Chapter One

Introduction

1.1 Background to the Study

The Centers for Disease Control and Prevention ranked immunisation as the number one contribution to public health in the 20th century. The World Health Assembly (WHA) of the World Health Organisation (WHO) established the Expanded Programme on Immunisation (EPI) in May 1974[1]. A strong immunisation and surveillance programme against poliomyelitis, tuberculosis, diphtheria, pertussis, and tetanus should be established and maintained by member states, according to the WHA[2]. The programme was born out of this suggestion. It also recommended creating a separate fund to support EPI. As a result, a select team of experts in disease prevention and immunisation was created as the Global Advisory Group[1].When EPI started in 1974, the estimated immunisation coverage rate for kids in developing nations was only 5%[2].

Immunisation is also one of the safest and most effective interventions for reducing disease and infant mortality. Even though about three quarters of the world's child population has received the required immunisations, only half of the children in Sub-Saharan Africa have access to them. Recently, a growing number of nations have employed a variety of tactics to increase both the accessibility and use of immunisation services. These findings are in line with the Global Immunisation Vision and Strategy (GIVS), which encourages the use of numerous strategies to reach everyone who needs vaccinations[2]. Many children around the world do not complete their immunisation schedules because they do not have regular access to health services and traditional communication methods in their communities. For instance, there are few doctors per patient among slum dwellers in the Philippines and South Africa,

nomadic groups in Sub-Saharan Africa, and internal migrants in Brazil, Cameroon, and Mozambique. Low immunisation rates are sometimes associated with families who live far from medical facilities, who have little access to or exposure to local or national media, and who have low levels of education. Low immunisation rates have persisted in underserved areas. Innovative outreach techniques are needed to specifically reach kids who are not eligible for or not within the reach of immunisation services[3].

In a similar vein, refusing to vaccinate children or disseminating false information about vaccinations are nothing new. People have previously refrained from getting immunised due to political, cultural, and religious considerations as well as worries about the safety of the vaccines[4]. Two new, formidable barriers are currently standing in the way of vaccine acceptance and trust. First of all, a globalised and fast-paced communication environment makes it possible for negative press and anti-immunization viewpoints to quickly spread throughout the world. Localised opposition (like anti-polio campaigns in India and Nigeria), vaccine safety worries (like the MMR shot in the UK), and alleged or confirmed adverse reactions to immunisation are more likely to get widespread media coverage and spread online [3,4]. Second, a stronger democracy promotes conversations about individual and societal freedom of choice. The democratisation of today's society has created an environment more conducive to the emergence of opposition to legally mandated programmes like immunisation. In a world where human rights are becoming a more prominent issue, both in developed and developing countries, national initiatives like immunisation are more vulnerable to criticism[5].

Between developed and developing countries, the access to vaccines gap has widened over the past few decades. More vaccines are now accessible, but the majority of developing

nations cannot afford the newer vaccines, lack effective delivery systems, and have insufficient surveillance systems or study data to quantify the disease burden to encourage policymakers to adequately fund them. Many vaccines, including those for hepatitis B, yellow fever, and haemophilus influenza type B (Hib), are underutilised as a result of insufficient funding from health ministries, overburdened health systems, and weak demand from healthcare professionals and carers (who lack sufficient knowledge about the effectiveness of particular vaccines, are unaware of the burden of vaccine-preventable diseases, or are unaware of the availability of vaccines)[6].

One of the world's most cost-effective health interventions to lower child mortality, morbidity, and disability is the vaccination of children to induce immunity[3]. This is accomplished by giving children in Nigeria a regular vaccination schedule that begins at birth and is completed by all children before their first birthday, as it is done in other countries[7].The WHO estimated in 2015 that routine immunisation (RI) services for vaccinations against diseases like the diphtheria-tetanus-pertussis (DTP3) vaccine were not available to 19.4 million infants worldwide. India, Angola, the Democratic Republic of the Congo, Ethiopia, Indonesia, Iraq, Nigeria, Pakistan, Ukraine, and the Philippines accounted for 60% of the unvaccinated infants[8].

Children in Nigeria experience high rates of illness and death from diseases that can be avoided with easy and inexpensive steps. Four main factors account for more than 90% of morbidity and 80% of mortality rates in children under the age of five: Acute respiratory infection, diarrheal diseases, malaria, and diseases that can be prevented by vaccination[1].These are responsible for 30%, 22%, 19%, and 16% of deaths in children under the age of five, respectively. In order to address this, pre-primary healthcare and

immunisation services were started in the rural community of Nigeria [10]. A dose of the bacillus Calmette-Guerin (BCG) vaccine at birth (or as soon as possible) and three doses of the diphtheria, pertussis, and tetanus (DPT) vaccine at 6, 10, and 14 weeks of age were required for the effective delivery of RI services coverage[2].

1.2 Statement of the Problem

WHO asserted that there is increased number of vaccine-preventable diseases in Nigeria. This can largely by attributed to under-utilization of vaccines, as well as inadequate knowledge of mothers about the importance of vaccine to the child. It was observed that despite high distribution of vaccine to Nigeria as a country, there is still increase in the prevalence of vaccine-preventable diseases in Nigeria[8].

Also, it was observed that in Nigeria, universal childhood routine immunization is provided free of charge as in some countries of the world. Routine immunization is a key strategy in the polio eradication programme, both in Nigeria and globally. For Nigeria to achieve millennium development goal of reducing child mortality by two-thirds by 2015, routine immunization coverage must be optimal[5]. A study in Colorado demonstrated that children exempted from routine immunization were twenty-two times more likely to acquire measles and almost six times more likely to acquire pertussis than vaccinated children. The primary site for acquiring infection usually, being their schools. The fact that immunization is not 100% effective, implies that the choice of some parents not to immunize their children significantly increases the risk of infection for other children who are immunized. This is because a small proportion of vaccinated children would not be protected since sub-optimal immunization coverage reduces herd immunity[11].

Apart from operational factors relating to policies, it has also been identified that awareness and attitude of parents/care givers could serve as part of the factors that contributes to increased obstacles to high immunization coverage. It is in view of this that that there might have been sheer ignorance of the knowledge and attitude of mothers towards vaccination of children and child survival strategies, especially in Lagos state, Nigeria. No study known to the author has examined how these maternal factors could play a role in vaccination of children and child survival strategies in Lagos state.

1.3 Aim and Objectives of the Study

The broad objective of this study is to assess the knowledge and attitudes of mothers towards child survival strategies in Urban Slum, Lagos Mainland LGA, Lagos State.

Specific Objective

The specific objectives of this study are to:

i. describe the Socio demographic characteristics of mothers living in Urban Slum, Lagos Mainland LGA, Lagos State.
ii. examine the knowledge of mothers about child survival strategies in Lagos Mainland LGA, Lagos State.
iii. investigate the attitude of mothers towards child survival strategies in Urban Slum Lagos Mainland LGA, Lagos State.
iv. assess the practice of mothers towards child survival strategies in Urban Slum, Mainland LGA, Lagos State.
v. identify the factors that contributes to the practice of Child survival Strategies in Urban Slum Lagos Mainland.

1.4 Research Questions

The following research questions were answered in the study;

1. What are the socio-demographic characteristics of mothers living in Urban Slum, Lagos Mainland LGA, Lagos State?
2. How knowledgeable are mothers about child survival strategies in Lagos Mainland LGA, Lagos State?
3. What is the attitude of mothers towards child survival strategies in Urban Slum Lagos Mainland LGA, Lagos State?
4. How do mothers in Urban Slum, Mainland LGA, Lagos State practice child survival strategies?
5. What factors contribute to the practice of child survival strategies in Urban Slum Lagos Mainland?

1.5 Hypotheses

The following hypotheses were tested in this study;

H_i1: Socio-demographic factors will jointly and independently predict knowledge and attitude towards child immunization in Lagos state.

H_i2: Socio-demographic factors will jointly and independently predict intention to immunize children in Lagos state.

H_i3: Socio-demographic factors will jointly and independently predict knowledge of child survival strategies in Lagos state.

1.6 Justification for the Study

Different studies have shown that knowledge gaps underlie low compliance with vaccination schedules. Mothers/Caregivers are less likely to complete immunization schedules if they are poorly informed about the need for immunization, logistics (time, date, and place of vaccination), and the appropriate series of vaccines to be followed. Although knowledge in itself is insufficient to create demand, poor knowledge about the need for vaccination and when the next vaccination is due is a good indicator of poor compliance[6].

Assessing the knowledge and attitude of mothers about routine immunizations and child survival strategies would offer scientific evidence to show how children could be prevented successfully from preventable diseases through ensuring that the mothers have adequate knowledge of routine immunization[2,5,4]. Therefore, it is important to conduct this study to examine the associations between knowledge, attitude and socio-demographic factors of mothers because when up-to-date, complete, and scientifically valid information about vaccines is available, mothers can make informed decisions. For example, they need to have access to accurate evidence-based information so that they understand the risks of non-vaccination, the child survival strategies, the importance of community immunity, and the actual risks of complications. Without this information, many mothers may develop a false sense of security and regard immunizations as unimportant.

1.7 Significance of the Study

The findings of this study will be significant in so many ways and to different stakeholders. Firstly, the findings of the study will be relevant to non-governmental agencies in the crusade for child immunization. This is because there will be evidence to show the prevalence of knowledge of mothers about child vaccination and child survival strategies. This will help

device the best approach in ensuring that mothers develop the requisite habit of vaccinating their children and having the knowledge of child survival strategies.

Also, the findings of this study will provide the ministry of health will need empirical evidence to show the prevalence of knowledge and attitude towards child vaccination among mothers in Lagos state. This will help in making needed policies to tackle and reduce the rate of unvaccination in Lagos state and Nigeria as a country.

Finally, the findings of this study will contribute to body of knowledge regarding knowledge and attitude of mothers towards childhood routine immunizations and child survival strategies.

1.8 Scope of the Study

The study will evaluate the knowledge and attitude of mothers towards childhood routine immunizations and child survival strategies. Specifically, the study will be carried out in Lagos Mainland Local Government Area of Lagos state. Primary Health Clinics as well as general hospitals will be covered for data gathering.

1.9 Limitations of the Study

Self-reported data were used, which may be affected by social desirability and recall bias.

1.10 Operational Definition of Terms

Immunization: A process whereby a vaccine is injected or introduced into a child to confer immunity to the child against a specific disease.

Knowledge: A familiarity, awareness or understanding of someone or something, such as facts, information, description or skills which is acquired through experience, education or learning.

Attitude: This refers to a thought process and feeling about something or towards a particular situation.

Endnotes

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Chapter Two

Literature Review

This chapter presents previous works done by researchers which have relevance to this study. The review of related and relevant literature was carried out under theoretical framework, theoretical review, empirical review, appraisal of literature, and conceptual model.

2.1 Conceptual Review

2.1.1 Immunization/Vaccination Program

2.1.1.1 Global

When it introduced the EPI in 1974, the WHO kicked off the international movement to use vaccination as a public health intervention. Since then, immunisation has remained one of the public health interventions with the highest return on investment for lowering child mortality and morbidity worldwide[1].The EPI programme is a model for how to handle the technical and administrative tasks necessary to regularly immunise children with a small number of vaccines, protecting them against diphtheria, tetanus, whooping cough, measles, polio, and tuberculosis, as well as to prevent maternal and neonatal tetanus by immunising women of childbearing age with tetanus toxoid[2].

The original goal of EPI was to provide all kids with a variety of vaccines through a straightforward schedule of well-child visits. This was difficult at the time because the health systems in the majority of developing and underdeveloped nations were weak, and in some cases nonexistent[3]. Before the majority of the poor countries institutionalised immunisation programmes based on the EPI blueprint around 1990, vaccine coverage levels were less than

5%. By 1991, the global goal of immunising 80% of the world's children was deemed to have been achieved, likely saving millions of lives. These accomplishments were credited to the development of these nations' capacities and capabilities through the EPI blueprint created at the program's inception [2,3].

The cost of vaccination in the developing world has grown from less than one United States Dollar (USD) in 2001 to about $21 for boys and $35 for girls in 2014, as increasingly expensive vaccines are being introduced into national immunization programs, and vaccines for girls, such human papillomavirus vaccines, are being introduced more widely[3,4]. To address these and other challenges, additional efforts are needed to strengthen 8 critical components of RI: policy, standards, and guidelines; governance, organization, and management; human resources; vaccine, cold chain, and logistics management; service delivery; communication and community partnerships; data generation and use; and sustainable financing, though these may not affect the rates of vaccination among boys and girls[4].

Countries are expected to adapt the available WHO global-level policies, standards, and guidelines to develop their own structures to provide overall guidance to their countries' immunization activities. In the majority of nations, the national program of immunization provides leadership and a wide range of other functions as part of its role in building strong governance, organization, and management [4,5]. There is a growing need for a highly trained health workforce as a result of the increasing complexity of immunization services caused in part by the rising number of vaccines given to a child and the growing populations of children who require these services. The quality of the health workforce has become more critical in the face of the increasing cost of vaccines, making competent handling and oversight of

limited and expensive stocks a key issue. Despite the growing demand for skills in the health workforce, the same basic method of vaccination training is still in use that was in place 30 years ago[1].

With the increasing number of new vaccines for disease prevention, the eradication of ongoing outbreaks, and frequent mass campaigns that necessitate additional storage equipment, funding, and expertise in the management of the entire system, vaccines, cold chain, and logistics management have become increasingly important[6]. The EPI activities and the use of immunisation services place a high priority on communication and community partnerships, particularly when it comes to educating and enlisting the community's support for immunisation[1,3]. In actuality, this calls for the assistance of the medical community and other dependable individuals to make sure that parents or carers are kept informed of where, when, and how many times they must bring their children for vaccination. The most frequently cited source of health data, including crucial information about immunisation, continues to be health personnel[2,3].

Figure 2.1: Child Vaccination

Source[2]

2.1.1.2 Immunization in Africa

When it introduced the EPI in 1974, WHO kicked off the international movement to use vaccination as a public health intervention. Since then, immunisation has remained one of the public health interventions with the highest return on investment for lowering child mortality and morbidity worldwide[6]. The Global Alliance for Vaccines and Immunisation, universal childhood immunisation, the Millennium Development Goals (MDGs), the Global

Immunisation Vision and Strategy, and most recently the Global Vaccine Action Plan have all been made to increase EPI coverage globally[2,5].

Global immunisation coverage has increased thanks to these efforts as well as specific regional initiatives like the Reaching Every District strategy, the WHO African Regional Office EPI Strategic Plans of Action, implemented between 2001 and 2005 and 2006 and 2009, and individual national EPI initiatives. For instance, the coverage rate for three doses of the diphtheria-tetanus-pertussis (DTP3) vaccine at the age of 12 months increased from 5% in 1974 to 85% in 2010. Despite this global development, sub-Saharan Africa's DTP3 coverage only reached 77% by 2010[7].

