
| | diphtheria, chicken pox, hepatitis A&B etc. | | | | | | | | | |
| 2 | I use information on immunisation to prevent child | 109(41%) | 76(28%) | 52(19%) | 30(12%) | 267 | 795 | 2.98 | 0.48 | Agreed |
| | mortality | | | | | | | | | |
| 3 | I use information on immunisation to avoid | 69(26%) | 33(12%) | 123(46%) | 42(16%) | 267 | 662 | 2.48 | 0.02 | Disagreed |
| | unnecessary expenses of parents on drugs | | | | | | | | | |
| 4 | I use information on immunisation to educate other | 142(53%) | 56(21%) | 23(9%) | 46(17%) | 267 | 828 | 3.10 | 0.6 | Agreed |
| | post-natal mothers around me | | | | | | | | | |
| 5 | I use information on immunisation because of its | 147(55%) | 53(20%) | 32(12%) | 35(13%) | 267 | 843 | 3.16 | 0.66 | Agreed |
| | importance to child's health | | | | | | | | | |
| 6 | I use information on immunisation to better my | 176(66%) | 32(12%) | 36(13%) | 23(9%) | 267 | 913 | 3.42 | 0.92 | Agreed |
| | child's life | | | | | | | | | |
| 7 | I use information on immunisation for nothing | 56(21%) | 21(8%) | 152(57%) | 38(14%) | 267 | 614 | 2.35 | 0.15 | Disagreed |
| 8 | I do not have knowledge on the use of information | 29(11%) | 31(12%) | 179(67%) | 28(10%) | 267 | 592 | 2.22 | 0.28 | Disagreed |
| | on immunisation | | | | | | | | | |

Key: SA- Strongly Agreed, A-Agreed, D-Disagreed, SD-Strongly Disagreed

Table 4.6 indicated that five out of the eight statements listed to find out how post-natal mothers use information disseminated to them on immunisation have high mean scores above 2.5 benchmark of adopted 4 point likert's scale. These statements include: I use information on immunisation to prevent childhood killer diseases such as mumps, measles, diphtheria, chicken pox, hepatitis A&B etc ($\bar{x} = 3.27$; SD=0.77); I use information on immunisation to prevent child mortality ($\bar{x} = 2.98$; SD=0.48); I use information on immunisation to educate other post-natal mothers around me ($\bar{x} = 3.10$; SD=0.6); I use information on immunisation because of its importance to child's health ($\bar{x} = 3.16$; SD=0.66) and I use information on immunisation to better my child's life ($\bar{x} = 3.42$; SD=0.92). While three statements showed low mean scores below the bench mark of 2.5. These include: I use information on immunisation to avoid unnecessary expenses of parents on drugs ($\bar{x} = 2.48$; SD=0.02); I use information on immunisation to avoid unnecessary expenses of parents on drugs ($\bar{x} = 2.48$; SD=0.02); I use information on immunisation on immunisation to avoid unnecessary expenses of parents on drugs ($\bar{x} = 2.48$; SD=0.02); I use information on immunisation on immunisation to avoid unnecessary expenses of parents on drugs ($\bar{x} = 2.48$; SD=0.02); I use information on immunisation on immunisation to avoid unnecessary expenses of parents on drugs ($\bar{x} = 2.48$; SD=0.02); I use information on immunisation on immunisation to avoid unnecessary expenses of parents on drugs ($\bar{x} = 2.48$; SD=0.02); I use information on immunisation on immunisation on immunisation ($\bar{x} = 2.35$; SD=0.15) and I do not have knowledge on the use of information on immunisation ($\bar{x} = 2.22$; SD=0.28).

Research Question 5: What are the diseases prevented as a result of information disseminated on immunisation against childhood killer diseases?

Table 4.7 shows the responses of medical librarians on diseases prevented as a result of the information disseminated on immunisation against childhood killer diseases

| Tał | ole 4 | 1.7: | Diseases | Prevente | ed as a | Resu | ilt of | Info | rmation | Diss | eminat | ed on | Immur | nisatio | n again | st C | hildhood | Killer | Diseas | ses |
|------|---|-------|----------|-----------|---------|-------|--------|------|---------|------|---------|-------|---------|---------|---------|------|----------|---------|--------|-----|
| I UI | , , , , , , , , , , , , , , , , , , , | • / • | Discuses | II CVCIIC | u us u | Ittou | | IIIU | mation | 100 | ciiiiau | cu on | IIIIIui | insuito | n agam | | munoou | IXIIICI | Discu | 300 |

| S/N | Statements | SA 4 | A 3 | D 2 | SD 1 | N | F | \overline{x} | SD | Decision |
|-----|---|-----------|----------|----------|----------|----|-----|----------------|------|----------|
| 1 | Information on immunisation has helped to prevent polio diseases | 25(71.4%) | 4(11.4%) | 3(8.6%) | 3(8.6%) | 35 | 121 | 3.45 | 0.95 | Agreed |
| 2 | Information on immunisation has helped to prevent whooping cough (pertussis) diseases | 21(60%) | 8(23%) | 2(6%) | 4(11%) | 35 | 116 | 3.31 | 0.81 | Agreed |
| 3 | Information on immunisation has helped to prevent pneumonia (pneumoeoccal) diseases | 18(51.4%) | 5(14.3%) | 7(20%) | 5(14.3%) | 35 | 106 | 3.02 | 0.52 | Agreed |
| 4 | Information on immunisation has helped to prevent mumps, diseases | 19(54.3%) | 4(11.4%) | 5(14.3%) | 7(20%) | 35 | 105 | 3.00 | 0.5 | Agreed |
| 5 | Information on immunisation has helped to prevent measles diseases | 25(71%) | 6(17%) | 2(6%) | 2(6%) | 35 | 126 | 3.60 | 1.1 | Agreed |
| 6 | Information on immunisation has helped to prevent influenza diseases | 21(60%) | 4(11.4%) | 6(17.1%) | 4(11.4%) | 35 | 112 | 3.20 | 0.7 | Agreed |
| 7 | Information on immunisation has helped to prevent hepatitis A and B diseases | 20(57.1%) | 5(14.3%) | 6(17.1%) | 4(11.4%) | 35 | 111 | 3.17 | 0.67 | Agreed |
| 8 | Information on immunisation has helped to prevent diphtheria diseases | 21(60%) | 7(20%) | 5(14%) | 2(6%) | 35 | 117 | 3.34 | 0.84 | Agreed |

- 9 Information on immunisation has helped to prevent 25(71.4%) 3(8.6%) 4(11.4%) 3(8.6%) 35 118 3.42 0.92 Agreed chicken pox diseases
- 10Information on immunisation has helped to prevent 23(66%)7(20%)3(8%)2(6%)351213.450.95Agreedtetanus(lockjaw) diseases

Key: SA=Strongly Agreed, A=Agreed, D=Disagreed, SD=Strongly Disagreed

Table 4.7 indicated that ten of the statements listed to find out how killer diseases prevented due to information disseminated on immunisation have high mean scores above 2.5 benchmark of adopted 4 point likert's scale. These include: Information on immunisation has helped to prevent polio diseases($\bar{x} = 3.45$; SD=0.95); Information on immunisation has helped to prevent whooping cough (pertussis) diseases ($\bar{x} = 3.31$; SD=0.81); Information on immunisation has helped to prevent pneumonia (pneumoeoccal) diseases ($\bar{x} = 3.02$; SD=0.52); Information on immunisation has helped to prevent mumps, diseases ($\bar{x} = 3.00$; SD=0.5); Information on immunisation has helped to prevent measles diseases ($\bar{x} = 3.60$; SD=1.1); Information on immunisation has helped to prevent influenza diseases($\bar{x} = 3.20$; SD=07); Information on immunisation has helped to prevent hepatitis A and B diseases($\bar{x} = 3.17$; SD=0.67); Information on immunisation has helped to prevent diphtheria diseases($\bar{x} = 3.34$; SD= 0.84); Information on immunisation has helped to prevent chicken pox diseases (\bar{x} =3.42; SD=0.92) and Information on immunisation has helped to prevent tetanus(lockjaw) diseases($\bar{x} = 3.45$; SD=0.95).

Research Question 6: What are the factors affecting information dissemination and use on immunisation to post-natal mothers?

