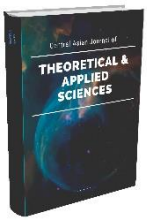

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Determinants Contributing to Nursing Mothers and Their Neonates' Adherence with Immunization Regimen in Infant-Welfare-Clinic, Olabisi Onabanjo Teaching Hospital, Sagamu, Ogun State, Nigeria

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Abstract: *Globally, immunization is among the major contributors to public health. It prevents 20% of childhood mortality annually. The highest fatality rates from vaccine preventable diseases are usually among children under five. Despite immunization guidelines put in place by the World Health Organization (WHO), 1.5 million children die globally on annual basis due to inadequate vaccination coverage. Existing literature indicate there is an increase in non-adherence to immunization schedule in developing countries and therefore an increased demand to improve adherence to immunization schedule. The Nigeria Demographic and health Survey 2014 documented Nigeria vaccination coverage for infants as 76%. Improving immunization adherence is an important measure in reducing morbidity and mortality from childhood immunizable diseases. So therefore, this study aimed to determine the determinants contributing to nursing mothers and their children's adherence with immunization regimen in infant welfare clinic in Olabisi Onabanjo University Teaching Hospital Sagamu, Ogun State.*

Keywords: *Nigeria, Clinic, Hospital.*

A Cross- sectional research design was used in the study. The study was carried out at infant welfare clinic in Olabisi Onabanjo University Teaching Hospital Sagamu, Ogun State and the target population was all children under 24 months of age and their care givers.

A total of 403 participants were selected by simple random sampling method and data collection was by researcher administered semi- structured questionnaire. Data was analyzed by the use SPSS Version 20 by use of descriptive and inferential statistics. Significance between variables was established by the use of Chi square test. Data was presented in tables, bar graphs and frequencies. Majority of the children 195(92.0%) were brought by their mothers. Among the study participants, (51.9%) were aged between

26-30years with mean and standard deviation (34.04 ± 5.601) . (72.7%) were married while 77.9% had attained secondary school.

All the participants do you know that aim of immunization is to protect the individual and the public from vaccine-preventable diseases the scheduled date. It was also found that level of education is statistically significant with the level of perception of routine immunization regimen also, age of the mothers towards adherence to immunization regimen was also found to be significant with the level of knowledge of routine immunization regimen by the mothers.

Age, and educational level determined adherence to immunization schedule. Health systems' factors such as rigid clinic hours, long distance to health facility and lack of strategies to follow-up caregivers or remind them on due date influence non adherence to immunization schedule. So therefore it is recommended that The health institutions should put in place mechanisms of reminding the caregivers on the return date using text messages. This will solve the problem of forgetfulness by the caregiver also more emphasis should be laid on educating head of homes and religious groups on the importance of routine immunization in the lives of children and mothers.

Background of the Study

Immunization (which can also be referred to as Vaccination or inoculation), is a process or method of causing resistance in the human body to some specific diseases. And this is carried out by using some microorganisms which could either be bacteria or viruses that have been killed or modified. These microorganisms do not have the ability to cause disease, but what they do is trigger the body's immune system to build some sort of defense mechanisms that will continuously guard the body against the disease.

Vaccines are usually administered into the body through needle injections, but some can be administered by mouth or sprayed into the nose (CDC; 2021) Immunization is a protective measure against infectious diseases (Tadesse H, Derbew A, Woldie M, 2009).Childhood Immunization is one of the greatest public health and Nursing interventions as it helps to reduce the amount of disease-related morbidity and mortality at little to no cost. (Obasoha, Mustapha et al 2018) It is a core child survival strategy and is demonstrated to avert more than 1.2 million child deaths every year. And it is a key strategy for attaining Sustainable Developmental Goal (SDG) number 3, which is the reduction of under-five mortality to less than 25/1000 live births by 2013 (World health statistics, 2010).

Vaccine-preventable diseases are diseases that could be prevented by the use of vaccines.Vaccines are one of the most cost-effective preventive services and vaccines are very crucial of preventive measures and it has led to a lot of gains and improvement in the overall boost of child health over the years (American Academy of Paediatrics 2017). But despite all these gains, Vaccine-preventable diseases still remain a major cause of child illnesses and deaths, particularly in low-income countries.

Without the introduction of vaccination, there would be more adverse effects on the health of children in the world and particularly in Africa. A lot of childhood death, trauma and disabilities are caused by these diseases (Immunization and Childhood diseases, 2017)

These diseases account for about 17 percent of global total under-five mortality per year and 22 percent of the total child mortality in Nigeria (Niger J paedatr 2012).Many children are at increased risk for preventable childhood illnesses because of under-immunization, thus increasing the burden on healthcare workers and families and increasing healthcare costs and also decreasing the quality of life. In order to make sure that a lot of children are immunized and safe from these diseases, they are to be given the provided vaccines at the right time. The CDC (Centre for Disease Control) states that children have to be

fully immunized against 14 deadly diseases before two years (CDC,2017). These diseases include; polio myelitis, hepatitis, rubella, measles, tuberculosis, yellow fever, tetanus, pertussis and rotavirus.