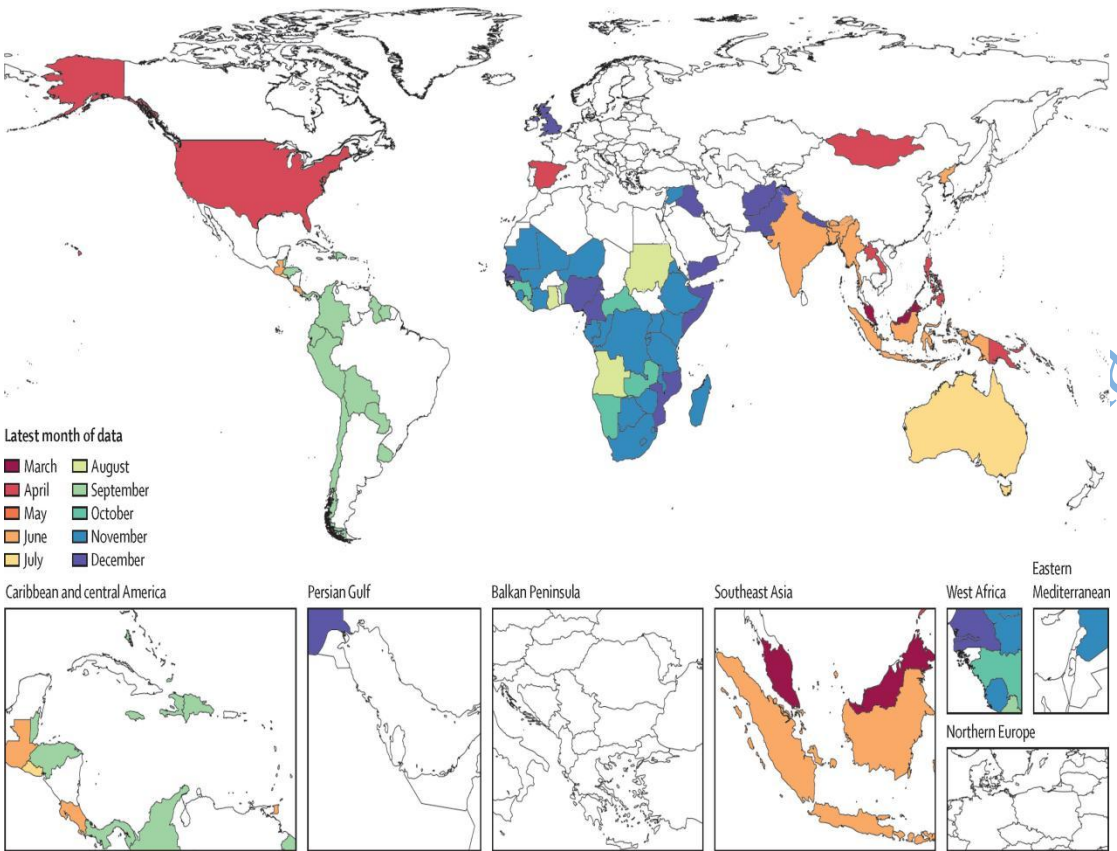

Figure 2.2 : Global Distribution

Source[7]

Since its introduction in 1974, the EPI has performed significantly better in Africa, despite differences between and within countries. Meningococcal group A, Haemophilus influenza type B, and hepatitis B vaccines have been made available across the continent, signalling progress and growth in the right directions. On the other hand, high vaccine dropout rates across the continent, polio and measles outbreaks, and national immunisation coverage scorecards for all point to EPI system failures that call for evidence-based corrective interventions[1,3,4]. It is urgent to develop plans for enhancing the immunisation system, bolstering shoddy infrastructure, addressing a shortage of qualified personnel, and figuring out how to always offer more affordable and suitable vaccines. If African leaders are to

maintain and advance the advancements made in EPI in the African region, greater financial and political commitment is required [8].

At the national level, 129 nations, or 66% of the 194 WHO Member States, achieved the DTP3 coverage target of 90% in 2014. Out of these, 109 of the nation states had continued this coverage for the previous five years and 119 for the previous three. In addition, 35 countries had DTP3 coverage below 80% in 2014 as opposed to 32 in 2013 and 30 in 2011. Of the 35 nations with coverage below 80% in 2014, 27 were already below this threshold in 2013 and 8 had coverage above 80%, including 2 with coverage rates above 90%[1]. Since 2010, 19 nations have never surpassed this 80% threshold. Five nations had DTP3 coverage below 80% in 2013, but they were able to raise it to above 80% in 2014, and only one reached a rate of 90%. According to estimates, 18.7 million children did not receive the recommended three doses of DTP-containing vaccines in 2014, down from 18.8 million in 2013 and 19.2 million in 2011. 75% of Nigeria's population is covered during the same time period[9].

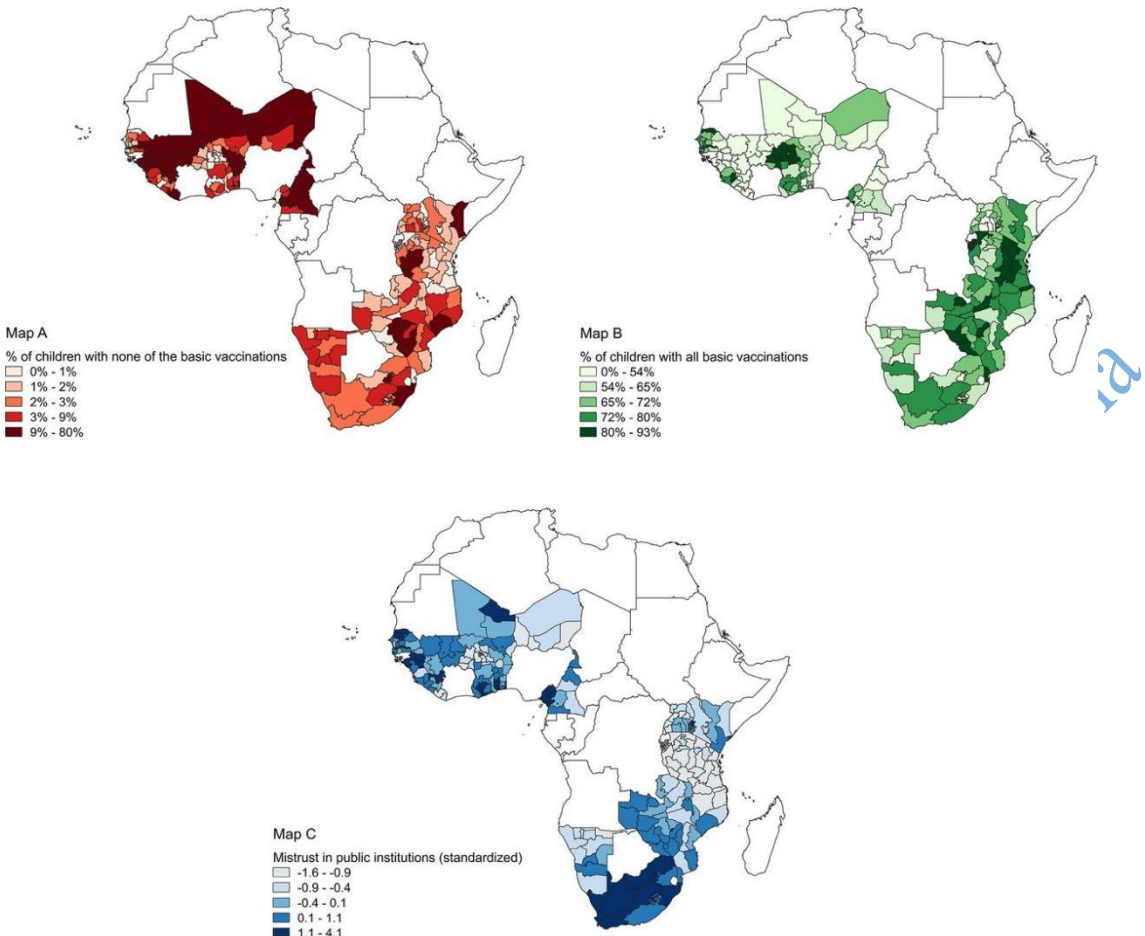

Figure 2.3: Child Vaccination in Africa

Source[7]

2.1.1.3 Vaccine and Immunization Development in Nigeria

With the intention of routinely immunising children under two years old, Nigeria implemented EPI in 1978. Successes were intermittently seen, with the highest level occurring in the early 1990s when Nigeria reached 81.5% childhood immunisation coverage[10]. Nigeria's immunisation coverage has fallen steadily but gradually since that successful time. National coverage for all antigens had fallen to less than 30% by 1996, and it further declined to 12.9% in 2003, which was in line with the findings of the national immunisation coverage survey. Due to over-centralization in the management of EPI at the federal level of

governance, vaccine shortages, and other administrative issues, the downward trend in coverage of all antigens appears to have been caused by a lack of political will and commitment on the part of the government[11]. The National Programme on Immunisation (NPI) was created in 1999 as a result of a government initiative to revive and maintain the immunisation system in conjunction with the polio eradication programme. The WHO Regional Office for Africa states that the NPI's main objective is to support the states and LGAs in the implementation of immunisation programmes[8].

Reaching Every Ward (REW) strategy is being strengthened and implemented in Nigeria by authorities at the federal, state, local, and ward levels with the assistance of WHO. This came after the two parties signed a memorandum of understanding under which WHO will offer technical assistance to health professionals at all levels in Nigeria. Improved coverage as a result of improved access and utilisation of routine immunisation services has been made possible by the support of WHO and other development partners[11,12].

In a study in Bungudu, Zamfara state, North West Nigeria, on determinants of routine immunization coverage, it was found that five factors were significantly associated with full immunization coverage; these included satisfactory level of knowledge on RI, having at least secondary education, receiving ante-natal care (ANC), having received information on RI 12 months preceding the study, and delivery at health facility by mothers. Among these factors, having a satisfactory level of knowledge on RI and at least attaining secondary education were the only independent determinants of full immunization after performing logistic regression[12].

2.1.2 Knowledge of Vaccination

Some researchers looked into whether the model based on the TRA is successful in predicting mothers' intentions to vaccinate their daughters against the human papilloma virus infection. knowledge could be facts, information, or skills acquired by an individual through experience or education[13].They discovered that 65% of mothers want to immunise their daughters, and that having more knowledge had a significant positive impact on this intention. Additional research has been done to determine whether knowledge and immunisation practise are related[14]. Overall findings from research conducted in Nigeria and other countries revealed that immunisation practise and knowledge of vaccines and diseases that can be prevented by them were positively correlated, and that education level was also associated with effective practise[15].

In order to evaluate the factors that directed proper immunisation coverage in northern Nigeria, a cross-sectional study was carried out. Data were collected using structured questionnaires that had undergone rigorous validation[16]. They evaluated parents' vaccination and immunisation knowledge. Their findings demonstrated that parents with no formal education (79%) lacked sufficient knowledge of immunisation. In their study, logistic regression analyses found a significant correlation between full immunisation and having at least a secondary school education and a lack of understanding. They came to the conclusion that maternal knowledge and educational status were the two most important determinants of immunisation coverage. They suggested that in order to improve immunisation coverage, parents' knowledge should be raised through awareness campaigns[17].

Research shows that mother's knowledge and positive attitude towards immunization, are required to achieve 90% national immunization coverage and 80% immunization coverage at

ward levels[18].There is a positive correlation between maternal knowledge of routine immunisation, the completion of childhood immunisations, and the use of maternal and child health facilities, according to several studies from Nigeria, Ethiopia, and India[19].

2.1.3 Attitude towards Child Immunization

The attitude of mother's influences children's immunisation rates significantly. Mothers frequently compare the risks and advantages of vaccination versus illness. Parents of children who are not adequately immunised are more likely to exhibit attitudes, convictions, and behaviours that are suggestive of vaccine safety worries. At the same time, parents who vaccinate frequently express concerns about the safety of vaccination. Most mothers understood the benefits of vaccination in a national telephone survey of parents, but many had serious misconceptions that undermined their trust in vaccines[20].

One of Healthy People 2,010's goals is for 90% of young children to have received all recommended vaccinations; as a result, it's critical to comprehend parental reservations about vaccination. The health of children is significantly influenced by their attitude as well as their educational level. If only they were aware of how vaccinations support a child's development of mental health and activity. Due to the low literacy rate, most people will not feel hesitant to permit their women to pursue education and other responsibilities in life. Additionally, there are a number of barriers, such as social and cultural stereotypes, which affect how mothers feel about immunising their children. Accordingly, mothers' attitudes towards childhood immunisation are influenced by their ethnicity and religious beliefs[21].

Attitude of mothers towards immunization refers to the behaviour of mothers towards immunization of children against the killer or deadly diseases. Some mothers have unconcerned or nonchalant attitude towards matters that concerns the immunization of their

children. The centre for disease control and prevention (CDC), stated that the general attitude of parents was negative among most of them towards childhood vaccination programs[22]. Moreover, some parents thought that polio immunization will decrease the fertility rate of their children thus, the parents attitude plays important role in vaccination process as they are the decision makers for their children[23].

Mothers differ in their attitude towards immunization of their children against childhood killer diseases based on their age[24]. Someone who was troubled by the apathy of these nursing mothers claims that shyness is one of the causes of this unfavourable attitude, especially as seen in teenage mothers. Teenage mothers are frequently regarded as underage girls and frequently give birth to their children outside of marriage. And many of these underage single mothers may feel embarrassed to bring their children to hospitals and health centres for vaccinations due to their antisocial behaviour and the way some adults may view them with disapproval. These people are advocating a compelling viewpoint[25].

In health centres in Addis Abeba, Ethiopia, a study was conducted on the knowledge, attitudes, and practises of mothers regarding the immunisation of infants. The data was collected by 18 well-trained nurses through face-to-face interviews using interviewer-administered questionnaires to collect information on socio-demographic variables and KAP of mothers regarding infant immunisation. Multistage sampling techniques were used for participant selection. The sample size was 634 and was allocated proportionally to the selected health centre. After entering the data, SPSS version 16.0 was used to analyse it. 5% level of precision and descriptive statistics. The findings showed that the sample's median age was 26.6 4.8 years, that 576 (92%) of the participants were married, and that 5.6% were not. Only 60.1% of people were housewives, 11.7% worked, and 20.3% lived privately. 594

(94.9%) mothers reported that they always brought their infants in on time for their scheduled vaccinations. Mothers with higher education were more likely to have positive attitudes towards infant immunisation than illiterate respondents by a factor of two compared to literate respondents who attend elementary school[19].

Another study was carried out on the knowledge, attitude and practice of mothers towards children obligatory vaccination[26]. The study used a cross-sectional survey as its method. The World Health Organization-supported cluster sampling technique was the chosen sampling strategy. The cluster consisted of 30 clusters overall, with 7 months between each cluster. There were 1050 mothers in the total sample of 210, drawn from 5 districts. Through the use of questionnaires, information regarding the sociodemographic traits of respondents was gathered. Using the statistical package for social sciences (SPSS), descriptive statistics and inferential statistics were conducted on the collected data. The findings showed that 559 (53.2%) of the studied mothers were between the ages of 20 and 30 years old, with a mean age of 29.67 6.28 years[27].

In addition, a study on children's knowledge, attitudes, and practises regarding immunisation in urban slums of Bijapur city, Karnataka, India, was conducted. In order to conduct a study in the Urban Slums, a community-based, cross-sectional survey was used. The population was chosen using the convenience sampling technique. A questionnaire was used to conduct a house-to-house survey, and oral consents were obtained for the data collection. The findings showed that 155 kids between the ages of 12 and 23 months were involved in the study. 85.16 percent of the mothers were stay-at-home moms, and 50.32 percent were illiterate. When it came to immunisation records, 69.05% of respondents had them, while others did not. 78.71% of children had received their immunisations from a government

facility, which is a significant number or percentage. 97 people (62.58%) were only partially immunised, 4 (2.58%) were not immunised, and only 34.84% were fully immunised. With a dropout rate of 53.96% from DPT1/OPV1 to DPT3/OPV3, only 64 of the 139 children who received the first dose of DTP received the third dose. Only 11.61 percent of respondents could name two or more diseases that the schedule could prevent, while 65.16 percent of respondents thought that diseases could be prevented by immunisation[10].

In Ibadan, Nigeria, a different study on mothers' preferences, experiences, and perceptions regarding the reminder/recall of childhood immunisations was carried out. 014 mothers of infants who regularly attended immunisation clinics in four (4) randomly chosen communities PHC in Ibadan participated in a cross-sectional survey. A semi-structured questionnaire with a 5-point Likert scale is used to collect the data. Software called SPSS version 21.0 was used to analyse the data. To describe the sociodemographic characteristics of the participant, descriptive statistics were computed. Logistic and regression modes were used. The findings showed that the participants' ages ranged from 15 to 42 years, with a mean age of 29 years and 4.9 years. Nearly all of them (98.7%) were wed to the fathers of their children, and 45.9% had finished high school. Additionally, 374 (60.9%) people thought mothers shouldn't let their kids miss their immunisation appointments, while 580 (95.6%) people agreed that following the immunisation schedule is important. The findings also showed that postsecondary educated mothers preferred phone calls and text messages twice as often as non-educated mothers and were twice as likely to prefer text messages/SMS. The preferred source of funding for immunisation reminder/recall did not significantly correlate with maternal age[21].