Table 4.8 shows the responses of medical librarians on factors affecting the dissemination and use of information to post-natal mothers on immunisation.

| | 8 | | | | | | | | / | |
|-----|---|-----------|----------|----------|----------|----|-----|----------------|------|----------|
| S/N | Statements | SA 4 | A 3 | D 2 | SD 1 | Ν | FX | \overline{x} | SD | Decision |
| 1 | Erratic power supply for effective dissemination of information on immunisation | 22(63%) | 6(17%) | 4(11.4%) | 3(8.6%) | 35 | 117 | 3.34 | 0.84 | Agreed |
| 2 | Inadequate fund to sponsor library immunisation programmes | 23(65%) | 8(22%) | 4(11%) | 1(2%) | 35 | 125 | 3.57 | 1.07 | Agreed |
| 3 | Inadequate fund to acquire the ICT equipment to disseminate the needed information to post-natal mothers | 21(60%) | 7(20%) | 4(11.4%) | 3(8.6%) | 35 | 116 | 3.31 | 0.81 | Agreed |
| 4 | Post-natal mothers lack of interest of seeking information on immunisation | 25(71%) | 6(17%) | 2(6%) | 2(6%) | 35 | 124 | 3.54 | 1.04 | Agreed |
| 5 | Lack of government intervention towards the awareness of information on immunisation to post- natal mothers | 20(57.1%) | 6(17.1%) | 5(14.3%) | 4(11.4%) | 35 | 112 | 3.20 | 0.70 | Agreed |

 Table 4.8: Factors Affecting Information Dissemination and Use on Immunisation to Post-natal Mothers (medical librarians)

Key: SA=Strongly Agreed, A=Agreed, D=Disagreed, SD=Strongly Disagreed

Table 4.8 revealed that five of the statements listed to disclose the factors affecting information dissemination on immunisation to post-natal mothers showed high mean scores above the bench mark of 2.50. These include: erratic power supply for effective dissemination of information on immunisation (\bar{x} -3.34; SD=0.84); inadequate fund to sponsor library immunisation programmes (\bar{x} -3.57; SD=1.07); inadequate fund to acquire the ICT equipment to disseminate the needed information to post-natal mothers (\bar{x} -3.31; SD=0.81); Post-natal mothers lack of interest of seeking information on immunisation (\bar{x} -3.54; SD=1.04) and lack of government intervention towards the awareness of information on immunisation to post-natal mothers (\bar{x} -3.20; SD=0.70) are the major factors affecting information dissemination to post-natal mothers on immunisation in the four medical centres studied.

4.4 Result of the Tested Hypotheses

 H_{o1} There is no significant relationship between information dissemination to post-natal mothers and information use on immunisation as prevention to childhood killer diseases.

Table 4.9 shows the relationship between information dissemination and information use on immunisation.

| Variable | n | df | Mean | SD | R | Р |
|---|-----|-----|-------|-------|-------|------|
| Information | | | 32.26 | 3.20 | | |
| Dissemination | 302 | 300 | | | 0.651 | 0.05 |
| Information use on immunisation as | | | 62.62 | 10.63 | | |
| prevention to childhood killer diseases | | | | | | |
| diseases | | | | | | |

 Table 4.9: Relationship Between Information Dissemination and Information use on

 Immunisation to Post-natal mothers

Table 4.9 showed that the Pearson Correlation coefficient =0.651 is greater than P value of 0.05. Therefore, the null hypothesis which states that there is no significant relationship between information dissemination to post-natal mothers and information use on immunisation is rejected. This means that increase in information dissemination greatly affects information use on immunisation. Hence, poor information dissemination will lead to low use of information on immunisation as prevention to childhood killer disease.in Federal Medical Centres Studied.

 H_{o2} There is no significant relationship between information use and diseases prevented as a result of information dissemination on Immunisation against childhood killer diseases.

Table 4.10 shows the relationship between information use and diseases prevented as a result of information dissemination on immunisation.

| Variable | n | df | Mean | SD | R | Р |
|--|-----|-----|-------|-------|-------|------|
| Information Use | | | 62.62 | 10.63 | | |
| | 302 | 300 | | | 0.926 | 0.05 |
| Diseases prevented due to information dissemination on Immunisation | | | 35.18 | 4.62 | | |

 Table 4.10: Relationship Between Information Use and Diseases Prevented as a Result of

 Information Dissemination on Immunisation

Table 4.10 showed that the Pearson Correlation coefficient = 0.926 is greater than P value of 0.05. Therefore, the null hypothesis which states that, there is no significant relationship between information use and diseases prevented as a result of information dissemination on immunisation against childhood killer diseases is rejected. This means that the use of information on immunisation has positive influence in disease prevention due to information dissemination on immunisation.

4.5 Summary of the Findings

Based on the result of the analysis, the following are summary of the major findings:

- The study revealed that the information resources and services available were: textbooks on medical lines, professional journals, newspapers, magazines, newsletters, dictionaries, reference services, current awareness services, selective dissemination of information, intra and inter-library loan services, manuals and guides on immunisation, medical standards and guidelines, library orientation services and posters/handbills in the medical centre libraries studied.
- 2. The level of post-natal mothers' use of library is low.

- 3. Librarians working in medical centre libraries mostly disseminate information on immunisation to post-natal mothers through radio/television messages workshops/seminars and outreach services/programmes,
- 4. Post-natal mothers mostly use information on immunisation to prevent childhood killer diseases such as; mumps, measles, diphtheria, chicken pox, hepatitis A&B etcetera, to prevent child mortality, to educate other post-natal mothers around them, because of its importance to child's health and to better their children's life.
- 5. Information on immunisation has helped to prevent polio diseases, whooping cough (pertussis) diseases, pneumonia (pneumoeoccal) diseases, mumps, measles, influenza diseases, hepatitis A and B diseases, diphtheria diseases, chicken pox diseases and tetanus(lockjaw) diseases although still beyond expectation.
- 6. There is significant relationship between information disseminated to post-natal mothers and information use on immunisation against childhood killer disease.
- 7. There is significant relationship between information used by post-natal mothers and diseases prevented as a result of information disseminated on immunisation against childhood killer diseases.
- 8. The major factors affecting the information dissemination and use on immunisation to post-natal mothers are inadequate fund to sponsor library immunisation programmes, erratic power supply for effective dissemination of information on immunisation, others include inadequate fund to acquire the ICT equipment to disseminate the needed information to post-natal mothers, Postnatal mothers lack of interest of seeking information on immunisation and lack

of government intervention towards the awareness of information on immunisation to post-natal mothers.

4.6 Discussion of the Findings

In line with the objective 1 of the study, the information resources and services available in the medical libraries studied are: textbooks on medical lines, professional journals, newspapers, magazines, newsletters, dictionaries, manuals and guides on immunisation, medical standards and guidelines and posters/handbills were available. In the same vein, reference services, current awareness services, selective dissemination of information, intra and inter-library loan services and library orientation services were equally available in the federal medical centre libraries studied. while, Internet browsing, Internet resources, conference proceedings, encyclopedias, immunisation services, email alerts to patients on health talk hours, mobile phone alerts, document delivery services, short messages services (SMS), library website health information services expected to be available were all not available in the medical centre libraries

This is probably because FMC Libraries of today are not adequately funded by the governments of the day. Thus, the libraries are not properly equipped to satisfy the information needs of users. This, therefore, has to a large extent hindered information resources and services provided to post-natal mothers particularly on immunisation services/programmes. This is contrary to the findings of Anyaoku and Nwosu (2017) who revealed that significant number of patients including post-natal mothers should have access to health information from different media which include books, Internet, mobile library services and posters/handbills.

The result from Table 4.4 revealed that out of the six statements listed for medical librarians to respond on the level of library use by post-natal mothers, only one

77

statement indicated high mean score which showed that post-natal mothers use the federal medical centre libraries only when directed by a librarian. This could be attributed to the fact that post-natal mothers are not adequately aware of the importance of using a library to seek for health information. This is in line with the study of Adeleke and Nwalo (2017) that awareness is an integral part of availability which in turn leads to utilisation. Furthermore, the awareness of information resources indicates the extent to which Post-natal Mothers have adequate information and knowledge of the presence of print and electronic information resources in the library. This awareness urges and encourages them to utilise the information resources.