This study is aimed at identifying those factors that contribute to non-compliance with vaccination schedules and thus help healthcare workers in identifying children who are at risk for under-immunization and help nurses recognize factors that could help increase compliance rates. In the year 2004, Nigeria included hepatitis B and yellow fever vaccines in its schedule, recommending the receipt of three doses of hepatitis B at birth, at six weeks of age, and at 14 weeks of age. While yellow fever should be given at nine months of age, along with measles vaccine. However, for maximal protection against vaccine-preventable diseases, a child should receive all immunizations within recommended intervals.

Statement of the Problem

As stated earlier, immunization is one of the most cost-effective health interventions mostly employed in order to prevent children from diseases that could easily be solved and it usually helps to reduce or eradicate diseases that would cost more money to treat later on.

However, immunization coverage remains far below the United Nations International Children's Emergency Fund (UNICEF) and World Health Organization (WHO) target of 80%. Some data from WHO shows that immunization prevents over 2.5 million children deaths every year. But in the year 2008, up to 1.7 million children died of vaccine-preventable diseases and about 19.2 million children were missing six basic vaccines in the year 2010. The countries where up to half of those vaccines were missing were in India, Nigeria, and Indonesia (Mukherjee, Madhivanan, Li, 2015).

Despite the effort of the government of Nigeria to combat childhood illnesses through immunization, it is still inadequate. A lot of children and Neonate still suffer from incomplete vaccination and non-uptake of immunization despite annually published immunization guidelines that define the criteria for the timing of Immunization.

The Northern part of Nigeria suffers the most from the problem of no immunization or incomplete immunization as evidence by prevalence of childhood mortality, morbidity due to vaccine-preventable diseases (Ophori et al, 2014). The reason being, in Nigeria, immunization is a postnatal service given to Nursing mothers and their children in order to boost their health, prevent vaccine preventable diseases, reduce infant mortality and morbidity (Adebiyi & Ajani, 2017). But most times in Northern parts of Nigeria, mothers do not present or make themselves available for this postnatal service due to high level of resistance to child immunization which in turn leads to an increase in vaccine preventable diseases and child mortality and morbidity (McArthur-Lloyd, McKenzie and Adamu, 2016).

A study was carried out previously (Ayebo and Charles, 2009) provided some explanations for incomplete immunization and missed immunization and this includes late reporting for immunization, non-administration of simultaneous injections, longer interval between DPT3 (percentage of one-year old that have received three doses of the combine diphtheria, tetanus toxoid and pertussis vaccine in a given year). So therefore, this study aimed to determine the determinants contributing to nursing mothers and their children's adherence with immunization regimen in infant welfare clinic in Olabisi.Onabanjo University Teaching Hospital Sagamu, Ogun State, Nigeria

Significance of the Study

This research's findings might help to identify the level of understanding of mothers about immunization and their rate of compliance to the immunization schedule. More so, it may also help to discover the factors affecting their compliance rate in order to have an insight to what measure to undertake so as to improve their knowledge and acceptance of immunization in their community which may assist in eradicating the vaccine-preventable childhood illnesses.

Objectives of the study

The main objective of this study is to determine the contributing to nursing mothers and their neonates' adherence with immunization regimen in infant-welfare-clinic, Olabisi Onabanjo Teaching Hospital, Sagamu, Ogun state, Nigeria. The specific objectives of the study are to:

1. Determine the respondent's level of knowledge on immunization regimen in infant welfare clinic in Olabisi Onabanjo University Teaching Hospital Sagamu, Ogun State, Nigeria
2. Determine respondents' level of perception on immunization regimen in infant welfare clinic in Olabisi Onabanjo University Teaching Hospital Sagamu, Ogun State, Nigeria
3. Determine respondents' Coping strategies on regimen in infant welfare clinic in Olabisi Onabanjo University Teaching Hospital Sagamu, Ogun State, Nigeria.
4. To determine the factors contributing to strict adherence of Nursing mothers and their children to Immunization schedule.

Research Questions

The following research questions are necessary to enable better understanding of the factors that affect the immunization rate of children and how improvement can be ensured

1. What is the respondents level of knowledge on immunization regimen in infant welfare clinic in Olabisi Onabanjo University Teaching Hospital Sagamu, Ogun State, Nigeria
2. What is respondents level of perception on immunization regimen in infant welfare clinic in Olabisi Onabanjo University Teaching Hospital Sagamu, Ogun State, Nigeria
3. What is respondents' Coping strategies on regimen in infant welfare clinic in Olabisi Onabanjo University Teaching Hospital Sagamu, Ogun State, Nigeria.
4. What are the factors contributing to strict adherence of Nursing mothers and their children to Immunization schedule.