A cross-sectional study was conducted in the immunisation OPD of a government medical college and hospital[27]. For the study, a sample of 364 mothers was used. Standard semi-structured questionnaires were used to collect the data, and face-to-face interviews were also conducted. All variables were described using descriptive statistics. For comparing KP scores, chi-squares and Mann Whitney U text were used. A total of 364 mothers between the ages of 21 and 40 were evaluated, according to the results. The average mother was under 25 years old in 76% of cases. The respondents' average age was 28.4 years. 286 kids received all the recommended doses of vaccination (78.5%), but 78 kids (21.4%) only received some of them (partially immunised). With a median score of 12, the results showed an average score of 12.28 SD = 2.95. There was a strong correlation between total knowledge and practice groups and vaccination completeness[27].

A study was carried out on the mothers and vaccination: knowledge, attitudes and practices in Iran[28]. A cross-sectional study involving 668 mothers was conducted the information gathered through a questionnaire-based interview. the methods of disproportionate sampling used to choose the participants. According to the findings, 341 children, or 51.1%, had a vaccination delay. Increasing birth order, the number of children living in the home, and the mother's age all significantly predicted vaccination schedules according to the results of logistic regression analysis (P = 0.02, P = 0.02, and P = 0.04 to P = 0.001, respectively). A study was carried out on public awareness regarding children vaccination in Jordan[29]. The cross-sectional design of this study was used to conduct it in Irbid city's public spaces. 506 mothers were chosen as the study's sample size. The women were chosen using the multistage sampling method. A questionnaire and an oral interview were used to gather information about their knowledge, attitudes, and vaccination practises. The statistical

package for social science (SPSS) was used for data entry and analysis. The analysis made use of both descriptive and inferential statistics. The findings showed that most mothers had adequate knowledge of and a favourable attitude towards immunisation. The majority of mothers (94.7–86.8%) were able to name the NPI-mandated vaccines. Mothers (71.6%) had less knowledge of the requirement for HIB vaccination. The majority of mothers (97.2%) had an NPI vaccination card for their child. A significant (P = 0.001) lower vaccination knowledge/attitude score was found to be associated with vaccination delay, which was reported by 36.6% of mothers[16].

A study on parents' knowledge, attitudes, and practises regarding childhood immunisation was also conducted[30,31]. A cross-sectional study was conducted at two primary care centre in Sandi Arabia. The population of study was 150,000 patients of which one third are children. The sample size was estimated based on assumption that 93% and adjusted to 400 samples. The results revealed that the study included parents of 390 children and response rate was 96%. Over 43% of children were below 1 year old and more one third of them (36.4%) were between one and three years. More than half of them were males (56%) and 69.7% had a birth weight of above 2.5kg. mothers represent 60.2% of the participants and majority of them (86.2%) were not employed and 29.7% had their education up to university/college level. More than half of the participants believed that vaccine is for all ages and the majority of them recognized correctly that vaccination prevent disease (82.6%). The parents' knowledge score ranged between 1 and 11.4 (out of 11) with a mean of 8.08 and SD of 1.8. Parent with first order children showed higher significant total knowledge score about vaccination than those with second or more child birth order (8.42 ± 1.87 Vs 7.97 ± 1.79), P>0.026. Younger mothers (0.001)[30].

2.1.4 Child Survival Strategies

Child Survival Strategies (CSS) are focused efforts made by governments, the United Nations, organisations, and communities to use efficient, affordable solutions to protect children from illness during their first five years of life. The use of insecticide-treated nets to prevent malaria, micronutrient supplements (vitamin A, zinc), complementary feeding, immunisation (especially for Hepatitis B, measles, and tetanus), and neonatal care (clean delivery and new-born temperature management), sanitation (clean water, waste disposal), growth, and development are a few of these. Monitoring and promotion, family planning, administration of an antiretroviral drug to prevent mother-to-child HIV transmission in nations with a high prevalence of HIV, oral rehydration therapy for diarrhoea, and antibiotics for newborn[31].

These strategies have been found to constitute high impact, easily adaptable interventions that significantly reduce child morbidity and mortality globally since the introduction of CSS as components of child survival development revolution[32,33]. The interventions and activities that constitute child survival strategies have been represented with the acronyms GOBIFFFETHE (growth monitoring, oral rehydration therapy, breast feeding, immunization, food fortification, female education, family planning, environmental sanitation, treatment of common injuries, health education and essential drug list[34].

Integrated management of childhood illness (IMCI), the use of insecticide-treated bed nets (ITN), additional preventive measures and prompt treatment of malaria (Roll Back Malaria), deworming of children, safe drinking water, micronutrient supplementation, complementary and improved infant and young child feeding practises, and antenatal booking are additional activities and practises that can also have a positive impact on the health of under-five children and thus increase their survival [35].When effectively implemented, these strategies

important public health concerns aimed at enhancing child wellbeing have the overall advantages of enhancing the growth, development, and survival of children under the age of five, which is why the WHO, UNESCO, UNICEF, and USAID have adopted them[36].

Despite the overall advantages of child survival strategies, it has been demonstrated that in some settings, particularly in developing nations, the application of CSS is subpar because of ignorance and poverty, which results in a high rate of child morbidity and mortality[35]. According to UNICEF data, the number of children under the age of five who died worldwide was estimated to be 5.8 million, with 15,000 dying every day. The majority of these deaths were recorded in sub-Saharan Africa and Asia, even though under-five mortality had decreased from 213/1000 in 1990 to 104/1000[37]. Also six countries account for almost half of the global under five mortality rate namely India, Nigeria, Parkistan, DRC (Democratic Republic of Congo), Ethiopia and China[38].

2.2 Theoretical Review

2.2.1 Theory of Reasoned Action

According to the Theory of Reasoned Action (TRA), a person's behaviour is determined by his or her intention to carry out the behaviour, which is dependent upon the person's attitude towards the behaviour and subjective norm[39].The intention, which in this study is defined as uptake/immunization status, is the best predictor of behaviour. It is believed that the intention serves as a cognitive representation of a person's readiness to carry out a specific behaviour and is the direct cause of behaviour[40].Their attitude towards the specific behaviour (mothers' knowledge, attitude, and practise regarding immunisation), their subjective norms (masculinity, religion, and ethnicity), and their expectations of how people they care about will perceive the behaviour in question all play a role in determining this intention[41].

Knowing these beliefs can help you predict someone's intentions just as much as understanding their attitudes can. The last factor influencing intentions is perceived behavioural control. When a person perceives that they have some degree of control over a particular behaviour, such as whether or not they will allow their children to receive an immunisation, they are said to have perceived behavioural control. Intention is generated by these predictors. According to the literature cited in this section, a person should be more motivated to engage in the desired behaviour if their attitude and subjective norm are more favourable[41].

Health professionals have used the TRA to describe a range of medical procedures. According to TRA, an individual's attitude towards engaging in a particular behaviour, as well as their perception of and adherence to social norms, are the biggest influences on their intention to do so[42]. Attitude and subjective norms are measured directly and indirectly. Attitude towards a behavior refers to whether an individual holds a positive or negative view of the health behavior under examination[43]. Attitude is comprised of beliefs, knowledge and values, and a determination of whether the outcomes of behavior are positive or negative[44]. In this study, the overall assessment of behaviour (whether immunising a child is good or bad) served as the basis for the direct measurement of perception and knowledge. The indirect measurement was based on a person's perception of whether engaging in a particular behaviour will lead to a particular result. Therefore, an individual's assessment of the behavioural outcome (improves child well-being and improves health) influences how much weight to give to a behavioural belief about immunising a child (likelihood of better health by immunisation)[44,45].

Subjective norms are the perceived social pressure to perform a behavior. Subjective norms, or how social referents (close friends, family, and religious leaders) view such behaviour, are determined by the individual's normative beliefs. A person's belief that each particular referent will support or disapprove of such behaviour is an indirect indicator of the subjective norm, whereas the direct measure is whether social referents approve or disapprove of his or her behaviour[45]. According to TRA, attitudes and subjective norms are the two factors that most strongly influence a person's intention to engage in a particular behaviour[46]. As a result, TRA is predicated on the fundamental tenet that the intention, which is determined by attitudes and social normative perceptions about the practise, is the best predictor of behaviour. This theory accounts for a sizeable portion of the variation in intentions and behaviours, including the use of health services and many other things[47].

On the other hand, make reference to normative beliefs derived from subjective norms that influence a person's perception. Such viewpoints increase social pressure to engage in a particular behaviour[48]. A person's opinion must be sharpened because doing so enables active campaigns and other necessary interventions to be more target-oriented through evaluation of the beliefs that underlie those behaviours. The TRA is an important theoretical framework in this study because it effectively predicts the relationship between attitude and behaviour[49].

In Malawi, Ethiopia, India, Bangladesh, and the Philippines, a multiregional study that was done showed there was a very significant general demand for better quality of vaccination services and damage was being done to the Expanded Programme on Immunization (EPI) by poor communication between health workers and clients [50,51]. Knowledge that vaccines are beneficial for children and/or a strong sense of exposure to serious illness were the main factors driving demand for vaccination. According to a different viewpoint, the perceived

quality of vaccination services is the main factor influencing vaccination uptake. The situation may change depending on the surroundings[52].

Knowledge about immunization by parents is poor and the knowledge they have is habitually incorrect[53]. One thing is clear, however, when parents refuse to take their children for immunization, it is because they want to protect their children from being harmed[53]. Political and religious leaders in three Nigerian states shunned a polio vaccination campaign by WHO saying that the vaccine caused infertility and AIDS[55]. Also, groups in India (certain Hindu and Muslim) have believed that vaccination is a concealed method of family planning, primarily targeting Muslims[56]. Due to the former cultural attitudes towards health, Javanese transmigrant populations showed a higher uptake of immunisation than Acehnese villagers in the same area. It was discovered that both groups had the same subpar knowledge of vaccination and health in general. In spite of the fact that they were largely illiterate and had little knowledge of immunisation, people of the Aga Khan in Pakistan were discovered to be interested in biomedical or western medicine and reasoning. High levels of knowledge may have an effect on future attitudes towards immunisation, but this is unknown[42].

Previous studies conducted in Nigeria on the factors that influence full child immunisation among children aged 12- to 23 months have been especially restricted to a particular locale, such as regions, states, or localities. There hasn't been any research on comprehensive child immunisation that we can use to compare across the nation. Place of birth, child's age in months, mother's age at present, marital status, occupation, religion, level of education, number of children, retention of immunisation card, site of vaccination, gender, and knowledge score were some of the factors that these studies identified[57,58,59]. The few country-wide studies that have dealt with the issue of child immunization in Nigeria are the

descriptive reports of 1990, 1999, 2003 and 2008 Nigeria Demographic Health Survey (NDHS) as well as result from more recent systematic assessments[60]. The reports from the four rounds of NDHS conducted in the country revealed broad regional variations in child immunization uptake by variables such as women's education, child's sex and place of residence, access to health facility[61].

Moving on to studies that took a more in-depth look at the factors that influence children receiving the full course of diphtheria, pertussis, and tetanus vaccines (DPT3), one researcher in the Northern region of Nigeria used data from a multi-state survey conducted in 2004 to pinpoint the variables[62]. However, despite the fact that such an approach is frequently used in literature, the study neglected to include variables that can be easily measured at the community level. According to the findings, maternal characteristics had no statistically significant influence on the fixed effects of the child's characteristics. Additionally, the odds ratio shows that maternal traits play a significant role in predicting childhood immunisation. However, the only socio-demographic factor that was a significant predictor in the model was the mother's age. On the other hand, this model's psychosocial predictors all showed significance[29].

2.3 Review of Empirical Studies

A cross-sectional study was conducted in 2012 to evaluate mothers' and carers' knowledge of immunisation services in a rural area of India's Jamnagar district. Using a multistage sampling technique, 200 mothers were chosen. Only 45.0% of carers correctly reported the days for routine immunisation (RI), and 67% of mothers and carers did not know the earliest age at which RI vaccines could be administered, according to the findings. Additionally, at least three diseases covered by RI that can be prevented by vaccination were named by 23.5%

of mothers and carers. 83.5% of carers said that they received their information about vaccinations from health professionals. Mothers and carers were aware of polio (61.5%), measles (40.0%), BCG (30.5%), and hepatitis-B (15.0%), but only 4.0% were aware of DPT[63].

In eight health zones in Kinshasa, the Democratic Republic of the Congo, 1024 mothers of young children (aged 0 to 4 years) participated in a cross-sectional household survey. To gauge the respondents' knowledge of immunisation, a systematic sampling method was used to select the respondents. Results showed that 99.8% of mothers had heard of immunisation, but some mothers attended immunisation sessions without fully understanding the value of the vaccines because some mothers listed malaria (3.0%) and diarrhoea (3.9%) as EPI-targeted diseases. About half of the mothers were aware of the BCG (52.3%) and measles (45.5%) schedules, but only 32.3% were aware of the poliomyelitis schedule. The fact that DPT antigens were given three times during the first four months of life was unknown to mothers[64].

By using a multi-stage sampling technique, another cross-sectional study that was carried out in Addis Abeba, Ethiopia to assess the knowledge of mothers regarding infant immunisation among 626 mothers found that approximately 542 (86.6%) had heard about immunisation, with the main information sources being health professionals 261 (48.2%), and television 14 (2.6%). Five hundred and sixty-two respondents (89.8%) were aware that infants should begin their immunisation programme as soon as possible after birth, while 44 (7.0%) were aware of this after one month and 20 (3.2%) were unaware of this[65].

A structured questionnaire was used in a study among 207 mothers in Enugu, Nigeria to evaluate the mothers' knowledge of immunisation. The findings revealed that 168 mothers

(81.2%) cited the prevention of major killer diseases as the justification for immunisation, 14.0% claimed that children were immunised to prevent diseases, and 3.4% believed that it was used to treat all diseases. 194 mothers, or 93.4%, correctly identified at least two of the deadly diseases, and 94.0% thought that giving their kids routine immunisations was worthwhile. 95.2% of the 150 mothers brought their kids to vaccination clinics for immunisations, and of those, 171 (82.6%) did so when it was time[66].

A cross-sectional community-based study on 1117 mothers who were chosen using a multistage sampling technique was conducted in Lagos, Nigeria. To gather information to evaluate the mothers' knowledge of immunisation, they used a structured questionnaire. Only 97 people, or 14.1%, were aware that the yellow fever and measles vaccines should be administered at the age of nine months to fully protect children against killer diseases. A quarter (21.8%) of the mothers knew that BCG was administered at birth, while 41 (6.0%) of the mothers (who were teachers and other educated residents of the LGA) knew that the Hepatitis B vaccine should also be administered at birth. 138 people (20.1%) mentioned vaccination as a way to prevent childhood diseases[67].

In Lagos, Nigeria, a cross-sectional and comparative study was conducted that included a rural and an urban community that had been chosen based on the accessibility of infrastructure and social services. Utilising a multi-stage sampling technique, 300 mothers were chosen for the study, which aimed to evaluate their knowledge of immunisation using both quantitative and qualitative techniques. According to the findings, both communities had a high level (100%) of immunisation awareness. Poliomyelitis (78.7% and 83.3%) and measles (75.7% versus 71.7%) were the VPDs that the majority of mothers were aware of in the rural and urban communities, respectively. Less than half of the vaccine-preventable

diseases were mentioned by the majority of the mothers. Respondents in this study were more knowledgeable about RI than those who took part in the study conducted in Enugu[58]. In Ghana and Ethiopia, where mothers also had poor knowledge of routine immunisation, only 36.7% of them mentioned poliomyelitis and measles of all the diseases covered by EPI. The poor knowledge on routine immunisation from the FGD session in the Lagos study is comparable to those findings. Only 3.3% of mothers were able to list every EPI disease[68].