Results from Table 4.5 revealed that librarians mostly disseminate information on immunisation to post-natal mothers through radio/television messages, workshops/seminars outreach services/programmes. This clearly shows that information dissemination on immunisation to post-natal mothers is still low and requires urgent attention of librarians in order to promote immunisation services among post-natal mothers. This is probably because of inadequate funding of FMC by federal government as revealed in Table 4.8. If the libraries in FMCs are not well equipped, they would not find it easy to disseminate information to post-natal mothers especially when it comes to using ICT facilities needed for fast and easy dissemination of information to the public in this jet age. The finding corroborates with the findings of Emowumi(2018) who worked on influence of information resources usage and services on job performance of healthcare practitioners in federal medical centre libraries in North central, Nigeria which revealed that some of the factors militating against optimal and effective utilisation of healthcare information resources and services are lack of adequate information resources, lack of adequate human resources to render some services, low ICT and search skills by both medical librarians and healthcare practitioners, lack of adequate funding from parent institutions, lack of adequate infrastructure to house the information resources and low Information and Communication Technology infrastructure.

From Table 4.6, results shows that post-natal mothers have knowledge of immunisation and use information on immunisation to help reduce childhood killer diseases such as mumps, measles, diphtheria, chicken pox, hepatitis A&B ecetera, to prevent child mortality, to educate other post-natal mothers around them and to better their children's life. This could be attributed to the fact that life is involved in this case and so post-natal mothers were able to adequately use information disseminated to them by medical librarians.

Results from Table 4.7 revealed that information on immunisation has helped to prevent/reduce polio diseases, whooping cough (pertussis) diseases, pneumonia (pneumoeoccal) diseases, mumps, measles, influenza diseases, hepatitis A and B diseases, diphtheria diseases, chicken pox diseases and tetanus(lockjaw) diseases. This means that, though librarians are faced with many challenges of information dissemination on immunisation, they still need to perform certain roles on making the right information available to post-natal mothers to permanently prevent childhood killer diseases. This corroborates with the findings of Mcnair (2014) who stated that when childhood vaccines are delivered at the right time, they increase the protection of children from vaccine preventable diseases, minimise the risk of children getting infected and decrease the chances of outbreaks of the diseases.

From Table 4.8 the medical librarians revealed that the major factors affecting information dissemination and use on immunisation to post-natal mothers are inadequate fund to sponsor library immunisation programmes, erratic power supply for

79

effective dissemination of information on immunisation, inadequate fund to acquire the ICT equipment to disseminate the needed information to post-natal mothers, Post-natal mothers lack of interest of seeking information on immunisation and lack of government intervention towards the awareness of information on immunisation to post-natal mothers. This could be as a result of dwindling economy affecting all sectors of the society including FMCs. This is contrary to the findings of Njeru *et al.* (2019) who researched on utilisation of immunisation services among children under five years of age in Kirinyaga, Kenya and disclosed that age, gender, educational level and level of income were significant factors that affected timely information on immunisation. Other factors derived as barriers to utilisation were myths and misconception, side effects of immunisation, etcetera.

4.7 Findings of the Tested Hypotheses

The test of the null hypothesis between information dissemination and use on immunisation shows that there is significant relationship between information dissemination to post-natal mothers and information use on immunisation as prevention to childhood killer diseases in federal medical centres, This means that increase in information dissemination greatly affects information use on immunisation. Hence, poor information dissemination will lead to low use of information on immunisation as prevention to childhood killer disease in federal medical centres. This corroborates the findings of Obasola and Mabawonku (2018) as they reported that there is absolute need for more MCH information products and services in local languages using acceptable means/channels especially ICT facilities.

Also, the null hypothesis tested between information use and diseases prevented as a result of the information disseminated revealed that, there is significant relationship

between information use and diseases prevented as a result of information dissemination on immunisation against childhood killer diseases. This means that the use of information on immunisation has positive influence in disease prevention. This statement is in line with Black (2010) who opined that up-to-date information on the causes of child death is crucial to guide global efforts to improve child survival

CHAPTER FIVE

5.0 CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

From the findings, the study concludes that information dissemination and use to postnatal mothers on immunisation to prevent childhood killer diseases is poor. This is not surprising since library cannot effectively disseminate relevant information resources and render library services without adequate library information resources and infrastructure such as ICT facilities. In Bida, Keffi, Lokoja and Makurdi federal medical centres, libraries were available but not adequately stocked with information resources such as ICT facilities and services to effectively carry out library health information dissemination services, particularly, the immunisation services. Inadequate fund to sponsor library immunisation programmes, lack of government intervention towards the awareness of information on immunisation to post-natal mothers, post-natal mothers lack of interest for seeking information on immunisation, erratic power supply for dissemination of information on immunisation were recorded as major factors obstructing information dissemination and use on immunisation. It is therefore, expected that with the eradication of all these factors hindering information dissemination and use on immunisation to prevent childhood killer diseases, medical librarians' effort to render adequate library resources and services to post-natal mothers will be more effective and yield better results.

5.2 Recommendations

Based on the findings of this study, the following recommendations were made:

- 1. The management of federal medical centres should as a matter of urgency finance the purchase of health information resources in order to carry out effective services particularly on immunisation programmes to post-natal mothers as well as the general public.
- 2. Librarians working in medical libraries alongside the management of federal medical centres should develop suitable methods/strategies on how to create more awareness on the importance of using the library particularly to post-natal mothers as well as the general public. This can be through developing mobile library services, organising regular conferences and workshops, weekly health talks for both pregnant and post-natal mothers among others.
- 3. A lot still needs to be done by the management of the federal medical centres on the provision of adequate equipment especially ICT facilities to enable librarians carry out effective library services and most importantly immunisation services particularly for post-natal mothers.
- 4. Medical librarians on the other hand need to focus more on creating awareness on the importance of seeking for as well as utilising information on immunisation in the society in order to prevent further childhood killer diseases such as mumps, measles, diphtheria, chicken pox, hepatitis A and B.
- 5. Since the study revealed that information on immunisation has helped to reduce polio diseases, whooping cough (pertussis) diseases, pneumonia (pneumoeoccal) diseases, mumps, measles, influenza diseases, hepatitis A and B diseases, diphtheria diseases, chicken pox diseases and tetanus(lockjaw) diseases although still beyond expectation, a lot still needs to be done by the federal government to provide adequate resources (both human and material) to drastically prevent future occurrence of these deadly diseases.

6. The management of federal medical centres should ensure that there is regular power supply and should ask for government intervention in terms of creating awareness on the importance of immunisation and information services provided by librarians to post-natal mothers.

5.3 Contribution to Knowledge

This study contributed to knowledge in the following ways:

- 1. The study contributed to knowledge by revealing that library resources and services in the federal medical centres in North-central, Nigeria are moderately provided.
- 2. The study has also revealed that the level of library use by post-natal mothers and the ways of information dissemination by the librarians in federal medical centre libraries is low.
- 3. The study has equally contributed to knowledge by revealing that the post-natal mothers use of information on immunisation disseminated to them and this has helped to prevent their children from childhood killer diseases.

5.4 Suggestion for Further Studies

The study suggested the following for further studies:

- Assessment of information dissemination and use to post-natal mothers on immunisation as prevention to childhood killer diseases by librarians in federal medical centres in South-west, Nigeria.
- Assessment of information dissemination and use to post-natal mothers on immunisation as prevention to childhood killer diseases by librarians in General Hospitals in North-east, Nigeria.

3. Assessment of information dissemination and use to pregnant women/ante-natal mothers on immunisation as prevention to childhood killer diseases by librarians in federal medical centres in North-central, Nigeria.