Research Hypothesis

Ho: There is no significant association between age of the respondents and their knowledge on immunization regimen in infant welfare clinic in Olabisi Onabanjo University Teaching Hospital Sagamu, Ogun State, Nigeria

Ho: There is no significant association between level of education of the respondents and their perception on immunization regimen in infant welfare clinic in Olabisi Onabanjo University Teaching Hospital Sagamu, Ogun State, Nigeria

Ho: There is no significant association between knowledge of the respondents and their perception on immunization regimen in infant welfare clinic in Olabisi Onabanjo University Teaching Hospital Sagamu, Ogun State, Nigeria

MATERIAL AND METHOD

The study will be carried out among mothers attending the infant welfare clinic in Olabisi Onabanjo University Teaching Hospital (O.O.U.T.H), Sagamu, Ogun state, South West Nigeria. The University Teaching University was established in the year 1986 with the primary aim of teaching medical students from Olabisi Onabanjo University and provision of healthcare service to the indigene of Ogun State and Nigeria as a whole. It is a contemporary Teaching University that focuses on good relationship between heath workers and patients.

A descriptive cross-sectional survey research was adopted for the study in order to identify the determinants contributing to mothers and their children's strict adherence to immunization regimen at O.O.U.T.H, Sagamu, Ogun state.

The Target Population

A target population is the primary respondent of a research in a geographic region. For this research work, our primary target population are Nursing mothers attending Infant welfare clinic, O.O.U.T.H.

Sample size calculation

The minimum sample size was calculated using Kish-Leslie (1965) formula and prevalence of immunization regimen adherence, Nigeria perspective 60.59% (Orjingene, 2021)

$$N = \frac{Z^2pq}{D^2}$$

n = minimum sample required

z = standard normal deviation set at 1.96 which corresponds to 95% confidence level.

P = prevalence of immunization regimen adherence, Nigeria perspective 60.59% =(0.0.61)

q = 1-p = (1-0.61) = 0.39

d = level of significant desired set at 0.05\

$$\therefore N = \frac{1.96^2 \times 0.61 \times 0.39}{0.0025}$$

$$= \frac{3.842 \times 0.61 \times 0.39}{0.0025}$$

$$= \frac{0.9140118}{0.0025}$$

= 365.60472

= 366 respondents

NB. 10% extra needs to be added to take care of those respondents that withdraw or those that do not completely fill their questionnaire.

Since 10% of 366 = 36.6

The new calculated sample size = 366+37 = 403.

Sampling Technique

A convenience sampling technique was used to collect data from the nursing mothers attending Infant welfare clinic, O.O.U.T.H, Sagamu, Ogun State. This sampling technique has been checked and rechecked to reduce bias.

Ethical Consideration

While conducting this study, the necessary forms and permission were acquired. A letter of permission to collect data was obtained from Babcock University School of Nursing, Ethical approval was also obtained from the Babcock University Health Research Ethical Committee (BUHREC). Also, approval was given

from the Management of Olabisi Onabanjo University Teaching Hospital, Sagamu, Ogun state, to conduct the study on Determinants contributing to Nursing mothers and their children's adherence to Immunization regimen schedule. Before conducting data collection from the respondents, verbal consent was obtained. In the instrument of data collection which was the Questionnaire, the name of the respondent was not allocated to be written for confidentiality purposes. The rights of the respondents were not infringed upon, and the respondents were duly notified of what they are doing. The respondents were informed that participation in the study was entirely voluntary and also that adherence to strict confidentiality and safeguards will be ensured.

DATA PRESENTATION AND ANALYSIS

This chapter presents the analyzed result finding from the researcher findings on determinants contributing to nursing mothers and their neonates' adherence with immunization regimen in infant-welfare-clinic, Olabisi Onabanjo Teaching Hospital, Sagamu, Ogun state, Nigeria.