Studies have shown that the educational level of the mother was significantly related to her understanding of the need for immunisation and her willingness to receive it. The rate of complete immunisation and vaccination coverage in rural Nigeria was also significantly correlated with mothers' knowledge of immunisation and vaccination at a privately funded health facility. Mothers who attend antenatal care and give birth in a medical facility are more likely to fully immunise their newborns because antenatal care provides women with a way to learn about the immunisation programme[68]. Client satisfaction, a crucial element of health services, has an impact on routine immunisation as well. Customer satisfaction is crucial to providing quality healthcare. The degree to which patients are satisfied with the services received determines, in large part, the effectiveness of health care. It has been shown that the most powerful predictor of client's satisfaction is the attitude of the provider, politeness of the health care provider and reduction in patients waiting[70].

In developing countries like Nigeria and Egypt, client satisfaction was found to be the most important factor determining the utilization of childhood routine immunization services[71].The length of time that patients wait in medical facilities has a significant impact on how satisfied they are with the care they receive. At least 90% of patients should be seen within 30 minutes of their scheduled appointment time, according to the Institute of Medicine (IOM). However,

numerous studies revealed that the average waiting time was longer[72]. Using a multistage cluster sampling technique to choose 1194 mothers, a study conducted in Guatemala in 2014 evaluated mothers' satisfaction with immunisation services. Based on administrative coverage levels and social demographic indicators, the study population was split into two groups. According to study results, 831 people (70.4%) gave immunisation services a good or very good rating, 302 people (25.6%) gave them an average rating, and 47 people (4.0%) gave them a bad rating. In high coverage areas, 73% of respondents thought the services were good, compared to only 67.8% in low coverage areas. Free vaccinations 256 (30.8%) and the ability of the medical staff to provide immediate attention 531(63.9%) were reasons given for positive evaluations, while poor service 20(41.7%) and rude treatment 31(64.6%) were the main reasons for negative evaluations.64 Instead of using DPT3 as the immunisation coverage indicator in the study, immunisation coverage was evaluated using administrative areas and poverty indicators. This might have had an impact on the study's conclusions[45].

A cross-sectional community-based study was also carried out in a rural Pakistani region. 204 mothers and carers who were chosen using a systematic sampling technique participated in the study. According to study results, 93.6% of participants were pleased with the facilities offered for immunising their kids. In satisfied respondents, the overall immunisation rate was twice as high (80.1%) as it was in unsatisfied respondents (38.5%). ($p< 0.001$). Instead of using the calculated sample size of 349, the study used a sample size of 204 mothers/caregivers. Due to non-responders, there were some respondent losses (nrr 41.6%). Because of the high non-response rate, the external validity of the study's findings may not be generalizable[73].

In order to gauge mothers' satisfaction with immunisation services, a cross-sectional study of 422 mothers who were chosen using a multistage sampling technique was carried out in Ethiopia. The findings revealed that 405 (96.0%) of the mothers and carers were happy with the treatment they received from the medical staff. The majority of these 405 mothers, 282 (69.6%), expressed satisfaction with the information and concern shown to them by health professionals. Mothers and carers were unsatisfied with 12 (70.6%) health workers' lack of concern for their problems and 17 (4.0%) health workers' impatience. 53.3% of people were happy with the immunisation services overall[74].

In an Egyptian study conducted, 335 mothers who attended immunisation clinics were asked to rate how satisfied they were with the services provided for children's immunisations. The findings showed that 319 (95.2%) of the mothers were pleased with the services for childhood immunisation, while only 16 (4.8%) were not. The level of satisfaction was not graded on a likert scale in this study; instead, it was categorised as good, fair, or inappropriate, which does not accurately reflect the level of satisfaction of the mothers. Additionally, the sampling technique used in the study was not disclosed[75].

In Calabar, Nigeria, primary healthcare facilities conducted a cross-sectional study on 425 mothers and carers who were chosen using a systematic sampling technique. Results revealed that 105 (26.1%) of the mothers were extremely satisfied with the care they received from the healthcare providers, while 50 (12.4%) clients, 102 (25.4%) customers, and 250 (62.2%) employees were not pleased with the attitude of the staff. Among the customers, 74 (18.4%) were extremely satisfied, 123 (30.6%) were satisfied, and 205 (51%) were not. In terms of how much time the healthcare provider spent with the child while providing services, 143

(35.6%) clients were satisfied, 252 (62.7%) clients were not satisfied, and seven (1.7%) clients were very satisfied[76].

Another study was done in in Nnewi, Anambra State, Nigeria, among 310 mothers and carers who were chosen through a straightforward random sampling method. The study's objective was to gauge mothers' and carers' satisfaction with the services provided for child immunisation. The nearest medical facilities to 65 carers' homes were not used by them to receive immunisations (20.9%). Reasons given included disliking the medical staff (18.5%), the number of immunisation service days being deemed insufficient by 126 (41.3%) clients, the availability of drugs and vaccines (115, 37.7%), the facility's cleanliness (109, 35.7%), the explanation given (104, 34.1%), the staff's attitude (102, 33.4%), and the hours of service (95, 31.1%). More than 80% of them expressed satisfaction with the child health and immunisation services provided by the clinics[77]. In a different study, 400 mothers' satisfaction with the immunisation services they received was evaluated in rural and urban communities in Enugu State, Nigeria. The majority of mothers who used immunisation services in urban and rural health centres reported being satisfied with the care they received (87.0% and 95.0%, respectively), and the difference in these percentages was found to be statistically significant (p 0.001). Long wait times were the main source of dissatisfaction among urban respondents (75.0%), whereas uncomfortable waiting areas were the main source of dissatisfaction among rural respondents (13.0%)[78].

According to research, 35.7% of PHCs are lacking one or more vaccines, and the majority of healthcare facilities lack adequate supervision, making it difficult to implement routine immunisation. These could result in a brittle primary healthcare system, inadequate service delivery at healthcare facilities, skill gaps among health workers, and weaknesses in the RI

programme[79]. The RI system in Nigeria has significant structural and logistical flaws, with the majority of the states exhibiting homogeneity in the barriers that have been identified. The top concerns in every state are inadequate transportation, a weak cold chain, families, and financial barriers. A further issue is a lack of accountability. Problems with fund distribution due to the decentralisation of designated funds across states and LGAs and a lack of political will to support RI. Health facilities' overarching structure and governance issues have an impact on the delivery of supplies and services at every level. This may result in a shortage of vaccines in medical facilities, a rise in missed opportunities for childhood immunisation, and a consequent rise in childhood illnesses brought on by VPDs[80].

In a Lithuanian Tertiary Teaching Hospital, a study was conducted on the knowledge and attitudes of postpartum mothers towards immunisation of their children. A cross-sectional survey design was used. Using a straightforward random sampling technique, 300 postpartum mothers were chosen to receive the questionnaire. Chi-square was used to analyse the data. According to the analysis, the majority of respondents (63%) had a higher education. For 49.7% of the mothers, it was their first child. The doctors, the Internet, and the media, according to the women, were their primary sources of information about children's vaccinations. Only 57.3% of respondents knew that vaccines offered effective protection, while the majority of respondents (87.3%) thought vaccine-preventable diseases to be dangerous. Only 57% of respondents thought vaccines were safe, but 75.3% believed that the advantages outweighed the risks. Mothers' knowledge was good in 36.3% of cases, average in 41.3%, and poor in 22.3%. The majority of respondents (81.3%) intended to vaccinate their child in the future with every shot prescribed by the national immunisation programme, but 72.7% expressed concern about potential side effects from vaccination. Mothers whose

knowledge was judged to be good reported that 74.8% had never objected to or questioned having their child immunised. Better informed mothers also had a lower likelihood of being worried[81].

Additionally, some researchers used a cross-sectional survey design to examine Mothers' Knowledge and Perception of Adverse Events Following Immunisation in Enugu, South-East, Nigeria. Using a straightforward random technique, 235 mothers were chosen and given a questionnaire. Utilising percentages and chi-square, data was analysed. The research revealed that 50.1% of mothers had tertiary education, 39.6% had secondary education, 9.4% had primary education, and 0.9% had no formal education. Five parents did not know why their child was immunised; 188 knew it was to protect against serious killer diseases; 33 thought it was to protect against all diseases; and 9 thought it was to treat illnesses. Maternal education was significantly correlated with maternal knowledge of immunisation reasons (p=0.000). The majority (89.8%) were also aware that the majority of vaccines' ingredients were chemicals or substances that could stop deadly diseases. 8.9% were unaware of the contents of vaccines, compared to 1.3% who thought they contained harmful materials. Maternal education was significantly linked to this (p 0.001). The majority (34%) were unable to mention any negative events, while 31.6% only mentioned one. While 10.6% and 23.8%, respectively, mentioned three or more AEFI. If their children experienced negative events, eighty percent would still continue, six percent would stop, thirteen percent remained unsure, and zero percent did not respond[82].

According to a study, 48 percent of mothers had tertiary education, 42 percent had secondary education, 9 percent had primary education, and 1 percent had no formal education. Eighty-two percent of respondents were aware that children receive vaccinations to ward off serious

diseases, while 14. percent and 3.4% thought vaccinations served other purposes, including the treatment of illnesses. The majority of mothers (95.2%) both brought their kids to a medical facility for routine immunisation and (75.4%) consented to immunisation-on-immunisation campaign days. However, during campaigns, 23.6% of parents had never vaccinated their kids. While 85% (177) of mothers had never rejected immunisation, 13% (27) had outright rejected it during the campaign. The remaining 2% did not receive the vaccine for causes other than rejection. Compared to the number of mothers who opted out of routine immunisation, more mothers significantly rejected vaccination campaigns [83].

The most well-known determining factors for child immunisation are maternal characteristics. According to a study conducted in the southern region of Nigeria, mothers with the lowest levels of education and unemployed women were less likely to finish their child's immunisations. Education enables a woman to interact successfully, access necessary health services, and learn about prenatal care, child immunisations, and dietary requirements[84]. Additionally, it was found that maternal education was the most powerful independent predictor of protection against child mortality[85]. Mothers who completed at least primary level education were 1.7 times more likely than mothers with no education to have their children fully immunized [86]. It was also indicated that children whose mothers were aged less than 30 years were 2.26 times more likely to be fully immunized[80]. Individuals' socioeconomic status, particularly their level of education and wealth, has a significant impact on their behaviour, which in turn affects how they seek out health care and, ultimately, how many children survive. Additionally, a higher socioeconomic status is linked to better health[88].

NDHS data showed that 5% of children in the poorest household and 53% of children in the wealthiest households received vaccinations, respectively. According to some studies, the family's socioeconomic situation can have a significant impact on vaccination compliance, with higher socioeconomic status being linked to higher vaccination uptake[89]. Children from relatively wealthier families in Bangladesh had an 80% higher chance of receiving all recommended vaccinations than those from economically disadvantaged families. This might be because, in comparison to people with higher socioeconomic status, children from low-income homes have a harder time accessing health services, and parents might have trouble getting to a health facility. Other research has not discovered a difference in vaccination rates according to socioeconomic status[90]. Rural-urban disparities in immunisation coverage are undoubtedly influenced by supply-related factors, such as the availability of immunisation clinics and services for children, and demand-related factors, such as mothers' knowledge and attitudes [91]. More than twice as many urban children (38%) as rural kids (16%) are said to have received all of their recommended vaccinations[92]. Since most of Nigeria's population lives in rural areas, the country's immunisation programmes may not be as accessible or effective in all rural areas due to distance. From the NDHS, there have been urban-rural differentials in immunization uptake in Nigeria. Fewer children in rural areas are vaccinated compared to those in urban areas. The major reason for this could be as a result of limited number of facilities in rural areas. 38% of children in urban received full immunization compared to their counterparts in the rural areas with 16.2%[93]. From the study conducted in Malawi, the percentage of children who were fully vaccinated in urban areas was higher than in rural areas. This is most likely related to the problems of accessing health facilities in rural areas compared to urban areas in Malawi[94]. A study also revealed that children in urban Bangladesh are more likely than those in rural Bangladesh to finish their immunisation

schedule. In Bangladesh, the proportions of children who have received all recommended vaccinations are 66 percent for urban children and 54 percent for rural children, respectively[95].

Additionally, there were variations in vaccination coverage between urban and rural areas in studies done in Nigeria and Niger. Compared to half of urban children, only one in ten rural Niger children have received all eight immunisations. While the overall vaccination rates in rural areas are less than half of those for BCG and measles among children in urban areas. Additionally, coverage levels for the third dose of DPT and polio are less than one-quarter of what they are in urban areas due to higher dropout rates from the health system in rural areas of Niger[96]. Rural-urban disparities in vaccination coverage in Nigeria are noticeable, but not as pronounced as they are in Niger. Rural coverage levels for the measles and BCG vaccines are roughly two thirds that of urban areas. Measles vaccination rates in Eastern Turkey were found to be higher in urban areas than in suburban and rural areas[97]. In a similar study conducted in China, as it is with other literatures, household wealth, mother's education and urban city are positively associated with immunization use while the opportunity costs are the barriers to immunization use However, child's gender is not a significant determinant in the joint cross-sectional model, nor did the results reveal any differential effect of gender between urban and rural areas[98].

Other elements that are related to children's immunisation status include access to health facilities, such as antenatal care, and the location of delivery. Studies show that mothers who attend antenatal clinics and give birth in medical facilities are more likely to fully vaccinate their children because these clinics provide women with a way to learn about the immunisation schedule[99]. In a study conducted in Nigeria, majority of the mothers (65.7%) who were interviewed learned about immunisation at the antenatal clinics[100]. It is also

comparable to the Columbia study on infants' uptake, behaviour, and attitudes towards the hepatitis B vaccine, which revealed that the vaccine was significantly associated with advice from medical professionals[101]. A study conducted in the Nigerian Niger Delta region found a link between a child's delivery location and immunisation status. When compared to a child delivered at home, a child born in a health facility had a significantly higher likelihood of having received the BCG vaccine, which is administered immediately after birth, and of being up to date on their vaccinations[102].

In societies where gender inequality is pervasive, a child's sex can also be used to predict whether or not they have received their immunisations. For instance, in Bangladesh, female children are 0.84 times less likely than male children to have received all recommended vaccinations[103]. However, a study conducted in Nigeria found no connection between sex and having received all recommended vaccinations. The Ethiopian Expanded Programme Immunisation Survey also revealed that there was no statistically significant difference in the immunisation status of boys and girls[104]. Male children were twice as likely as female children to have received immunisations, according to studies done in North India and Nepal. Despite the nearly universal availability of immunisation services, Bangladeshi rural areas still discriminate against female children who seek full immunisation coverage. Female children were 30% less likely to receive immunisations, but there was no connection between this and the gender of the child[105].

Immunisation coverage may be closely related to birth order. According to NDHS 2008, full immunisation rates fall as birth order rises; 27% of first-born children have received all recommended vaccinations, compared to 14% of children born in birth order six and above. Another element that could influence full childhood immunisation in Nigeria is religion[106].

The political and religious leaders of Kano, Zamfara, and Kaduna States in northern Nigeria attempted to halt the immunisation campaign in 2003 by discouraging parents from allowing their children to receive vaccinations. This is due to their misconception that a plan to lower the Muslim population through vaccine fortification was being carried out by outsiders (Islam's enemies). Additionally, they believed it to be a new method of HIV transmission that would decrease the number of Muslims. This resulted in a decline in the uptake of vaccinations in Northern Nigeria[107].

Another excuse given by guardians or parents in Nigeria for why their kids may not have received all of the recommended vaccinations is the distance to the doctor. Distance to the health post, a different indicator of accessibility, was found to have an impact on Kenya's immunisation coverage[108].In Pakistan and Egypt, the likelihood of vaccination increased with proximity to the clinic, while immunisation coverage decreased with increasing distance from the clinic[109]. This might be explained by the fact that a clinic's visibility may draw a parent's attention and/or serve as a reminder to the parent of the child's immunisation status.