REFERENCES

- Abbey, M. J., Saad, B. O., Robert, A. B., Neal, A.H., Lawrence, H. M. & Daniel, A.S. (2012). Parents's source of vaccine information and impact on vaccine attitudes, beliefs, and nonmedical exemption. *Advances in Preventive Medicine*, 20(12), 1-8. Retrieved from ID 932741, doi:10.1155/2012/932741.
- Abdulkarim, A. A. (2011). Vaccines and immunisation: The past, present and future in Nigeria. Nigerian Journal of Paediatrics, 38(4), 186–194. Retrieved from www.ajol.info/index.php/njp/article/download/72382/61305.
- Abdulraheem, I. S., Onajole, A. T., Jimoh, A. A. G. & Oladipo, A. R. (2011). Reasons for incomplete vaccination and factors for missed opportunities among rural Nigerian children. *Journal of Public Health and Epidemiology*, 3(4), 194-203. Retrieved from <u>http://www.academicjournals.org/jphe</u>.
- Adedokun, S.T., Uthman, O. A., Adekanmbi, V. T., & Wiysonge, C. S. (2017). Incomplete childhood immunisation in Nigeria: a multilevel analysis of individual contextual factors. *BMC Public Health*, 17(236), 1-10. Retrieved from https://doi.org/10.1186.
- Ajuwon, G. A. (2015). Internet accessibility and use of online health information resources by doctors in training healthcare institutions in Nigeria. *Library Philosophy and Practice(e-Journals)*, 1258, 1-21. Retrieved from https:// digitalcommons.unl.edu/libphilprac/1258.
- Akparobore, O. D. (2011). The role of public libraries in promoting adult education in Nigeria. *Library Philosophy and Practice (e-journal)*, 453. Retrieved from http://digitalcommons.unl.edu.edi/viewcontent.cgi?article=147&context=libphilprac.
- Amolo, L., Irimu, G., & Njai, D. (2017). Knowledge of postnatal mothers on essential newborn care practices at the Kenyatta National Hospital: a cross sectional study. *Pan African Medical Journal*, 28, 1-7. Retrieved from http://www.panafrican-med-journal.com/content/article/28/97/full.
- Andre, F. E. (2012). Bulletin of the world health organisation vaccination greatly reduces disease, disability, death and inequity worldwide. 86(2), 140-146. Retrieved from DOI:10.1590/S0042-
- Anum, B.M. (2015). Acceptability and Utilisation of Health Care Services among Pregnant Women in North Central Zone of Nigeria. Ahmadu Bello University, Zaria. (Unpublished thesis).
- Anunne, E. A. (2012). Information Needs and Information Dissemination to artisanal fisheries in Selected Communities in Three Local Government Areas of Benue State. Department of Library and Information Science. University of Nigeria, Nsukka. (Unpublished MLS thesis).
- Anyaoku, E. N. & Nwosu, O.C. (2017). Extent of access to health information and sources to chronic diseases patients in tertiary health institutions in South East, Nigeria: Implications for library role. *Library Philosophy and Practice(ejournal)*, 1504,1-18 Retrieved from <u>http://digitalcommons.unl.edu/libphilprac</u>.

- Aryee, K. L. (2014). The Role of the Mobile Phones in health education for Rural Communities in Ghana. An explorative Study in digital Technologies. Electronic thesis and Dissertation Repository, paper2030. Retrieved from https://ir.lib.uwo.ca/etd/2030.
- Bates, A. S. & Wolinsky, F. D. (1998). Personal, financial, and structural barriers to immunisation in socio-economically disadvantaged urban children. *Pediatrics*, 101 (4 part 1), 591-596. Retrieved from Doi.:10.1542/peds.101.4.591.
- Beck, J. B. (2010). Postnatal parental education for optimising infant general health and parent-infant relationships (Review). Cochrane Database of Systematic Reviews (Online) Library, 28 (11), 40-68. Retrieved from Doi:10.1002/14651858.CD004068.pub3
- Berhan, D. & Gulema, H. (2018). Level of knowledge and associated factors of postnatal mothers' towards essential newborn care practices at governmental health centers in Addis Ababa. Ethiopia. *Advances in Public Health*, 2018, 1-10. Retrieved from <u>https://doi.org/10.1155/2018/8921818</u>.
- Bitagi A. M. & Ozioko, R .E. (2015). Factors militating against utilization of information resources for research by scientists in Agricultural Research institutes in Nigeria. *Journal of Balkan Libraries Union*, 3 (2), 14-30. Retrieved from http://www.balkanlilibraries.org/journal.
- Black, R. E., Cousins, S., Johnson, H. L., Lawn, J. E., Rudan, I., Bassani, D.G., Jha, P., Campbell, H., Walker, C. F., Cibulskis, R., Eisole, T., Liu, L. & Mathers, C. (2010). Global, regional, and national causes of child mortality in 2008: a systematic analysis". The Lancet, 375(9730), 1969–1987. Retrieved from Doi: 10:1016/S0140-6736(10)60549-1.
- Bondy J. N., Think, A., Krual, J. J. & Speechley, K. N. (2009). Identifying the Determinants of Childhood Immunisation in the Philipines. Vaccine, 27(1), 169-175. Retrieved from Doi: 10.1016/j.vaccine.2008.08.042.
- CBHS Health & Wellbeing Blog (2014). log (/health-well-being-blog)//Wellbeing (/health-well-being-blog/wellbeing) The Importance of Immunisation.
- Charlotte, W., Daly, P., Toure, L. & Mongi, P. (2006). Postnatal care. *Opportunities for Africa's newborns*. 78-90. Retrieved from <u>https://www.who.int>publications</u>.
- Chimah, J.N. & Nwokocha, U. (2013). Information resources, retrieval and utilisation for effective research in tertiary and research institutions. *Asian Journal of Humanities and Social Sciences* (AJHSS), 1(3), 43-50. Retrieved from <u>https://ajhss.org/pdfs/vol1issue3/information%20</u> resources.pdf.
- Cole, C. (2008). People transforming information -information transforming people: what the eanderthals can teach us. *Proceedings of the American Society for Information Science and Technology*, 45(1), 1-10.
- Coreil, J., Augustin, A., Holt, E. & Halsey, N. A. (1989). Use of ethnographic research for instrument development in a case control study of immunisation in Haiti. *International Journal of Epidemiology*, 18, 33-37. Retrieved from <u>https://doi.org/10.1093/ije/18.supplement_2.S33</u>.

- Counselling for Maternal and Newborn Health Care: A Handbook for Building Skills. Geneva: World Health Organisation; 2013. 11, postnatal care visits of the mother and newborn. Retrieved from https://www.ncbi.nlm.nih.gov/books/NBK304191/.
- Cox, B. L. & Janti, M. H. (2013). Capturing business intelligence required for targeted marketing, demonstrating value and driving process improvement. *Library and Information Science Research*, 34(4), 308-316. Retrieved from DOI:10.1016./j.lisr./06.
- Darmstadt, G. L., Bhutta, Z. A., Cousense, S., Adam, T., Walker, N. & De Bernis, L. (2005). Evidence-based, cost-effective interventions: how many newborn babies can we save?" *The Lancet*, 365(9463), 977–988. Retrieved from <u>https://www.ncbi.nlm.nih.gov/m.pubmed</u> mobile.
- Doctor, H. V., Bairagi, R., Findley, S.E., Hellenringer, S. & Dahir, T. (2011). Northern Nigeria maternal, newborn and child health programmes: Selected analyses from population-based baseline survey. *The Open Demography Journal*, 4, 11-21.
- Edem, N. B. & Egbe, N. (2016). Availability and utilisation of electronic resources by post-graduate students in a Nigerian University Library: a case study of university of Calabar, Nigeria. *Information and Knowledge Management*, 6(2), 60-69.
- Elias, L. & Worku D. (2015). An Assessment of Child Immunisation Coverage and its Determinants in Sinana District, Southeast Ethiopia. Retrieved from (http://creativecommons.org/publicdomain/zero/1.0/)
- Eniwonmi, O. (2018). Use of information resources and services for effective job performance by healthcare practitioners in FMC libraries in North-central, Nigeria. (Unpublished MTech Thesis of the Department of Library and Information Technology, F.U.T, Minna).
- Etana B., & Deressa, W. (2012). Factors associated with complete immunisation coverage in children aged 12–23 months in Ambo District. Central Ethiopia: *BMC Public Health*, 12(56), 2-9. Retrieved from bmcpublicheath. Biomed central .com
- Federal Ministry of Health Expanded Program on Immunisation (EPI)(2004). Addis Ababa 5.
- Federal Ministry of Health, Nigeria. Comprehensive EPI Multi-year plan 2011-2015. National primary health care development agency. Retrieved from https:/national planningcycles.org>org>Nigeria.
- Feilden Battersby Analysts. Design of Routine Immunisation Initiative—Trip Report for DFID. Bath UK: 2005
- Fikirte, T., Walelegn, W., Fekadu, M. & Many, K. (2014). Knowledge, perception and utilisation of postnatal care of mothers in Gondar Zuria District, Ethiopia: A crosssectional study. *Maternal Child Health Journal*, 18, 2341–2351). Retrieved from DOI 10.1007/s10995-014-1474-3
- Global Vaccine Action Plan. (2012).https:// <u>www.who.int>immunization</u> /Global vaccine action plan (2011-2020). 12.

- Global Vaccine Action Plan. (2018). Immunisation Today and in the next decade: an assessment report of the global vaccine action plan. Retrieved from https://www.who.int>immunization.
- Hadley School Committee (2014) library resources. https://www.hadleyschoos.org/pages/haleydistrict_webdocs/doistrict/i/IJLA%20 %20 library%20resources%20note%20above%2011AC%20-%20copy.pdf.
- Healy C. M. (2012). Vaccines in Pregnant Women and Research Initiatives. Clin Obstet Gynecology, 55, 474–86. doi: 10.1097/GRF.0b013e31824f3acb.
- Hearly, M.C., Rossmann, E. B. & Rench, M. A. (2013). Knowledge and Attitudes of Postpartum Women Towards Immunisation During Pregnancy and the Peripartum Period. Retrieved from www.landesbioscience.com/journals/vaccines/article/25096.
- Ibrahim, U. (2013). *Techniques for Writing and Presentation of Thesis/Dissertation*: a comparism guide for postgraduate students in Nigerian University System. Zaria: ABU Press limited.
- Idris, M. (2013). Routine immunisation in Nigeria: A historical perspective. Immunisation in Nigeria: Accountability, attitude, economics and politics. Proceedings of the Vaccine Stakeholders Meeting Hosted by the Nigerian Academy of Science Vaccine and Immunisation Advisory Committee Held on December 04-05, Retrieved from nas.org.ng/wp.
- IGI Global (2018). What is information dissemination. <u>https://www.igi-global.com/dictionary/information-dissemination/14382</u>.
- Ikpat, E. (2018). 10 Problems of Immunisation in Nigeria and Possible Solutions. InfoGuide Nigeria. Retrieved from <u>https://dailypost.ng</u>.
- Illinois Department of Public Health (2018) /Illinois Immunisation Program 2018.<u>https://wwidph.state.il.us>immunization/vfc</u>.
- Immunisation (2018). https//wiki educator. org/index. php?title=lesson-9:-immunisation &oldid=103010.
- Isibor, A. & Fidella, W. (2018). Effective Dissemination of Health Information as a key to Ensuring and Sustaining a Productive Workforce in Ahmadu Bello University, Zaria. (Unpublished MLS Thesis). Retrieved from https://www.academia.edu>.
- Iyanda, H. I. (2017). Determinants of Utilisation of Postnatal Care Services in Nigeria. A thesis submitted in partial fulfilment of the requirement for the degree of Master of Public Health. Biafa Resources, 1-59.Retrieved from bibalex. Org>resources
- Johnson, J. D. & Meischke, H. (1991). Women's preferences for cancer information from specific communication channels. *American Behavioral Scientist*, 34(6), 742-755.
- Kamali, S., Ahmadian, L., Khajouei, R. & Bahaadinbeigy, K. (2017). Health information needs of pregnant women: information sources, motives and barriers. *Health Information & amp; Libraries Journal*, 35(1). 1-53. Retrieved from <u>https://doi.org/10.1111/hir.12200</u>.

- Kansky, C. (2016). "*Normal and Abnormal Puerperium:* Overview, routine postpartum care, hemorrhage".https//emedicine.Medscape.com/article/260187/overview.
- Kelly, J. S., Reed, Z. & Enter, K. S. (2007). Immunisation information systems national research and valuation agenda. *Journal of Public Health Management Practitioners*. 13: 35–38.
- Klevens, R. M. & Luman, E.T. (2001). U.S. Children living in and near poverty: risk of vaccine-preventable diseases. *Animal Journal of Preventive Medicine*, 20 (4), 5560.
- Krejcie, R. V. & Morgan, D. W. (1970). Determining sample size for research activities. In: Sarantakos, S. 1998. Social Research. London: Macmillan Press Limited.163.
- Legesse, E. & Dechasa, W. (2015). An Assessment of Child Immunisation Coverage and its Determinants in Sinana District, Southeast Ethiopia. doi: 10.1186/s12887-015-0345-4.
- Lomas J. (1993). Diffusion, dissemination and implementation. *Annals of the New York Academy of Sciences*, 703, 226–57.
- Lomoro, O. A., Ehiri, J. E., Qian, X. & Tang, S. L. (2008). Mothers' perspectives on the quality of postpartum care in central Shanghai, China. *International Journal for Quality in Health Care*, 14(5), 393-402.
- Luthy, K. E., Beckstrand, R. L. & Peterson, N. E. (2009). Parental hesitation as a factor in delayed childhood immunisation. *Journal of Paediatric Health Care*, 23(6), 388-93. Retrieved from http://dx.doi.org/10.1016/j.pedhc.2008.09.006.
- Mba, E. (2016). *The role of ICT in Nigeria*. <u>https://infoguidenigeria.com/role-information-communication-technology/on</u>
- Mcnair, C. M. (2014). Factors Influencing Vaccination Decisions in African American mothers of preschool age children. Retrieved from http://scholarcommons.usf.edu /cgi/viewcontent.cgi?article=6269&context=etd
- Mediclock. (2018). Overview of Immunisation. <u>https://mediclocknfo/2018/08/overview</u> of immunisation /?utm-source=bing&utm=cpc&utm. /articls/view/72382campaign.
- Meseka, L.A. (2016). Knowledge and Practice on Essential Newborn Care Among Postnatal Mother's at Juba Teaching Hospital, South Sudan. Ph.D dissertation of University of Nairobi, Kenya. 1-73. Retrieved from www.southsudanmedicaljou .com/August/2017/mothers-knowledgeon.erepository.uonbi.ac.ke`
- Mohammed, B. B. & Abule, M. A. (2014). An examination of health information service provision at federal medical centre katsina. Qualitative and quantitative methods in libraries (QQML). 2:503-508. Retrieved from qqml.net>papers>june.
- Monebenimp, F., Mongo, M. E., Chemo, D., Foumane, P., Kamta, C. & Kuaban, C. (2013) "Mothers' knowledge and practice on essential newborn care at health facilities in Garoua City, Cameroon,". *The Journal of Medicine and Health Sciences*, 14(2). 56-61. <u>https://www.hsd-fmsb.org/in</u>.

National Polio Eradication Initiative Emergency Plan for Nigeria, 2012. 19. 4-5.

- NPI/UNICEF March, (2003). Assuring Vaccine Security in Nigeria. Report of NPI/UNICEF Vaccine security mission. <u>https://www.ncbi.nlm.nih.gov>articles</u>.
- Nwachukwu, V. N., Abdulsalam, T. L & Salami, P. F. (2014). Availability, accessibility and use of information resources and services among information seekers of lafia public library in nassarawa state. *Information and Knowledge Management*, 4(10), 83-91. Retrieved from <u>www.iiste.org</u>.
- Njeru, M. W., Kabue, P. N. & Gachau, A.G. (2019). Utilisation of immunisation services among children under five years of age in Kirinyaga County, Kenya. *International Journal of Innovative Research in Information Security* (IJIRIS), 6(3), 1-54. Retrieved from <u>www.ijiris.com</u>. doi: 10.26562/IJIRAE.2019.FRIS10081
- Obasola, O. I. & Mabawonku, I. M. (2018). Mothers' perception of maternal and child health information disseminated via different modes of ICT in Nigeria. *Health Information & amp; Libraries Journal.* 35, (4), 309-318. Retrieved from https://doi.org/10.1111/hir.12235.
- Odujinrin, O. (2011). Women's reproductive health and household food securities in Africa: a ten-year review (1986-95) of maternal mortality at the Lagos University Teaching Hospital (L.U.T.H.). *Annals of Internal Medicine*, 35(12), 67-74.
- Ofori-Dwumfuo, G. O. & Addo, L. (2012). Utilisation of information and ICT resources by parliamentarians in Ghana. *Current Research Journal of Social Sciences*, Maxwell scientific organisation., 4(3), 213-221. Retrieved from <u>https://maxwellsci.com/print/crjss/v4-213-221.pdf</u>
- Ojewole, F. & Oludipe, Y. O. (2017). Pregnancy-related information need and information-seeking pattern among pregnant women attending antenatal clinic at Ikorodu General Hospital, Lagos State, Nigeria. *European Scientific Journal August 2017 edition*. 13(24). 50-56 Retrieved from doi:10.19044/esj.2017.v13n24p436.<u>URL:http://dx.doi.org/10.19044/esj.2017.v1</u> <u>3n24p43</u>.
- Okeke, O. C., Eze, S.G.N., Eze, J. U. & Asogwa, G.E. (2017). Status of medical library resources and services I teaching hospitals in Enugu state, Nigeria: implication for quality health care services. *International Journal of Knowledge Content Development and Technology*, 7(2), 21-40. Retrieved from <u>https://www.researchgate.net/publication/319165888</u>
- Ola, E. (2018). Influence of Information Resources Usage and Services on Job Performance by Health Practitioners in federal Medical Centres Libraries in North Central, Nigeria. (Unpublished Mtech Thesis) submitted to the Department of Library and Information Technology, Federal University of Technology, Minna.
- Olalewe, C.J. & Amana, E.N. (2011). Effective utilisation of information and communication technology (ICT) for sustainable manpower development among computer educators in Colleges of Education in South East Geo-political Zones of Nigeria. *A paper presented at the 24th National Association of Technology*

Teachers (NATT) on Technical Vocational Education and Training (TVET) for Sustainable Industrial Development in Nigeria between 17th-21st October 2011 at Umunze Anambra state, Nigeria. Retrieved from htpps://files.eric.ed.gov/fulltect/ED529103.pdf.