2.4 Conceptual Framework

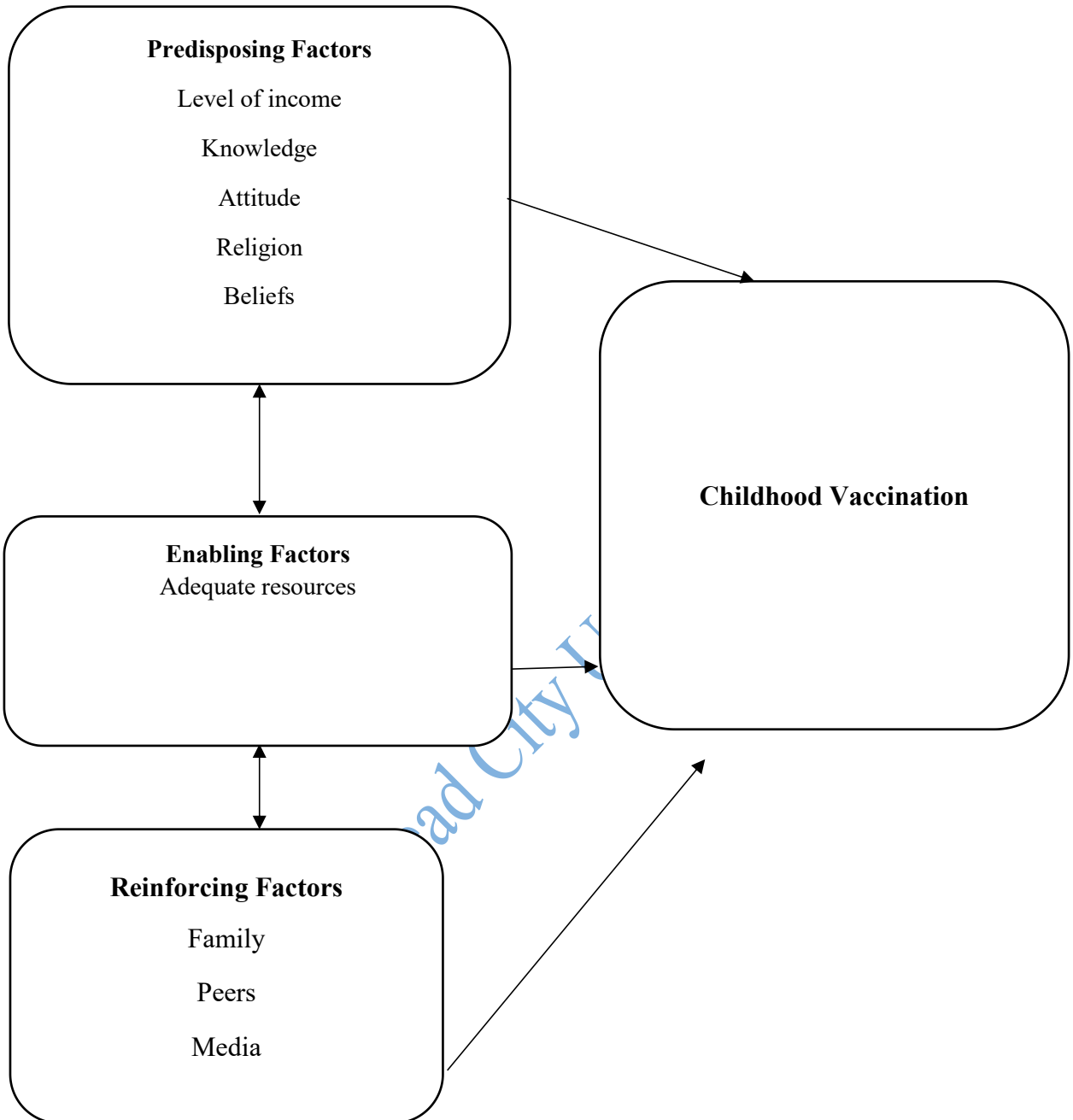

Figure 2.4: Conceptual Framework for Assessment of the Knowledge and Attitudes of Mothers towards Child Survival Strategies

Source[57]

2.5 Summary of Gaps in Literature Reviewed

There is a distinct lack of research focused specifically on urban slum environments, as most studies primarily examine maternal knowledge and attitudes towards child survival strategies in broader urban or rural settings. This highlights the need for research that specifically addresses the unique challenges and factors influencing mothers in urban slum areas. Additionally, the socioeconomic factors influencing maternal knowledge and attitudes in these environments have not been comprehensively explored. Factors such as income levels, access to healthcare, and housing conditions play a significant role in shaping maternal perspectives, and more in-depth analysis is required in this regard.

Furthermore, the sources of information and channels through which mothers in urban slums acquire knowledge about child survival strategies have not been thoroughly explored. This may include community networks, social media, or local healthcare facilities, and understanding these sources is crucial for developing effective interventions. Cultural and ethnic diversity within urban slum populations is often overlooked in the literature. Research should consider these variations to develop culturally sensitive interventions that resonate with the diverse groups in these areas. Many of the reviewed studies are outdated, and there is a clear need for more recent research that considers the evolving social and healthcare landscape in urban slum areas. While knowledge is indeed important, the existing literature tends to prioritize it over attitudes towards child survival strategies. More research is needed to understand the attitudinal barriers that might hinder the adoption of these strategies.

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Chapter Three

Methodology

The method used to collect data is described in this chapter. Research design, population, sample, and sampling technique, research instrument, validity, and reliability, data collection, data analysis, and ethical consideration were specifically covered in this chapter.

3.1 Research Design

A cross-sectional survey research design was used for this study. The purpose of the study is to assess mothers' knowledge of and attitudes towards routine childhood immunisations and child survival techniques in the Urban Slum, Mainland LGA, Lagos State.

3.2 Description of the Study Area

Southwest Nigerian state of Lagos State. It is the most populous and the smallest in size of the 36 states. Lagos State is the only Nigerian state with a single state border, being bounded to the south by the Bight of Benin and to the west by the international border with the Benin Republic. Lagos State is bordered to the east and north by Ogun State.

This study was specifically conducted in Mainland LGA, Lagos State, in a few urban slum areas. Lagos Mainland Local Government is one of the local government areas in Lagos State, Nigeria's Lagos Division. There are many slums in the chosen area, but only Makoko, Aderupoko, and Botanical were specifically chosen for the study. In the Mainland LGA, these wards are recognised.

3.3 Study Population

Mothers of infants younger than two years old in particular communities in the Urban Slum, Mainland LGA, Lagos State, participated in the study. The study was specifically conducted among mothers of children under the age of two.

The population of children under 2 years are as follows according to different selected urban slums in Mainland LGA of Lagos state;

Makoko - 5,803

Aderupoko - 6,526

Botanical - 2,563

Therefore, the total number of children under 2 years old is 14,892

3.4 Sample & Sampling Technique

Choosing how many observations to include in a sample is the process of determining sample size. Any empirical study whose objective is to draw conclusions about a large population from a sample must consider the sample size. Typically, a formula is used to produce such a representative sample. The Slovin sample size formula was modified for the purpose of determining the study sample. The computation is demonstrated below;

True Sample size = SS X P ÷ SS + (P – 1)

Where; SS = Sample size

P = Population size = 14,892

Therefore, Sample Size = $(0.5 \text{ X } (1\text{-}0.5) \div (0.05/1.96)^2$

Sample size = $0.25 \div (0.02551)^2$

Sample size = 0.25/0.00065077

Sample size = 384.16

Therefore, True sample size = 384.16 X 14,892 ÷ 384.16 + (14,892 - 1)

True sample size = 5,720,910.72 ÷ 384.16 + (14,891)

True sample size = 5,720,910.72 ÷ 15,175.16

True sample size = 376.9; Approximately 377 participants.

The cluster sampling approach was used. Often used to study large populations, particularly those that are widely geographically dispersed, cluster sampling is a probability sampling technique.

The inclusion criteria are as follows;

1. Must be mothers of children less than 2 years old;
2. Must be willingly to participate
3. Must reside in the selected local government.

The exclusion criteria are as follows

1. Unwillingness to participate
2. Not a nursing mother

3.5 Description of Research Instruments

Data was gathered through a well-structured research questionnaire. This consisted of five sections; Section A - E.

Section A: Socio-Demographic Information

The respondents' demographic data was included in this section. The section will specifically cover the mother's and the child's demographic data. This included information on the mother's age, the child's age, sex, position, education level, number of children, marital status, religion, family background, and whether the mother had received antenatal care prior to giving birth.

Section B: Knowledge Of Vaccines Preventable Diseases and Other Child Survival Strategies

There were 12 questions in this section about vaccine knowledge, diseases that can be prevented, and other child survival techniques. The inquiries focused on the degree to which expectant mothers are aware of the vaccinations to administer in order to shield their offspring from contracting diseases that could be avoided. Additionally, mothers' knowledge of child survival techniques would be the subject of questions. For each of the questions in this section, mixed response options were used because there is no standard format for responses. **Section C: Vaccination Coverage and Determinant of Immunization**

This section discussed how mothers view vaccination coverage as a potential determinant of immunisation. This section's response choices were also not all the same. There will be a total of 15 items in this section that relate to the main topic.

Section D: Vaccine Hesitancy among Mothers

This section included seven questions about how willing mothers would be to vaccinate their children to protect them from contracting diseases that are preventable. On a 5-point Likert scale,

the response options would be: SA for "Strongly Agree," A for "Agree," U for "Undecided," D for "Disagree," and SD for "Strongly Disagree."

Section E: Risk Factors Associated with Mothers Intention to Vaccinate

The factors that are related to mothers' intentions to immunise their children are covered by a total of six questions in this section. The response options ranged from SA - Strongly Agree to A - Agree, U - Undecided, D - Disagree, and SD - Strongly Disagree on a 5-point Likert scale.

3.6 Validity of the Research Instrument

The degree to which a measurement is accurate is referred to as its validity. The measurements are more accurate and valid the closer they are to the true values, so the fewer errors they contain. Pretesting was conducted internally on the questionnaire and other tools. Giving them to my boss and other professionals (lecturers) in the nursing department is part of this. They provided suggestions that were used to enhance the instruments.

3.7 Reliability of the Research Instrument

When an instrument is reliable, it can measure precisely what it is supposed to measure and produce the same result when the process is repeated. This was ensured by pre-testing the research tools on nursing mothers of kids under the age of five. Ten percent of the total sample size (n = 35) participated in the pretest. To test the reliability of the pretested questionnaires, they were cleaned, coded, and entered into the SPSS software programme. A statistical reliability analysis was then carried out on the data.

3.8 Method of Data Collection

First, the researcher asked the department for an introduction letter introducing her as conducting academic research on the subject of the study. This was subsequently turned in at the primary healthcare centres' location.

The head of the primary health care centres was introduced to the study's objectives, what the centre stands to gain from the results, and how the results may later be helpful generally. After obtaining permission, the researcher hired two additional research assistants and trained them in data collection.

3.9 Method of Data Analysis

The act of presenting and evaluating newly collected data in a manner that is meaningful, as well as providing explanations for observations, is referred to as data analysis. The information obtained from the questionnaire was processed in an objective manner with the help of SPSS 20 (Statistical Package for Social Sciences, Version 20). In this study, descriptive and inferential statistics were both used. Frequencies, percentages, graphs, and charts are used in descriptive statistics. The inferential statistics that were used to analyse the data were chi square and regression analysis, and the information was displayed in tables and charts.

3.10 Ethical Consideration

Ethical approval for this study was obtained from the University Research Ethics Committee (HREC) of Lead City University, Ibadan, Ibadan, Oyo State, and Research Ethics Committee LASUTH (LREC/06/10/2074). The ethical guidelines for dealing with research participants who are humans were strictly followed. Such moral concerns related to the following:

Informed Consent: inform consent and asset was obtained from the respondents.

Voluntary Participation: The respondents were told that participation in the study is voluntary and that they can withdraw at any time they wish.

Confidentiality: The researcher kept the respondents' names, addresses, and any other information that might have revealed their true identities private. Additionally, the information gathered was handled in the strictest of confidence.

Non-maleficence: Throughout the fieldwork, there were no invasive medical procedures or tests, and respondents were not compelled to provide any information with which they felt uncomfortable.

Beneficence: respondents were informed that they will not enjoy any special benefit by participating.

Chapter Four

Results and Discussion of Findings

This chapter presents the findings of the study and the discussion. The results are presented in the other, in which the objectives were stated in Chapter one of the study.

4.1 Demographic Data Analysis

Results of the analysis of the demographic data of the respondents are presented in the Table.

Table 4.1: Socio-demographic Characteristics of the Respondents

Variable	Frequency	Percent(%)
Age		
< 21	6	1.6
21-25	105	27.9
25-30	119	31.6
31-35	57	15.1
35-40	39	10.3
41 and above	51	13.5
Mother's education		
no formal education	245	65.0
formal education	132	35.0
Father's education		
no formal education	208	55.2
formal education	169	44.8
Marital Status		
Married	371	98.4
not married	6	1.6
Number of Children		
less than 5 children	282	74.8
5 children and above	95	25.2
Employment Status		
Employed	6	1.6
self employed	359	95.2
Unemployed	12	3.2
Religion		
Christianity	275	76.8
Islam	83	23.2
How Many Co-Wives		

None	275	72.9	Sour
1 and above	102	27.1	ce:
Yes	363	96.3	
No	14	3.7	Fiel

d Survey, 2022

Table 4.1 presents results on frequency distribution of respondents according to their socio-demographics. Following the socio-demographics of the mothers, more of them 31.6% indicated to be between 25 and 30 years old, 27.9% were between 21 and 25 years old, 15.1% were between 31 and 35 years old, 13.5% were 14 years old and above, 10.3% were between 35 and 40 years old, while the other 1.6% were less than 21 years. The respondents' educational backgrounds showed that 65% of them had no formal education, while the remaining 35% claimed to have one. More fathers than not had a formal education, as indicated by 55.2% of them, while 44.8% of them did, according to the fathers' educational qualifications. The frequency distribution for respondents' marital status reveals that 98.4% of them said they were married, while the remaining 1.6% did not. The majority of mothers, 74.8%, indicated that they have fewer than five children, while the remaining 25.2% indicated that they have five or more. According to respondents' employment status, 95.2% said they were self-employed, 3.2% said they were unemployed, and 1.6% said they were in a job that paid a living wage. More respondents (76.8%) identified as Christians than Muslims (23.2%), who made up the remaining respondents. Additionally, a higher percentage of respondents—72.9%—said they were the only wives, while the remaining 27.1% said they had at least one co-wife. Finally, 96.3% of the respondents said they live with their husband, while the remaining 3.7% said they live alone.

4.2 Presentation of Data

4.2.1 Research Question One: The Socio Demographic Characteristics of Mothers Living in Urban Slum, Lagos Mainland LGA, Lagos State

Table 4.2 Demographic Characteristics of the Child

Variable	Frequency	Percent
Sex of Child		
Male	199	52.8
Female	178	47.2
Age of Child		
1 through 9	180	47.7
10 through 19	142	37.7
20 and above	55	14.6
Position of Child		
1st to 5th position	327	86.7
more than 5th position	50	13.3
Antenatal Care when Pregnant		
Yes	358	95.0
No	19	5.0
If yes, where		
health centers	147	41.1
general hospital	118	33.0
others e.g. pharmacy, home, traditional etc.	93	26.0
How Many Doses		
None	29	7.7
One	11	2.9
Two	91	24.1
Three	246	65.3

Source: Field Survey, 2022

Table 4.2 presents results on frequency distribution of the child. From the frequency distribution, it is shown that there was more male child (52.8%) than females (47.2%). Age of child reveals that more of them 47.7% were between 1 and 9 months old, 37.7% were between 10 and 19 months old, while the other 14.6% children were 20 months old and above. According to the

child's position, 86.7% of the mothers said the child was between the first and fifth born, while 13.3% said the child was the fifth or more. When asked if they had received antenatal care prior to giving birth, 95% of them responded that they had, while the remaining 5% indicated that they had not. Of those who received antenatal care, the majority (41.1%) said they went to a health centre, followed by 33% who went to a general hospital, and 26% who went to pharmacy centres, their homes, or traditional antenatal care. Finally, when asked how many doses of tetanus toxoid (TT) injection they received during the pregnancy of the child, more of them indicated to take three doses of TT, more than 65.3% indicated to take two doses, more than 24.1% indicated to take two doses, less than 7.7% indicated to take none, and the remaining 2.9% indicated to take one dose of TT.

4.2.2 Research Question Two: The Knowledge of Mothers About Child Survival Strategies in Lagos Mainland LGA, Lagos State.

Table 4.3: Knowledge of Respondents on Child Survival and Immunization

Variable	Percent %
At what age should a child complete immunization	
Correct	77.5
Incorrect	22.5
Purpose of Immunization	
Correct	86.7
Incorrect	13.3
Is there an alternative to prevent vaccine preventable diseases	
Correct	48.8
Incorrect	51.2
Have you heard about child immunization	
Correct	98.1
Incorrect	1.9
Types of vaccine; BCG	
Correct	79.3
Incorrect	20.7
OPV (OPV 0) (OPV1) (OPV 2) AND (OPV 3)	

Correct	72.4
Incorrect	27.6
HepB 0	
Correct	22.5
Incorrect	77.5
PCV (PCV 1, 2 AND 3)	
Correct	21.8
Incorrect	78.2
PENTA (PENTA 1,2 AND 3)	
Correct	27.6
Incorrect	72.4
Measles 1	
Correct	22.5
Incorrect	77.5
Do you know about the existence of childhood immunization services in LGA	
Correct	89.1
Incorrect	10.9
Do you think exclusive breastfeeding is key to child survival	
Correct	93.9
Incorrect	6.1
Breastfeeding Initiation	
Correct	99.5
Incorrect	.5
Use of ORS	
Correct	66.6
Incorrect	33.4
Use of ZINC	
Correct	56.5
Incorrect	43.5
Growth Monitoring	
Correct	87.0
Incorrect	13.0
Vitamin Supplementation	
Correct	89.9
Incorrect	10.1
Use of ITN	
Correct	91.5
Incorrect	8.5

Source: Field Survey, 2022

Table 4.3 presents results on frequency distribution according to mother's knowledge about child survival and immunization strategies. It is shown that more of the respondents 77.5% indicated to have the knowledge of the age at which a child complete immunization, while the other 22.5% displayed inadequate knowledge about it. Mothers 86.7% indicated to have an understanding of the purpose of an immunization, while the other 13.3% indicated to have inadequate knowledge about the purpose of immunization. Additionally, it is demonstrated that more mothers 51.2% said they lacked adequate knowledge of methods other than using vaccines to prevent diseases, while 48.8% said they had adequate knowledge of those methods. Vaccines are just one of many methods for preventing disease. Also, 98.1% of those polled said they had heard of childhood vaccinations, while just 1.9% said they had not. More respondents (77.5%) said they knew about BCG, 72.4% said they knew about OPV 0 to 3, more respondents (77.5%) said they didn't know about Hepatitis B as a child vaccine, the majority of respondents (78.2%) said they didn't know enough about PCV 1 to 3, more respondents (72.4%) said they didn't know enough about PENTA 1 to 3, and more respondents (77.5%) said they didn't know enough about PENTA. It is shown that more of the respondents 89.1% indicated to have the knowledge of the existence of childhood immunization service in their local government, while the other 10.9% do not have an idea of an existing childhood immunization service in their local government. In addition, almost all of the respondents 93.9% indicated that they believe exclusive breastfeeding is key to child survival, while the other 6.1% do not agree to this notion. Additionally, nearly all of the respondents (99.5%) agreed that starting a breastfeeding relationship is a type of child survival strategy. Additionally, more respondents—66.6%—said that using ORS is a proven strategy for child survival, while only 33.4% disagreed. According to the table, more respondents (56.5%) agreed that using zinc is a good way to ensure a child's survival; almost all respondents (87) said

that regularly checking on a child's growth is a good way to ensure a child's survival; and 89.9% said that vitamin supplementation is a good alternative. Ninety-one percent of respondents said that using ITN is a good way to ensure a child's survival.

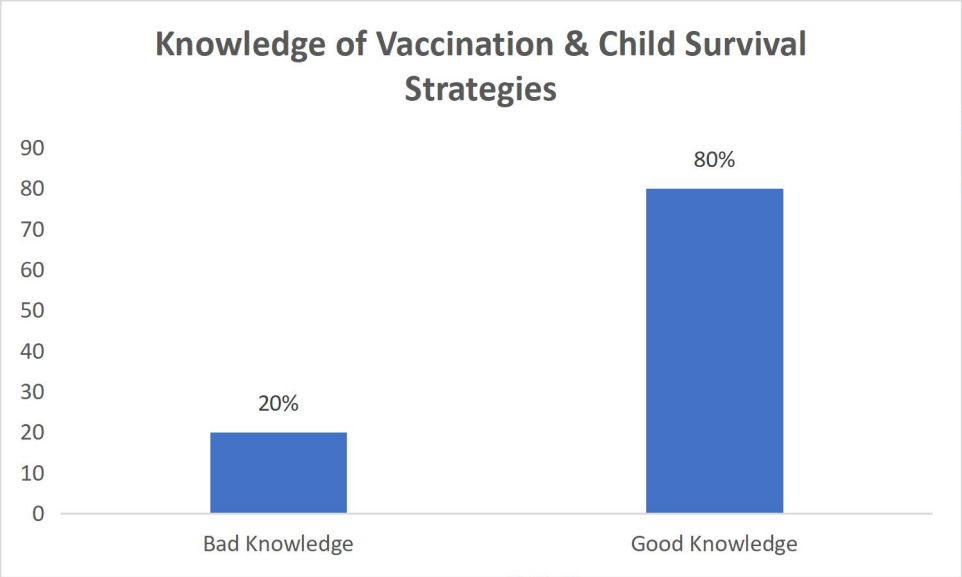

Figure 4.1 Knowledge of Mothers on Child Survival and Immunization

Source: Field Survey, 2022

Figure 4.1 presents the overall distribution according to the knowledge of mothers regarding child immunization and survival strategies. It is shown that more of the mothers 80% were found to have adequate/good knowledge of immunization and child survival strategies, while the other 20% have bad or inadequate knowledge of child immunization or child survival strategies.

Table 4.4: Association between the Demographic Characteristics and the Knowledge on the Respondents

Variable	Good	Poor	Chi-square	P-value
Age			12.818[a]	.025
less than 21	83.3%	16.7%		
21-25	73.3%	26.7%		
25-30	75.6%	24.4%		
31-35	86.0%	14.0%		
35-40	89.7%	10.3%		
41 and above	92.2%	7.8%		
Mother's Education			2.741[a]	.098
No formal Education	82.9%	17.1%		
Formal Education	75.8%	24.2%		
Father's Education			9.510[a]	.002
No formal Education	86.1%	13.9%		
Formal Education	73.4%	26.6%		
Marital Status			8.551[a]	.003
Married	81.1%	18.9%		
Not married	33.3%	66.7%		
Number of Children			6.670[a]	.010
Less than 5 children	77.3%	22.7%		
5 children and above	89.5%	10.5%		
Employment Status			7.262[a]	.026
Employed	83.3%	16.7%		
Self employed	81.3%	18.7%		
Unemployed	50.0%	50.0%		
Religion			.280[a]	.597
Christianity	81.0%	19.0%		
Islam	78.4%	21.6%		
How Many Co-Wives			.334[a]	.564
None	81.1%	18.9%		
1 and above	78.4%	21.6%		
Are you currently living with your Husband			18.380[a]	.000
Yes	82.1%	17.9%		
No	35.7%	64.3%		
Sex of Child			1.728[a]	.189
Male	82.9%	17.1%		
Female	77.5%	22.5%		
Age of Child			.480[a]	.787
1 through 9	78.9%	21.1%		

10 through 19	81.7%	18.3%		
20 and above	81.8%	18.2%		
Position of Child			3.388[a]	.066
1st to 5th position	78.9%	21.1%		
More than 5th positions	90.0%	10.0%		
Antenatal Care when Pregnant			37.060[a]	.000
Yes	83.2%	16.8%		
No	26.3%	73.7%		

Source: Field Survey, 2022

Table 4.4 presents results on the association between knowledge of child immunization and child survival strategies and demographic characteristics. From the table, age (X^2 = 12.82; P < .05), father's educational qualification (X^2 = 9.51; P < .05), marital status (X^2 = 8.55; P < .05), number of children (X^2 = 6.67; P < .05), living status of mother (X^2 = 18.38; P < .01), and attending ante-natal care (X^2 = 37.06; P < .01) were found to have significant association with mother's knowledge about immunization and child survival strategies. However, mother's educational qualification (X^2 = 2.74; P > .05), religion (X^2 = .28; P > .05), number of wives (X^2 = .33; P > .05), sex of child (X^2 = 1.73; P > .05), child's age (X^2 = .48; P > .05), and position of child (X^2 = 3.39; P > .05) had no significant association with knowledge of child immunization and child survival strategies.

4.2.3 Research Question Three: The Attitude of Mothers towards Child Survival Strategies in Urban Slum Lagos Mainland LGA, Lagos State

Table 4.5: Attitude of the Respondents Regarding Child Survival and Immunization

Variable	Percent(%)
How confident are you in the safety of routinely received childhood immunization	
Good attitude	33.4
Bad attitude	66.6
Do you think immunizations are for keeping children healthy	
Good attitude	28.3
Bad attitude	77.7
I trust the vaccine advice that my child's main healthcare provider gives me	
Good attitude	33.9
Bad attitude	66.1
My child's main healthcare provider is easy to talk to	
Good attitude	34.4
Bad attitude	65.6
Parents should be allowed to get exemption from vaccination for their child	
Good attitude	43.0
Bad attitude	57.0
Getting multiple shots in one visit can (not) overload a child's immune system	
Good attitude	17.5
Bad attitude	82.5
The use of outreach is helping to increase immunization	
Good attitude	49.6
Bad attitude	50.4
Routine immunization is sufficient to reach all children for immunization	
Good attitude	44.2
Bad attitude	55.8
The level of education of the mother is important in increasing the use of immunization services	
Good attitude	92.0
Bad attitude	8.0
Immunization is (not) expensive	
Good attitude	46.9
Bad attitude	53.1

Source: Field Survey, 2022

Table 4.5 presents results on frequency distribution according to attitude of respondents towards child survival and immunization. It is shown that more of the respondents 66.6% indicated to have negative attitude towards the safety of routinely receiving child immunization, while the other 33.4% gave favorable or good attitude towards routine receipt of childhood immunization. Also, more of the respondents 77.7% were of the opinion that immunizations are not necessary for keeping the child healthy, while the other 28.3% thinks otherwise. Additionally, a larger percentage of respondents 66.1% said they do not trust the vaccination recommendations made by their child's primary healthcare provider, while 33.9% had a negative attitude in this regard. Additionally, more respondents (65.6%) indicated that they had a negative attitude towards the main healthcare providers' recommendations for immunisations for their children. Additionally, a higher percentage of respondents, 57%, indicated that parents should not be permitted to obtain a child's vaccination exemption, suggesting a favorable attitude towards immunisation. Majority of the respondents 82.5% indicated that getting multiple shots in one visit can overload a child's immune system, which implies a positive attitude towards child immunization. In addition, a higher percentage of respondents—97.6%—agreed that using outreach to promote immunisation for children helps increase positive attitudes towards the practice, while 2.4% had negative attitudes. Additionally, a higher percentage of respondents (94.2%) believed that routine immunisation is sufficient to immunise all children. Additionally, more respondents (92%), compared to the remaining 8%, agreed that a mother's education level is important in increasing the use of immunisation services. Finally, more respondents 53.1% indicated that the cost of vaccination causes them to have an unfavourable attitude towards it, while 46.9% indicated that the cost of vaccination does not cause them to have a favourable attitude towards it.

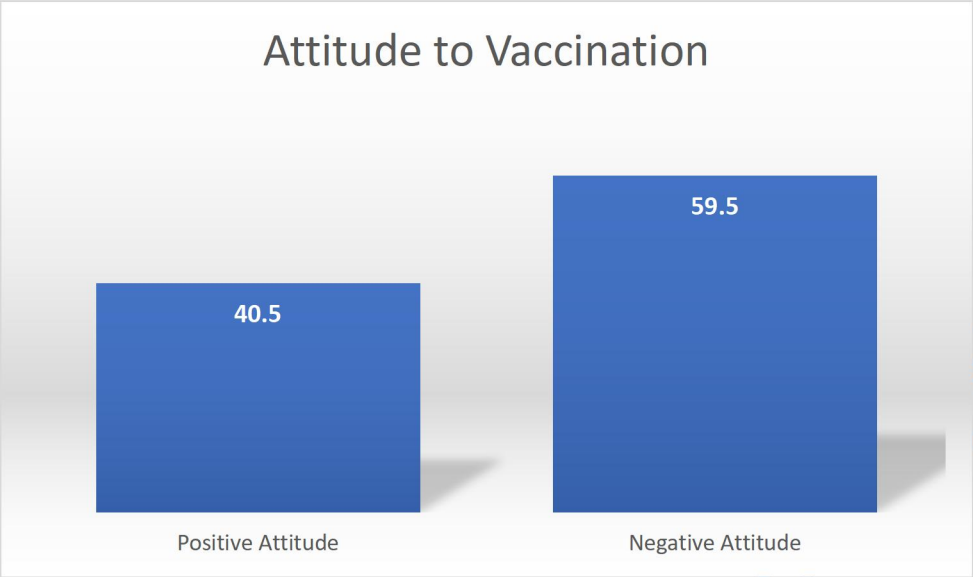

Figure 4.2: Attitude of Respondents towards Child Survival and Immunization

Source: Field Survey, 2022

Figure 4.2 presents results on overall attitude towards child immunization / vaccination. It is shown that more of the respondents 59.5% had negative and unfavorable attitude towards child immunization and vaccination, while the other 40.5% had favorable attitude towards child immunization.

Table 4.6: Association between the Socio-demographic Characteristics and the Attitude of the Respondents

Variable	Good	Bad	Chi Square	P Value
Age			6.577[a]	.254
less than 21	100.0%	0.0%		
21-25	96.2%	3.8%		
25-30	93.3%	6.7%		
31-35	94.7%	5.3%		
35-40	100.0%	0.0%		
41 and above	100.0%	0.0%		
Mother's Education			.478[a]	.489
No formal education	95.5%	4.5%		
Formal education	97.0%	3.0%		
Father's education			5.132[a]	.023
No Formal Education	98.1%	1.9%		
Marital Status			2.569[a]	.109
Married	96.2%	3.8%		
Not married	83.3%	16.7 %		
Number of Children			2.846[a]	.092
Less than 5 children	95.0%	5.0%		
5 children and above	98.9%	1.1%		
Employment Status			.783[a]	.676
Employed	100.0%	0.0%		
Self employed	95.8%	4.2%		
Unemployed	100.0%	0.0%		
Religion			.098[a]	.755
Christianity	95.8%	4.2%		
Islam	96.6%	3.4%		
How Many Co-Wives			3.044[a]	.081
None	97.1%	2.9%		
1 and above	93.1%	6.9%		
Are you Currently Living with your Husband			4.043[a]	.044
Yes	96.4%	3.6%		
No	85.7%	14.3 %		
Age of Child			16.151[a]	.000
1 through 9	99.4%	.6%		
10 through 19	90.8%	9.2%		
20 and above	98.2%	1.8%		
b			2.389[a]	.122

1st to 5th position	95.4%	4.6%		
More than 5th position	100.0%	0.0%		
Antenatal Care when Pregnant			56.561[a]	.000
Yes	97.8%	2.2%		
No	63.2%	36.8 %		

Source: Field Survey, 2022

Table 4.6 presents results on the association between socio-demographic characteristics and attitude towards child immunization and vaccination. From the table, it is shown that father's educational qualification (X^2 = 5.13; P < .05), living status of mother (X^2 = 4.04; P < .05), age of child (X^2 = 16.15; P < .01), and attending ante-natal care (X^2 = 56.56; P < .01) were found to have significant association with mother's attitude towards immunization and vaccination. However, mother's age (X^2 = 6.58; P > .05), mother's age (X^2 = .48; P > .05), marital status (X^2 = 2.57; P > .05), number of children (X^2 = 2.85; P > .05), employment status (X^2 = .78; P > .05), religion (X^2 = .10; P > .05), number of wives (X^2 = 3.04; P > .05), and position of child (X^2 = 2.39; P > .05) had no significant association with attitude towards of child immunization and child survival strategies.