- Olugbenga-Bello, A., Jimoh, A., Oke, O., & Oladejo, R. (2017). Maternal characteristics and immunisation status of children in North Central of Nigeria. *Pan African Medical Journal*. 1-15.doi:10.11604/pamj.2017.26.159.11530. Retrieved from <u>http://www.panafrican-med-journal.com/content/article/26/159/full/</u>.
- Oluleye, H. R. (2014). Influence of Information Dissemination on the Achievement of Millennium Development Goals (MDGS) in kogi state, Nigeria.
- Ophori, E. A., Tula, M. Y., Aziz, A.V., Okojie, R. & Ikpo, P. E. (2014). Current trends of immunisation in Nigeria: prospects and challenges. *Tropical Medicine and Health*, 42 (2), 67-75. Retrieved from https: // www .ncbi .nlm .nih. gov> articles.
- Otunga, C.L. (2017). Assessment of Utilisation of Postpartum Care Services among women in Wenbuye West, Bungoma County, Kenya. (unpublished thesis). Kenyatta University.
- Ozawa S., Clark, S., Portnoy, A., Grewal, S., Brenzel, L. & Walker, D. G. (2016). Return on Investment from Childhood Immunisation in Low-and Middle-Income Countries, 2011–2020. *Health Affiliation*, 35(2), 199–207. Retrieved from <u>https://doi.org/10.1377/hlthaff.2015.1086</u>.
- Parrott, R. (2004). Emphasizing-communication in health communication. *Journal of Communication*, 54(4), 751-787.
- Popoola, S. O. & Haliso, Y. (2009) Use of library information resources and services as predator of teaching effectiveness of social scientists in Nigerian universities. *African Journal of Library, Archives and Information Science*, 19(1), 65-77.
- Postnatal definition. Protect your baby with immunisation features.<u>https://www.cdc.gov>infant</u> immunisation.
- Ramadan, E. (2016). Use of IT by special libraries in the Arab world: an overview. *International Journal of Digital Library Services*. 6(4), 13-21.
- Nigerian Networks of NGOs (NNGOs) (2018). Reviewing the Costed Implementation Plan for Routine Immunisation in Lagos State. Retrieved from PACFaH@Scale (https://nnngo.org/portfolios/pas/.
- Orenstein, W.A., Atkinson, W., Mason, D. & Bernier, R.H. (1990). Barriers to vaccinating preschool children. *Journal of Health* Care Poor Underserved, 1(3), 315-330. Retrieved from Doi:10.1353/hpu.2010.0324.
- Romano, M., Cacciatore, A., Giordano, R. & Rosa La B. (2010). "Postpartum Period: three distinct but continuous phases". *Journal of Prenatal Medicine*, 4 (2), 22–25. Retrieved from https:ncb.nlm.gov/pmc/articles/pmc3279173 PMC 3279173. PMID 22439056.

- Rudman, A., & Waldenström, U. (2007). Critical views on postpartum care expressed by new mothers. *BMC Health Services Research*, 14, 13-19. doi:10.1186/1472-6963-7-178.
- Saraswati, S. P. (2016). "Knowledge and practice of postnatal mothers on newborn care at hospital setting," *ARC Journal of Nursing and Healthcare*, 2(1). 1-34.
- Schein R., Wilson, K. & Keelan J. (2010). *Literature Review on Effectiveness of the Use of Social Media*: a report for peel public health. Retrieved from http://www.peelregion.ca/health/resources/pdf/socialmedia.pdf.
- Sharma, A. (2017). Descriptive Research Survey. Department of Management studies, Maharshi Dayanand Saraswati University, Ajmer. https://www.slidesshare.net/anjalisharma731/descriptive-research -survey.
- Shamsul, A. S., Normal, K., Nazarudin, S., Rohaizat, H., Azimatun, N. A. & Rosita, H. (2012). Factors influencing childhood immunisation defaulters in Sabah, Malaysia. *The International Medical Journal of Malaysia*, 11(1), 17-22. Retrieved from <u>http://iiumedic.net/imjm/v1.</u>
- Somefun, O. D., & Ibisomi, L. (2016). Determinants of postnatal care non-utilisation among women in Nigeria. *BMC Res Notes*. 9(1) 21-30.
- Special Libraries Association. Retrieved on 20, 2019 from http://www.sla.org (10 Aug. 2002).
- Strecher V., Rosenstock, I. The health belief model. In: Glanz K, Lewis FM, Rimer BK (1997). Editors. *Health behavior and health education: theory, research, and practice*. San Francisco: Jossey- Bass Publishers.
- Taiwo, L. A. (2016). Knowledge, Perception, Practices and Sources of Information On Immunisation Among Mothers/Caregivers Of Children Aged 12-23months In Kaduna State, Nigeria. 1-83.
- Uhegbu, A. N. (2007). *The Information user: issues and themes.* Okigwe, Nigeria: whytem publishers Nigeria.
- Unobe, E.S. (2011). Availability and Utilisation of on-line Information Sources and Services in Federal Universities' Medical Libraries in North West geo-political zone of Nigeria. (Unpublished MLS Thesis). Ahmadu Bello University, Zaria.
- Use of information /encyclopedia.com. Retrieved from. https://www.encyclopedia.com.media.
- Waiswa, P., Kemigisa, M., Kiguli, J., Naikoba, S., Pariyo, G. W. & Peterson, S. (2008)
 "Acceptability of evidence-based neonatal care practices in rural Uganda -Implications for programming," *BMC Pregnancy and Childbirth*, 8(21), 23-20.
 Retrieved rom <u>https://www.ncbi.nlm.nih.gov/m/ doi:10.1186/1471-2393-8-21.</u>
- Wangari, M. N. (2011). Factors Affecting Utilisation of Postnatal Care Services at Central Provincial General Hospital, Nyeri, Kenya. A Research report submitted in partial fulfilment of the requirement for the award of a degree of master of arts in project planning and management of the university of Nairobi, Kenya.

- What is information usage IGI Global (2019), Retrieved from <u>https://www.igi-global.com.dictionary</u>.
- WHO.(2014) "WHO Recommendations on Postnatal Care of the Mother and Newborn".
 WHO. https://who.int/maternal-child-adolescent /documents/post natal-care recommendations/en/.
- www.igi-global.com/dictionary/information-need-and-the-beginning-of-informationsearch/14578
- Zangeneh, T. T., Baracco, G. & Altawfiq, J. A. (2011). Impact of conjugate pneumococcal vaccines on the changing epidemiology of pneumococcal infections. *Expert Rev Vaccines*. 10, 345-353.
- Zimmerman, R.K., Sheesh, E. R., Mieczkowski, T. A., Block, B., Janosky, J. E. & Barker, D. W. (1996). Influence of family functioning and income on vaccination in Inner-city Health Centers. *Architectural Pediatrics Adolescent Medicine*, 150, 1054-1061. Retrieved from https://www. Ncbi.nlm.nih.gov.

APPENDIX A: LETTER OF INTRODUCTION

FEDERAL UNIVERSITY OF TECHNOLOGY MINNA SCHOOL OF INFORMATION AND COMMUNICATION TECHNOLOGY (SICT) DEPARTMENT OF LIBRARY AND INFORMATION TECHNOLOGY

VICE - CHANCELLOR: Prof. Abdullahi Bala PhD, fssn

REGISTRAR: A.N. Amos, B. Sc., MSC, ACIPM



Tel:+234(0) 80368880881 Fax: +234(0) 66 223275 Telegram: FUTECH, Minna

HEAD OF DEPARTMENT: Dr .K. A Saka, NCE, BLIS (ABU), MLS(BUK), Ph.D(UniMaid) E mail:s.katamba@futminna.edu.ng Tel: 07038706880

3rdth September, 2019

LETTER OF INTRODUCTION: SAIDU, AMINA ABUBAKAR/MTECH/SICT/2017/6867

The above named is an M-Tech student of the Department of Library and Information Technology, Federal University of Technology, Minna, Niger State.