Research Question Four: The Practice of Mothers towards Child Survival Strategies in Urban Slum, Mainland LGA, Lagos State

Table 4.7: Practice among Mothers on Child Survival and Immunization

Variable	Percent(%)
Do You Engage in Exclusive Breastfeeding	
Good Practice	93.1
Bad Practice	6.9
Do You Adopt Other Methods of Disease Prevention	
Good Practice	49.1
Bad Practice	50.9
What Vaccine Has That Child Received BCG	
Good Practice	89.4
Bad Practice	10.6
OPV (OPV 1, 2 AND 3)	
Good Practice	44.5
Bad Practice	55.5
PCV (PCV 1, 2 AND 3)	
Good Practice	52.8
Bad Practice	47.2
PENTA (PENTA 1, 2 AND 3)	
Good Practice	51.7
Bad Practice	48.3
IPV	
Good Practice	21.0
Bad Practice	79.0
Measles	
Good Practice	30.8
Bad Practice	69.2
Do You Have Vaccination Card	
Yes, I Have	21.8
Yes, But Not Carried With/Having Around	78.2

Source: Field Survey, 2022

Table 4.7 presents results on practice of immunization and child survival strategies among mothers. It is shown that more of the respondents 93.1% indicated that they engage in exclusive

breastfeeding of their child, while the other 6.9% indicated that they do not practice exclusive breastfeeding of their child. Additionally, a higher percentage of respondents 50.9% said they do not use any additional disease prevention strategies, compared to 49.1% who said they do. In addition, a sizable portion of respondents 89.4% said their child had received the BCG vaccine; more respondents 55.5% said they had not given their child the OPV 1, 2, and 3 vaccines; more respondents 52.8% said their child had received the PCV vaccine; more mothers 51.7% said their child had received the PENTA vaccine; and more respondents 79% said they had not given their child the IPV vaccine. Additionally, a larger percentage of respondents 69.2% said they had not given their child the measles vaccine or immunisation, compared to 30.8% who said they had. The remaining 21.8% of respondents simply said they have it and may carry it around as needed, while the remaining 78.2% of respondents said they have a vaccination card for their child but do not carry it around with them.

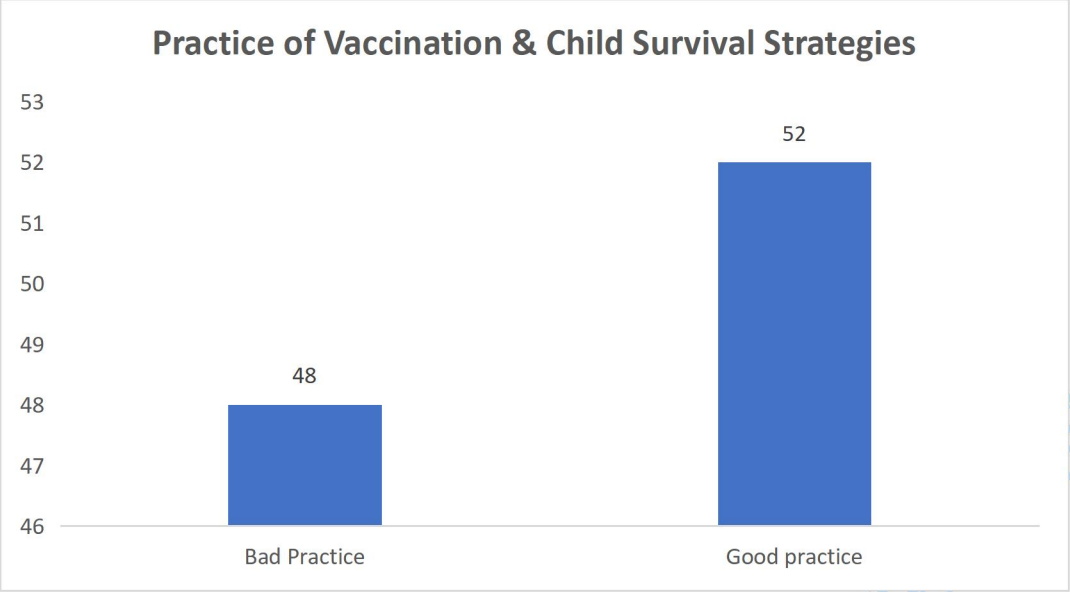

Figure 4.3: Practice of Child Survival and Immunization among Mothers

Source: Field Survey, 2022

Figure 4.3 presents results on overall practice of child immunization/vaccination among mothers. It is shown that more of the respondents 52% indicated to have good practice of child immunization and vaccination, while the other 48% had bad practice of child immunization and vaccination.

Table 4.8: Association between Socio-demographic Characteristics and Practice of Mothers Concerning Child Survival and Immunization

Variable	Good	Bad	Chi Square	P Value
Age			9.948[a]	.077
Less than 21	66.7%	33.3%		
21-25	61.0%	39.0%		
25-30	54.6%	45.4%		
31-35	49.1%	50.9%		
35-40	43.6%	56.4%		
41 and above	37.3%	62.7%		
Mother's Education			6.755[a]	.009
No Formal Education	47.3%	52.7%		
Formal Education	61.4%	38.6%		
Father's Education			16.665[a]	.000
No Formal Education	42.8%	57.2%		
Formal Education	63.9%	36.1%		
Marital Status			.875[a]	.350
Married	52.6%	47.4%		
Not Married	33.3%	66.7%		
Number Of Children			1.215[a]	.270
Less Than 5 Children	53.9%	46.1%		
5 Children And Above	47.4%	52.6%		
Employment Status			.573[a]	.751
Employed	50.0%	50.0%		
Self employed	52.6%	47.4%		
Unemployed	41.7%	58.3%		
Religion			5.923[a]	.015
Christianity	55.7%	44.3%		
Islam	40.9%	59.1%		
How Many Co-Wives			5.069[a]	.024
None	48.7%	51.3%		
1 and above	61.8%	38.2%		
Are you currently living with your husband			.030[a]	.863
Yes	52.3%	47.7%		
No	50.0%	50.0%		
Age of Child			17.047[a]	.000

1 through 9	41.7%	58.3%		
10 through 19	59.2%	40.8%		
20 and above	69.1%	30.9%		
Position of Child			1.574[a]	.210
1st to 5th Position	53.5%	46.5%		
More than 5th Position	44.0%	56.0%		
Antenatal Care When Pregnant			7.808[a]	.005
Yes	53.9%	46.1%		
No	21.1%	78.9%		

Source: Field Survey, 2022

Table 4.8 presents results on the association between socio-demographic characteristics and practice of child immunization and vaccination. From the table, it is shown that mother's educational qualification (X^2 = 6.76; P < .05), fathers' educational qualification (X^2 = 16.67 P < .01), religion (X^2 = 5.92; P < .05), number of wives (X^2 = 5.07; P < .05), age of child (X^2 = 17.05; P < .01), and attending ante-natal care (X^2 = 7.81; P < .05) were found to have significant association with practice of immunization and vaccination. However, mother's age (X^2 = 9.95; P > .05), marital status (X^2 = .88; P > .05), number of children (X^2 = 1.22; P > .05), employment status (X^2 = .78; P > .05), religion (X^2 = .10; P > .05), number of wives (X^2 = .57; P > .05), living status (X^2 = .03; P > .05) and position of child (X^2 = 1.57; P > .05) had no significant association with practice of child immunization and child survival strategies.

4.2.5 Research Question Five: The Factors that Contribute to the Practice of Child Survival Strategies in Urban Slum Lagos Mainland

Table 4.9: Logistics Regression Coefficient of Selected Socio-Demographic Characteristics Showing the Factors Associated with the Practice of Child Survival and Immunization

Variable	UOR	Pvalue	95%CI	AOR	Pvalue	95% CI
Age						
Less than 21	.297	.184	0.50, 1.778			
21-25	.380	.006	0.191, 0.758			
25-30	.493	.039	0.252, 0.967			
31-35	.615	.215	0.285, 1.327			
35-40	.768	.544	0.328, 1.798			
41 and above						
Mother's education						
No formal education	1.766	.010	1.148, 2.717	.808	.562	0.392, 1.663
Formal education						
Father's education						
No formal education	2.367	.000	1.560, 3.593	1.175	.664	0.568, 2.432
Formal education						
Marital Status						
Married	.451	.362	0.082, 2.494			
Not married						
Number of Children						
Less than 5 children	.770	.271	0.483, 1.226			
5 children and above						
Employment Status						
Employed	.714	.738	0.1, 5.118			
Self employed	.642	.457	0.2, 6.002			
Unemployed						

Religion						
Christianity	.550	.016	0.339, 0.893	.985	.961	0.544, 1.784
Islam						
How Many Co-Wives						
None	1.700	.025	1.069, 2.704	2.009	.020	1.117, 3.613
1 and above						
Are you currently living with your husband						
Yes	.911	.863	0.313, 2.648			
No						
Age of child						
1 through 9	3.129	.001	1.643, 5.959	2.920	.008	1.320,6.460
10 through 19	1.543	.199	0.796, 2.994	1.100	.823	0.479, 2.528
20 and above						
Position of child						
1st to 5th position	.682	.211	0.375, 1.242			
More than 5th Position						
Antenatal Care When Pregnant						
Yes	.228	.010	0.074, 0.700	.615	.492	0.154, 2.460
No						
Distance as a Barrier						
Yes	6.565	.000	4.132, 10.430	4.101	.002	1.664, 10.107
No						
Inadequacy As a Factor						
Yes	5.745	.000	3.482, 9.479	1.688	.227	0.721, 3.953
No						
Lack Of Means of Transportation						
Yes	5.347	.000	3.361, 8.506	2.725	.022	1.153, 6.440
No						
Knowledge						

Good	.264	.000	0.150, 0.462	.183	.000	0.088, 0.379
Poor						
Attitude						
Good	.132	.008	0.029, 0.592	.049	.003	0.007, 0.366
Bad						

Source: Field Survey, 2022

At UOR, there is a significant relationship (1.148, 2.717) CI between the practise and the mother's educational attainment. According to this finding, those with formal education are twice as likely as those without formal education to practise child survival and immunisation. The same is true for the father's education, where there is a significant association at 95%CI 1.560, 3.593, showing that fathers with formal education are twice as likely as those without formal education to practise child survival and immunisation. The results indicate that there is a significant correlation between practise and religion (0.339, 0.893) CI, with respondents who practise Islam being two times less likely than respondents who identify as Christians to practise child survival and immunisation. The number of co-wives and the practise are significantly correlated (1.069, 2.704). This shows that people who have at least one cowife are twice as likely to practise immunisation and child survival than people who do not have cowives. Additionally, there is a strong correlation between the practise and children's ages (Age 1-9 1.643, 5.959; Age 10-19 0.796, 2.994). This demonstrates that children between the ages of 20 and 30 are twice as likely to practise child survival and immunisation than children between the ages of 1 and 9, and they are three times more likely than children between the ages of 20 and 30 to do so. The practise and antenatal while pregnant are significantly associated at UOR (0.074, 0.700) CI. According to this, people who do not practise antenatal care are four times less likely than those who do to practise child survival and immunisation. Additionally, there is a strong correlation

between the practise and people who consider distance to be a barrier (4.132, 10.430). According to these findings, people who do not perceive distance as a barrier are twice as likely to practise child survival and immunisation. This outcome holds true for those who attribute inadequacy (3.482, 9.479) CI and a lack of transportation (3.361, 8.506) CI as contributing factors. Additionally, there is a strong correlation between immunisation practises and knowledge of child survival. According to the findings, people who know little about child survival and vaccination are four times less likely to practise these practises. While there was a significant association between the practise of child survival and immunisation at 95% CI of 0.029, 0.592, those who have a poor attitude are 8 times less likely to practise than those who do. However, the table's age, marital status, number of children, employment status, whether you currently live with your husband, and the position of the child do not show any associations between the practise of child survival and immunisation and any of these variables.

4.3 Discussion of Findings

The study's findings indicate that more than 80% of the mothers had adequate or good knowledge of immunisation and child survival techniques. This result is in line with earlier research that demonstrated the importance of maternal knowledge in ensuring the survival of children.[1,2]. But the study also found some topics about which mothers knew little, like the value of exclusive breastfeeding and the application of oral rehydration therapy. This demonstrates the necessity of specialised health education initiatives to fill in these knowledge gaps and raise child survival rates.

The majority of the mothers, according to the study, had a favourable attitude towards child survival techniques and were prepared to take action to ensure their children's survival. This finding is encouraging because it suggests that mothers are motivated to take action to improve

their children's health. Mothers' attitudes are a significant factor in a child's survival, according to similar studies[3]. The study did note some obstacles mothers face, such as financial limitations and limited access to healthcare facilities, when putting child survival strategies into practise. These results are in line with earlier research that stressed the significance of addressing social and economic issues in raising child survival rates[4,5].

Additionally, this study reveals that more respondents, 52%, indicated that they practise good child immunisation and vaccination practises. The majority of the mothers who participated in the study's survey exclusively breastfed their infants, which is a good practise for a child's survival. However, the study also found some mothers who did not use exclusive breastfeeding or other disease prevention strategies. This emphasises the necessity of specialised health education initiatives to support child survival strategies like exclusive breastfeeding and disease prevention. Similar studies have discovered that maternal behaviours play a significant role in a child's survival. The study also identified some obstacles mothers face when putting good practises into practise, such as a distance from medical facilities and limited resources. These results are in line with earlier research that stressed the significance of addressing social and economic issues in order to enhance maternal practises and child survival rates[6,7].

The study found a number of factors that influence the use of child survival techniques in urban slums on the Lagos Mainland. According to the study, there is a significant link between maternal education and the use of child survival strategies and immunisation, with mothers who have received formal education being more likely to do so. The study also discovered a significant relationship between fathers' educational attainment and their use of child survival techniques and immunisation, with fathers who had received formal education being more likely to do so. The study also discovered a significant relationship between religion and immunisation

and child survival practises, with respondents who practised Islam being less likely to employ child survival techniques than those who practised Christianity. These results suggest that the use of child survival techniques in urban slums on the Lagos Mainland is influenced by both education and religion. These results are in line with earlier research that found that religion and education play significant roles in maternal and foetal health outcomes. For instance, a 2018 study found that maternal education was positively correlated with child survival in Bangladesh. The study was published in the Journal of Health, Population, and Nutrition. According to the study, mothers with higher levels of education were more likely to seek medical attention for their kids and engage in healthy habits like exclusive breastfeeding and immunisation[8].

Maternal education was found to be positively associated with child survival in Nigeria, according to a 2019 study that was published in the Journal of Public Health in Africa. According to the research, mothers with higher levels of education were more likely to adopt healthy habits like exclusive breastfeeding and immunisations, as well as more likely to seek out medical care for their kids[9]. Religion was found to be a significant factor in maternal and child health outcomes in Nigeria, according to a study that was published in the Journal of Epidemiology and Community Health in 2020. The study discovered that Muslim women were less likely than Christian women to use modern contraceptives and seek antenatal care, which may be a factor in Muslim women's poorer maternal and child health outcomes[10].

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Chapter Five

Conclusions and Recommendations

This chapter presents the conclusive aspect of the research. The following outlines were covered; summary, conclusions, recommendations, and suggestions for future studies.