She is writing a thesis titled: "ASSESSMENT OF INFORMATION DISSEMINATION AND USE TO POST-NATAL MOTHERS ON IMMUNISATION AS PREVENTION TO CHILDHOOD KILLER DISEASES BY LIBRARIANS IN FMCs NORTH-CENTRAL, NIGERIA."

I therefore request you to kindly give her all the necessary assistance she may require for the success of her assignment.

Thank you for your anticipated cooperation.

Yours Sincerely,

1.(0)0*****

APPENDIX B

QUESTIONNAIRE FOR LIBRARIANS IN FEDERAL MEDICAL CENTRES

LIBRARIES

Department of Library and Information Technology, School of Information and Communication Technology, Federal University of Technology, Minna. Niger State. 3rd September, 2019.

Dear Respondent,

I am a postgraduate student of the Department of Library and Information Technology, Federal University of Technology, Minna with matriculation number MTECH/SICT/2017/6867. I am currently conducting a research titled "Assessment of Information Dissemination and Use to Post-natal Mothers on Immunisation as Prevention to Childhood Killer Diseases by Librarians in FMCs North-central, Nigeria". Please kindly complete the attached questionnaire as your kind response will be appreciated and any information provided will be treated as confidential as possible and will be used for research purpose alone.

Thank you.

Yours faithfully,

SAIDU, Amina Abubakar MTech/SICT/2017/6867.

Question for Librarians in Medical Centre Libraries

SECTION A: Demographic Information

- 2. Gender a. Male { } b. Female { }
- 3. Qualification a. ND/HND { } b. BTechlit/BLS { } c. MTech/MLSS { } d. Ph.D { }
- 4. Year of Experience a. 5-10 { } b. 11-15 { } c. 16-20 { } d. 21-25 { } e. 25 and above { }
- 5. Age a. 20-30 years { } b. 31-40 years { } c. 41-50 years { } 51 and above { }

OBSERVATION CHECKLIST

SECTION B: Types of Information Resources and Services Available in Federal Medical Centre Libraries

NB: please tick the available resources and services in your federal medical centre library

Research question 1: What are the information resources and services available in your library?

| S/N | Type of Information Resources | Available | Not Available |
|------|--|-----------|---------------|
| 1 | Textbooks on medical line | | |
| 2 | Magazines | | |
| 3 | Professional journals | | |
| 4 | Newspapers | | |
| 5 | Posters/handbills | | |
| 6 | Newsletters | | |
| 7 | Dictionaries | | |
| 8 | Internet resources | | |
| 9 | Medical Standards and guidelines | | |
| 10 | Conference proceedings | | |
| 11 | Encyclopedias | | |
| 12 | Manuals and guides on Immunisation | | |
| Othe | ers (please specify) | · | |
| | | | |
| | | | |
| Info | rmation Services | Available | Not Available |
| 1 | Immunisation services | | |
| 2 | Email alerts to patients on health talk hour | | |
| 3 | Mobile phone alerts | | |
| 4 | Library website health information services | | |
| 5 | Reference Services | | |
| 6 | Document Delivery Services | | |
| 7 | Current Awareness Services | | |
| 8 | Selective Dissemination of Information | | |
| 9 | Inter and Intra-library Loan | | |

| 10 | Short Messages Services (SMS) | |
|----|-------------------------------|--|
| 11 | Library Orientation Services | |
| 12 | Internet browsing | |
| | Others (please specify) | |
| | | |
| | | |

SECTION C: Level of Library Use by Post-natal Mothers

Research Question 2: What is the level of library use by post-natal mothers?

| S/N | Statements | VHL | HL | VL | L |
|------|---|-----|----|----|---|
| 1 | The post-natal mothers use the library on daily basis | | | | |
| 2 | The post-natal mothers use the library on weekly basis | | | | |
| 3 | The post-natal mothers use the library on monthly basis | | | | |
| 4 | The post-natal mothers use the library only during post-natal | | | | |
| | visits | | | | |
| 5 | The post-natal mothers use the library only when directed by | | | | |
| | a librarian | | | | |
| 6 | Post-natal mothers do not use the library at all | | | | |
| Othe | ers (please specify) | | | | |
| | | | | | |
| | | | | | |

Key: VHL=very High Level, HL=High Level, VL=Very Low and L=Low

SECTION D: Ways Used to Disseminate Information on Immunisation to Postnatal Mothers

Research Question 3: What ways do you disseminate information on immunisation to post-natal mothers against childhood killer diseases?

| S/N | Statements | SA | Α | D | SD |
|-----|---|----|---|---|----|
| 1 | Information on Immunisation is disseminated to post-natal mothers | | | | |
| | through posters/fliers/handbills | | | | |
| 2 | Information on Immunisation is disseminated to post-natal mothers | | | | |
| | through weekly health talks | | | | |
| 3 | Information on Immunisation is disseminated to post-natal mothers | | | | |
| | through outreach Services/programmes | | | | |
| 4 | Information on Immunisation is disseminated to post-natal mothers | | | | |
| | through workshops/seminar | | | | |
| 5 | Information on Immunisation is disseminated to post-natal mothers | | | | |
| | through yearly conferences organized by the Federal Medical | | | | |
| | Centre | | | | |
| 6 | Information on Immunisation is disseminated to post-natal mothers | | | | |
| | through the library websites | | | | |
| 7 | Information on Immunisation is disseminated to post-natal mothers | | | | |
| | through librarians' health talks hour | | | | |
| 8 | Information on Immunisation is disseminated to post-natal mothers | | | | |
| | through email alerts/mobile phone SMS | | | | |
| 9 | Information on immunisation is disseminated to post-natal mothers | | | | |
| | through film/video shows | | | | |

| 10 | Information on immunisation is disseminated to post-natal mothers through radio/television messages | | |
|------|--|--|--|
| Othe | ers (please specify) | | |
| | | | |
| | | | |

Key: SA=Strongly Agreed, A=Agreed, D=Disagreed, SD=Strongly Disagreed

SECTION E: Diseases Prevented as a result of Information Disseminated on immunisation

Research Question 5: What diseases are prevented as a result of information disseminated on Immunisation against childhood killer diseases?

| S/N | Statements | SA | Α | D | SD |
|------|---|----|---|---|-------------|
| 1 | Information on immunisation has helped to prevent polio | | | | |
| | diseases | | | | |
| 2 | Information on immunisation has helped to prevent whooping | | | | |
| | cough (pertussis) diseases | | | | |
| 3 | Information on immunisation has helped to prevent pneumonia | | | | |
| | (pneumoeoccal) diseases | | | | |
| 4 | Information on immunisation has helped to prevent mumps, | | | | |
| | diseases | | | | |
| 5 | Information on immunisation has helped to prevent measles | | | | |
| | diseases | | | | |
| 6 | Information on immunisation has helped to prevent influenza | | | | |
| | diseases | | | | |
| 7 | Information on immunisation has helped to prevent hepatitis A | | | | |
| | and B diseases | | | | |
| 8 | Information on immunisation has helped to prevent diphtheria | | | | |
| | diseases | | | | |
| 9 | Information on immunisation has helped to prevent chicken pox | | | | |
| | diseases | | | | |
| 10 | Information on immunisation has helped to prevent | | | | |
| | tetanus(lockjaw) diseases | | | | |
| Othe | ers (please specify) | | | | |
| | | | | | |
| | | | | | |

Key: SA=Strongly Agreed, A=Agreed, D=Disagreed, SD=Strongly Disagreed

SECTION F: Factors Affecting Information Dissemination and Use on Immunisation to Post-natal Mothers

Research question 6: What are the factors affecting information dissemination and use on immunisation to post-natal mothers?

| S/N | Statements | SA | A | D | SD |
|-----|---|----|---|---|----|
| 1 | Erratic power supply for effective dissemination and use of | | | | |
| | information on immunisation | | | | |
| 2 | Inadequate fund to sponsor library immunisation programmes | | | | |
| 3 | Inadequate fund to acquire the ICT equipment to disseminate the | | | | |
| | needed information to post-natal mothers | | | | |
| 4 | Post-natal mothers lack of seeking for information on | | | | |
| | immunisation | | | |
|---|--|--|--|--|
| 5 | 5 Lack of government intervention towards the awareness of | | | |
| | information on immunisation to post-natal mothers | | | |
| | Others (please specify) | | | |
| | | | | |
| | | | | |

Key: SA=Strongly Agreed, A=Agreed, D=Disagreed, SD=Strongly Disagreed

APPENDIX C

QUESTIONNAIRE FOR POST-NATAL MOTHERS

Department of Library and Information Technology, School of Information and Communication Technology, Federal University of Technology, Minna. Niger State. 3rd September, 2019.

Dear Respondent,

I am a postgraduate student of the Department of Library and Information Technology, Federal University of Technology, Minna with matriculation number MTECH/SICT/2017/6867. I am currently conducting a research titled "Assessment of Information Dissemination and Use to Post-natal Mothers on Immunisation as Prevention to Childhood Killer Diseases by Librarians in FMCs North-Central Nigeria". Please kindly complete the attached questionnaire as your kind response will be appreciated and any information provided will be treated as confidential as possible and will be used for research purpose alone.

Thank you. Yours faithfully,

SAIDU, Amina Abubakar MTech/SICT/2017/6867.

Question for Post-natal Mothers

SECTION A: Demographic Information

- 6. Name of Medical Centre
 -
- 7. Gender a. Male { } b. Female { }
- 8. Marital status a. Single { } b. Married { } c. Divorced { }
- 9. Age a. 20-30 years { } b. 31-40 years { } c. 41-50 years { } 51 and above { }
- 10. Educational Background a. 0'Level { } b. ND/HND { } c. B.Tech/Bsc/B.Ed { } d. Masters { } e. P.hD { }

SECTION B: Research Questions

- 1. Do you use the medical library?
- a. Yes b. No
- 2. If yes, how often do you use the library?

| S/N | Statements | SA | Α | D | SD |
|------|---|----|---|---|----|
| 1 | I use the library on daily basis | | | | |
| 2 | I use the library on weekly basis | | | | |
| 3 | I use the library on monthly basis | | | | |
| 4 | I use the library only during post-natal visits | | | | |
| 5 | I use the library only when directed by a librarian | | | | |
| Othe | ers (please specify) | | | | |
| | | | | | |
| | | | | | |

Key: SA- Strongly Agreed, A-Agreed, D-Disagreed-, SD-Strongly Disagreed

3. If no, why

| S/N | Statements | SA | Α | D | SD |
|------|---|----|---|---|----|
| 1 | Because I am always occupied with house chores | | | | |
| 2 | Because there is no adequate library stock | | | | |
| 3 | Because the library staff are not friendly | | | | |
| 4 | Because there are no enough chairs and tables | | | | |
| 5 | Because post-natal mothers are not allowed to use the library | | | | |
| Othe | ers (please specify) | | | | |
| | | | | | |
| | | | | | |

Key: SA- Strongly Agreed, A-Agreed, D-Disagreed, SD-Strongly Disagreed

SECTION C: Information Resources Available in the Library

Research question 1: What are the information resources available in your library?

| S/N | Information Resources | Available | Not Available |
|-----|---------------------------|-----------|---------------|
| 1 | Textbooks on medical line | | |
| 2 | Magazines | | |
| 3 | Professional journals | | |
| 4 | Posters/handbills | | |
| 5 | Newsletters | | |

| 6 | Internet resources | |
|------|------------------------------------|--|
| 7 | Dictionaries | |
| 8 | Medical standards and guidelines | |
| 9 | Conference proceedings | |
| 10 | Encyclopedias | |
| 11 | Manuals and guides on Immunisation | |
| 12 | Library health talk | |
| 13 | Newspapers | |
| Othe | ers (please specify) | |
| | | |
| | | |

SECTION D: Use of Information Disseminated on Immunisation

Research question 2: How do you use information disseminated on immunisation?

| S/N | Statements | SA | A | D | SD |
|------|---|----|---|---|----|
| 1 | I use information on immunisation to prevent childhood killer | | | | |
| | diseases such as mumps, measles, diphtheria, chicken pox, | | | | |
| | hepatitis A&B etc. | | | | |
| 2 | I use information on immunisation to prevent child mortality | | | | |
| 3 | I use information on immunisation to avoid unnecessary expenses | | | | |
| | of parents on drugs | | | | |
| 4 | I use information on immunisation to educate other post-natal | | | | |
| | mothers around me | | | | |
| 5 | I use information on immunisation because of its importance to | | | | |
| | child's health | | | | |
| 4 | I use information on immunisation to better my child's life | | | | |
| 5 | I use information on immunisation for nothing | | | | |
| 6 | I do not have knowledge on the use of information or | | | | |
| | immunisation | | | | |
| Othe | Others (please specify) | | | | |
| | | | | | |
| | | | | | |

Key: SA- Strongly Agreed, A-Agreed, D-Disagreed, SD-Strongly Disagreed

APPENDIX D

Cronbach Alpha Reliability Analysis Result for Medical Librarians

SCALE: ALL Variables

Section C

Reliability Statistics

| Cronbach's | |
|------------|------------|
| Alpha | N of Items |
| .749 | 6 |

Section D

Reliability Statistics

| Cronbach's | |
|------------|------------|
| Alpha | N of Items |
| .691 | 10 |

Section E

Reliability Statistics

| Cronbach's | |
|------------|------------|
| Alpha | N of Items |
| .838 | 10 |

Section F

Reliability Statistics



The reliability analysis revealed that the instrument is strong and reliable

Cronbach Alpha Reliability Analysis Result for Postnatal Mothers

SCALE: ALL Variables

Section B

Reliability Statistics

| Cronbach's | - |
|------------|------------|
| Alpha | N of Items |
| .847 | 10 |

Section C

Reliability Statistics

| Cronbach's | - |
|------------|------------|
| Alpha | N of Items |
| | |
| .752 | 10 |
| | |

Section D

Reliability Statistics

| Cronbach's | |
|------------|------------|
| Alpha | N of Items |
| .671 | 8 |

Section E

Reliability Statistics

| Cronbach's | - | | | |
|------------|------------|--|--|--|
| Alpha | N of Items | | | |
| .903 | 5 | | | |

Average =
$$0.847+0.752+0.671+0.903$$
 = 3.17 = 0.79

4

The reliability analysis revealed that the instrument is strong and reliable

4

APPENDIX E

| N | S | N | S | N | S | N | S | N | S | |
|------|------------------------|-----|-----|-----|-----|------|-----|--------|-----|--|
| 10 | 10 | 100 | 80 | 280 | 162 | 800 | 260 | 2800 | 338 | |
| 15 | 14 | 110 | 86 | 290 | 165 | 850 | 265 | 3000 | 341 | |
| 20 | 19 | 120 | 92 | 300 | 169 | 900 | 269 | 3500 | 246 | |
| 25 | 24 | 130 | 97 | 320 | 175 | 950 | 274 | 4000 | 351 | |
| 30 | 28 | 140 | 103 | 340 | 181 | 1000 | 278 | 4500 | 351 | |
| 35 | 32 | 150 | 108 | 360 | 186 | 1100 | 285 | 5000 | 357 | |
| 40 | 36 | 160 | 113 | 380 | 181 | 1200 | 291 | 6000 | 361 | |
| 45 | 40 | 180 | 118 | 400 | 196 | 1300 | 297 | 7000 | 364 | |
| 50 | 44 | 190 | 123 | 420 | 201 | 1400 | 302 | 8000 | 367 | |
| 55 | 48 | 200 | 127 | 440 | 205 | 1500 | 306 | 9000 | 368 | |
| 60 | 52 | 210 | 132 | 460 | 210 | 1600 | 310 | 10000 | 373 | |
| 65 | 56 | 220 | 136 | 480 | 214 | 1700 | 313 | 15000 | 375 | |
| 70 | 59 | 230 | 140 | 500 | 217 | 1800 | 317 | 20000 | 377 | |
| 75 | 63 | 240 | 144 | 550 | 225 | 1900 | 320 | 30000 | 379 | |
| 80 | 66 | 250 | 148 | 600 | 234 | 2000 | 322 | 40000 | 380 | |
| 85 | 70 | 260 | 152 | 650 | 242 | 2200 | 327 | 50000 | 381 | |
| 90 | 73 | 270 | 155 | 700 | 248 | 2400 | 331 | 75000 | 382 | |
| 95 | 76 | 270 | 159 | 750 | 256 | 2600 | 335 | 100000 | 384 | |
| ite: | "N" is population size | | | | | | | | | |