5.1 Summary of Findings

In an urban slum on the Lagos mainland, Lagos state, the study evaluated the knowledge and attitudes of mothers towards child survival strategies. The research was divided into five chapters. The study's general introduction was covered in Chapter 1, which also includes the study's background, problem statement, justification, purpose, research questions, hypotheses, significance, and operational definitions of terms. Chapter 2 covered the literature review. The chapter specifically covered a review of prior research on the study's topic. The chapter covered a review of related studies, a conceptual framework review, and a conceptual review of concepts.

The research method was covered in Chapter 3. The research methodology outlines the precise steps and processes that the researcher used. In this chapter, the topics of research design, population, sample, and sampling technique, research instrument, validity and reliability, data collection, data analysis, and ethical consideration were covered.

The study's results were presented in chapter four. Five goals were tested, and the results were presented. Overall, it was found that the majority of nursing mothers have sufficient knowledge of child vaccination and immunisation. However, it was discovered that more than all of the mothers had negative attitudes towards vaccination and immunisation of children. Additionally, it was discovered that slightly more mothers than average did not actually practise child immunisation and vaccination. Finally, it was found that factors including the number of wives,

age of the child, travel distance, knowledge and attitudes about immunisation, and child vaccination were found to have a significant impact on the practise of immunising children.

5.2 Conclusion

The majority of pregnant women are between the ages of 21 and 30, the majority of them without a formal education, and the majority have fewer than five children. Additionally, more of the kids were in the first through fifth positions, and many of them indicated that they would be attending prenatal care. The results of this study allowed us to draw the conclusion that mother's knowledge of immunisation and child survival techniques was significantly correlated with her age, father's educational level, marital status, number of children, and living situation. Additionally, it can be inferred from this study that the mother's attitude towards immunisation and vaccination is significantly correlated with the father's educational level, mother's living situation, the child's age, and attendance at antenatal care. The study also found that attendance at prenatal care, age of child, religion, number of wives, mother's educational background, and father's educational background were significant correlates of immunisation and vaccination practises. The results of this study allowed us to draw the following conclusions: The practise of immunising children is significantly influenced by factors such as the number of wives, age of the child, distance to the health centre, transportation options, knowledge and attitude about immunisation, and child vaccination.

5.3 Recommendations Series of findings were made, therefore, based on the findings, the following recommendations were presented;

1. Mother's living situation was consistently correlated with her attitude towards vaccination, knowledge of immunisation and vaccination, and practise of immunisation and vaccination. This suggests that mothers who live with their spouses are more likely to be knowledgeable, have a positive outlook, and practise immunisation and vaccination. Therefore, it is advised that partners of mothers be urged to be available and present when their wives give birth to a child. This gives them even more motivation to vaccinate the child.
2. Additionally, it is advised that healthcare and social service providers work to promote a narrative that encourages husbands to support their wives throughout their pregnancies, deliveries, and postpartum care.
3. It was found that a child's knowledge, attitude, and practise regarding immunisation and vaccination were significantly correlated with the educational backgrounds of the father and mother. It implies that mothers' perceptions of immunisation and vaccination are impacted when they lack knowledge. Therefore, it is advised that uneducated people be sought out and educated about the significance and importance of vaccination for the child and the community at large. This may significantly alter how mothers view vaccination and immunisation.
4. Antenatal care attendance was a reliable predictor of knowledge, attitude, and practise regarding child immunisation and vaccination. Therefore, it is advised that more campaigns on the value of antenatal care be launched in order to gain from knowledge shared about caring for the pregnancy and the unborn child.

5. Furthermore, it was discovered that the practise of immunising and vaccinating children is significantly impacted by the distance to a healthcare facility and the availability of transportation. Therefore, it is advised that concerned organisations figure out how to build more small medical facilities with nursing staff and community healthcare providers. This will significantly increase the likelihood that child immunisation and vaccination reach the local population.

5.4 Contribution to Knowledge

The study sought to determine the factors that influence the use of child survival techniques in this population by evaluating the knowledge and attitudes of mothers towards these techniques in urban slums in Lagos Mainland LGA, Lagos State. The study discovered that religion, paternal education, and maternal education all had a significant impact on the practise of immunisation and child survival. The study advances knowledge by helping to clarify the variables that affect how child survival strategies are used in urban slums in Lagos Mainland LGA, Lagos State. According to the study's findings, targeted interventions are required to improve health and healthcare-seeking practises among disadvantaged populations, particularly those who practise Islam and those with lower levels of education. The study also emphasises the need for interventions that address the underlying social and economic factors that contribute to poor maternal and child health outcomes, as well as health education programmes that promote healthy behaviours for child survival. The study's conclusions could be used to direct public health policies and to develop such interventions with the goal of enhancing maternal and child health outcomes in urban slums in Lagos Mainland LGA, Lagos State. This study contributes to the body of knowledge already available on immunisation and child survival.

5.5 Suggestions for Further Research

The following suggestions were made from this study;

First, it was recommended that future research make every effort to take into account more factors that are in opposition to knowledge, attitude, and practise of immunisation and vaccination of children. A deciding factor could be a previous pregnancy's experience. Future research is advised to take into account how vaccinations for children affect nursing mothers' intentions to continue receiving vaccinations. It should be investigated to see if this factor might influence whether or not to keep vaccinating children. In order to ensure that the study's results are more broadly applicable, it was also recommended that future studies should have a broader focus. Finally, it is recommended that future research take the spouse into account.

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Appendix

Informed Consent Letter

Assessment Of The Knowledge And Attitudes Of Mothers Towards Child Survival Strategies In Urban Slum, Mainland Lga, Lagos State

Dear Participant,

I am a post graduate student at the department of Nursing, Faculty of BASIC Medical and Applied Science, Department of Public Health, Lead City University, Ibadan. The purpose of this study is to gather information about the **Assessment Of The Knowledge And Attitudes Of Mothers Towards Child Survival Strategies In Urban Slum, Mainland LGA, Lagos State.**

Please note that your participation in this study is entirely voluntary because the main intention behind the study is not to associate any individual's response with their real identity but to assess your knowledge. All information that would be collected during this study will be treated with utmost confidentiality.

Appendix

Questionnaire

Department Of Public Health
Faculty Of Basic Medical Sciences
Lead City University, Ibadan

Dear respondent,

My name is ……, I am a postgraduate student of the above department and institution, carrying out a research on **assessment of the knowledge and attitudes of mothers towards child survival strategies in urban slum, Mainland LGA, Lagos state.** The findings of the study will assist in making relevant recommendations in encouraging immunization of children and gaining child survival strategies. There are no right or wrong answers and under no circumstance will your responses be divulged to a third party. Please, truthfully and sincerely respond to the items for the success of the exercise.

Thank You.

SECTION A: Socio-Demographic Characteristics of Respondents

1. Age (Last birthday): _____

2. Educational Qualification (Mother): No formal education [ ] Primary [ ] SSCE [ ] ND/NCE [ ] HND/University degree [ ] Masters [ ] PhD [ ] Others [ ]

3. Educational Qualification (Father): No formal education [ ] Primary [ ] SSCE [ ] ND/NCE [ ] HND/University degree [ ] Masters [ ] PhD [ ] Others [ ]

4. Marital Status: Single parent [ ] Married [ ] Divorced [ ] Separated [ ] Widow [ ]

   a) If married, how many years have you been married? _____

5. Number of Children: _____

6. Employment status: Employed [ ] Self-employed [ ] Unemployed/Full-housewife [ ]

7. Religion: Christianity [ ] Islam [ ] Traditional [ ] Others: _____

8. How many co-wives: _____

9. Are you currently living with your husband? Yes[ ] No [ ]

Child's Demography

1. Sex of child: Male [ ] Female [ ]

2. Age of child (Months):_____

3. Position of child: _____

4. Did you receive ante-natal care when pregnant for the child? Yes [ ] No [ ]

   a) If yes, where did you receive it? Health centre [ ] General Hospital [ ] Chemist/Pharmacy [ ] Traditional [ ] Home [ ] Others:_____

5. How many doses of tetanus toxoid (TT) injection did you received during the pregnancy of this child who is 12-23months? (a) None [ ] (b) One [ ] (c) Two [ ] (d) Three [ ]

6. Where did you give birth to the child in question? (a) House [ ] (b) Health centre [ ] (c) General Hospital [ ] (d) Traditional Birth Attendant's home [ ] (e) others (specify)……

SECTION B: Knowledge of Immunization and Child Survival Strategies

1. Have you ever heard about childhood immunization? Yes [ ] No [ ]

   a) If yes, what were your sources of information? Media [ ] Word of mouth [ ] Bill Board [ ] Poster/Leaflet [ ] Health worker [ ] Religious settings [ ] Others:_____

2. List the types of vaccine you know and corresponding disease they present:_____
_____

3. At what age should a child complete immunization? Before one year [ ] Greater or equal to one year [ ] don't know

4. What is the purpose of immunization? Makes child brilliant [ ] prolongs life [ ] prevents disease [ ] makes child grow fast [ ] others specify:_____

5. Is there an alternative to prevent vaccine preventable diseases other than immunization? Yes [ ] No [ ]

6. Do you know about the existence of childhood immunization services in the LGA? Yes [ ] No [ ]

7. Do you think exclusive breastfeeding is key to child survival strategies? Yes [ ] No [ ]

   a) If yes, to what extent do you think exclusive breastfeeding is important? Not at all [ ] Some extent [ ] Great extent [ ] Very great extent [ ]

Kindly respond to the following the extent to which you agree that they are part of child survival strategies;

SN	Items	Yes	No
8	Breastfeeding initiation		
9	Use of ORT		
10	Use of Zinc		
11	Growth monitoring		
12	Vitamin supplementation		
13	Use of ITN		

SECTION C: Attitude Towards Immunization/Vaccination

Kindly respond to the following as the extent to which you agree with them. Response keys are; SA - Strongly Agree, A - Agree, U - Undecided, D - Disagree, SD - Strongly Disagree

SN	Attitude towards immunization	SA	A	U	D	SD
6	How confident are you in the safety of routinely received childhood immunizations?					
7	Do you think immunizations are for keeping children healthy?					
8	I trust the vaccine advice my child's main health care provider gives me.					

9	My child's main healthcare provider is easy to talk to.					
10	Parents should be allowed to get exemption from vaccination for their child on religious ground even if it were clear that it raised the risk of disease for the child and everyone else					
11	Getting multiple shots in one visit can overload a child's immune system					
12	The use of outreach is helping to increase coverage for immunization					
13	Routine immunization is sufficient to reach all children for immunization					
14	The level of education of the mother is important in increasing the use of immunization services					
15	Immunization is expensive					

SECTION D: Practice of child survival strategies and vaccination

1. Do you engage in exclusive breastfeeding for your child? Yes [ ] No [ ]

2. Do you adopt other methods of preventing diseases other than immunization? Yes [ ] No [ ]

   a) If yes, what name them:_____

3. Does your child have a vaccination card? Yes, and I have it with me [ ] Yes, but I do not have it with me [ ] No, i don't have [ ]

4. Reasons for not carrying or having vaccination cards? It's at the school or day care centre [ ] Left it at home [ ] Lost it [ ] Have not been given it [ ] Because vaccination was not the reason for the visit [ ] others specify .....

5. What vaccines has the child received? BCG [ ] OPV 1 [ ] OPV 2 [ ] OPV 3 [ ] PCV 1 [ ] Penta 1 [ ] PCV 2 [ ] Penta 2 [ ] PCV 3 [ ] Penta 3 [ ] IPV [ ] Measles [ ]

6. Which of the following are vaccine preventable diseases? Tuberculosis [ ] Poliomyelitis [ ] Hepatitis B [ ] Diptheria [ ] Pertusis (Whooping Cough) [ ] Tetanus [ ] Measles [ ] Yellow fever [ ] Meningitis [ ] Malaria [ ] Cholera [ ] others (specify): _____ Don't Know [ ]

SECTION E: Risk Factors Associated With Mothers Intention To Vaccinate

Kindly respond to the following questions using the following keys; SD - Strongly Disagree, D - Disagree, U - Undecided, D- Disagree, SD - Strongly Disagree

SN	Questions	SA	A	U	D	SD
1	The distance to cover in order to vaccinate is a barrier to me					
2	If I am asked to pay for immunization/vaccination, I will not					
3	Time inadequacy is a factor to consider when I want to take the					

	child for vaccination					
4	I hate going to health centres for vaccination purposes only					
5	Lack of means of transportation is a challenge for me to vaccinate this child					
6	I do not believe in immunization and will not take my child for immunization					

Bio-data

A. Personal Data

Full name: Olufunke Tosin, Olanrewaju-Ogunbekun

Address: 29, Nurudeen Shobajo Street, Elepe, Lagos Nigeria.

E-mail Address: olori1tosin@gmail.com

Phone no: +234(0)8085285404

Date of birth: 10th of August, 1972

Place of birth: Lagos State

Nationality: Nigeria

Marital Status: Single

Name of Next of Kin: Pelumi Mariam, Ogunbekun

Address of Next of Kin: 29, Nurudeen Shobajo Street, Elepe, Lagos Nigeria.

B. Educational Background

Educational Institutions Attended with Dates and Qualification:

HND Public Health

School of Hygiene, Eleyele, Ibadan, Nigeria 1994

Bachelor of Science; (Health Education) 2000

University of Nigeria Nsukka, Enugu, Nigeria.

Masters of Public Health *2021- current*

Lead City University, Ibadan, Ibadan, Oyo State.

C. Work Experience

Disease Surveillance and Notification Officer, Lagos State Ministry of Health.

- Contact Tracing/Global Epidemic Containment Ebola Virus Diseases.
- Outbreak Investigation / Viral Hemorrhagic Fever, Bird Flu, Diarrhea Diseases e.t.c)

- Case Investigation of suspected poliomyelitis
- Stool, blood, cervla CSF, anto rectal swab crust, exudate etc sample collection
- Environmental Sample Collection
- Supervision of Immunization Outreach Programs
- Collaborating with Community Informants/CDA
- Environmental Diagnosis and Investigation of Problems Hazardous.
- Monitoring of Environmental Health Issue in Climate Change

Sanitization of Community Members and Health Workers in Public and Private Hospitals on purity diseases, recognition, detection and reporting.

- Monthly monitoring and evaluation meeting with Health Workers from Public/Private Hospitals. • Monthly review meetings with the state opitemiology team and WHO
- Sending weekly reports to the state and NCDC
- Chairman AEFI Committee, Lagos Mainland LG

Coordinator of Covid-19 Response Activities in Lagos Mainland LGA

- Surveillance Officer for surveillance outbreak

Case Investigation/ Contact Tracing/ Containment of Monkey Pox Outbreak

D. Training

- Monkey Pox Public Outreach and Sample Collection Training by US Defense Threat Reduction Agency, BTRP, NCDC, HJF 2022
- Collaborative Institutional Training Institute (CITI) Program 2021

- Vaccine Safety Basics by WHO 2020
- Investigation of Adverse Events Following Immunization by WHO 2020
- Lagos State Covid-19 Responder Under Surveillance Pillar by Lagos State Government 2020
- Reviewers of National Guidelines for Yellow Fever Preparedness and Response by NCDC 2019
- Response to a Yellow Fever Outbreak (Simulation Exercise by NCDC) 2018
- Climate Change and Environmental Health by Environmental Health Officers Association of Nigeria. EHOAN 2018
- Frontline Field Epidemiology and Laboratory Training Programme by AFENET NIGERIA 2016
- Base Level Safety Training Programme by Lagos State Safety Commission 2016
- Professionalism in Work Management (Prelude to Waste to Wealth) AWAM Association of Waste Management of Nigeria. 2011

Referees:

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_____ _____

Signature Date

The University Compliance Certification

This is to certify that this thesis by **Olufunke Tosin, OLANREWAJU-OGUNBEKUN**, with the Matriculation Number LCU/PG/002245 in the Department of Public Health Faculty of Basic Medical and Health Sciences, Lead City University, Ibadan is full compliance with the approved University format.

_____ _____

Signature Date