Table 4.1a: Socio-Demographic Characteristics of Respondents surveyed (n=403)

Variable	Responses	Frequency (403)	Percentage (100)
Age	20-26	9	2.2
	27-33	209	51.9
	34- 40	116	28.8
	41-46	69	17.1
Mean ± S.D.	34.04 ± 5.601		
Sex	Female	403	100.0
Marital status	Married	293	72.7
	Separated	15	3.7
	Cohabiting	95	23.6
Religion	Christianity	300	74.4
	Islam	103	25.6
Level of education	Secondary	314	77.9
	Tertiary	89	22.1
Ethnic group	Yoruba	257	63.8
	Hausa	83	20.6
	Igbo	63	15.6
Number of living children	1	68	16.9
	2	73	18.1
	3	262	65.0
Number of the child that followed you to the clinic	1	55	13.6
	2	86	21.3
	3	262	65.0

Table 4.1 shows the socio demographic characteristics of the respondents under survey. It was revealed that 9(2.2%) of the respondents fell within age group of 20-26, (51.9%) respondents fell within age group 27-33, 116(28.8%) of the respondents were within age group 34-40years, and 69(17.1%) of the respondents were within the age group of 41-46years. The mean and standard deviation of the ages of the respondents were found to be 34.04years and 5.6years respectively.

More than half of the respondents, (63.8%), were Yoruba, (20.6%) were Hausa, and the remaining (15.6%) were Igbo. Majority of the respondents (72.7%) were married, (3.7%) are separated and the remaining (23.6%) are cohabitating. Majority of the participants (74.4%) are Christians, and the

remaining (25.6%) practice Islam. The table shows that 314(77.9%) of the participants highest level of education is secondary level, and the remaining 89(22.1%) has tertiary highest level of education. More than half of the respondents 262(65.0%) are blessed with three child, 73(18.1%) has two children and the remaining 68(16.9%) has one children and. Majority of the participants 262(65.0%) come to the clinic with their third child, 86(21.3%) of the respondents come with their second child while the remaining 55(13.6%) come with their first child.

Table 4.2: Respondents' Level of Knowledge on immunization regimen (n=403)

Variable	Responses	Frequency (403)	Percentage (100)
Do you know that aim of immunization is to protect the individual and te public from vaccine-preventable diseases?	Yes, I do	403	100.0
Do you know that modern vaccines are safe, especially those recognized by W.H.O. and produced by accredited manufacturers?	Yes, I do	403	100.0
Do you know that some vaccine present with some adverse effect?	Yes, I do No, I don't	319 84	79.2 20.8
Do you know that Children having serious illness should be vaccinated as soon as their general condition improves?	Yes, I do No, I don't	324 79	80.4 19.6
Do you know that when a child had severe adverse effect from a vaccine, subsequent dose of same vaccine should not be given?	Yes, I do No, I don't I will inquire	310 48 45	76.9 11.9 11.2
Do you know that a malnourished child can be allowed to receive normal dose of next vaccine?	Yes, I do No, I don't	300 103	74.4 25.6
Do you know that a child with history of jaundice after birth can be allowed to receive vaccine?	Yes, I do No, I don't	339 64	84.1 15.9
Do you know that pain, swelling and redness are common vaccination reactions?	Yes, I do	403	100.0
Do you know that fever, weakness and irritability are normal immune response?	Yes, I do No, I don't	322 81	79.9 20.1
Do you know that support from significant others enhance appropriate utilization of immunization regimen?	Yes, I do No, I don't	327 76	81.1 18.9

The table above revealed that all the participants knows that aim of immunization is to protect the individual and the public from vaccine-preventable diseases and they all agreed that modern vaccines are safe, especially those recognized by W.H.O. and produced by accredited manufacturers. The table also shows that majority of the respondents 319(79.2%) said yes that some vaccine present with some adverse effect and the remaining 84(20.8%) said they don't know. Also majority of the respondent 324(80.4%) knows that children having serious illness should be vaccinated as soon as their general condition improves, while the remaining 79(19.6%) don't know they should be vaccinated.

Majority of the participants 310(76.9%) knows that when a child had severe adverse effect from a vaccine, subsequent dose of same vaccine should not be given, 48(11.9%) don't know, while the remaining 45(11.2%) said they will make enquiry about it. It was also revealed that majority of the participants 300(74.4%) knows that a malnourished child can be allowed to receive normal dose of next vaccine, while the remaining 103(25.6%) don't know by saying no.

Majority of the participants 339(84.1%) knows that a child with history of jaundice after birth can be allowed to receive vaccine, while the remaining 64(15.9%) don't know about it. It was also revealed that all the participants knows that pain, swelling and redness are common vaccination reactions. Also, majority of the participants knows that fever, weakness and irritability are normal immune response, while the remaining 81(20.1%) don't know by saying no. The table also shows that majority of the respondent knows that support from significant others enhance appropriate utilization of immunization regimen, while the remaining 76(18.9%) don't know.

Table 4.3: Respondents' level of perception on immunization regimen (n=403)

Variable	Responses	Frequency (403)	Percentage (100)
Do you perceive that ability of the government to understand level of immunization would them to design good interventions?	Yes, I do No, I don't	343 60	85.1 14.9
Do you perceive that ability of the mother to ensure their Children receive full immunization would prevent lots of Children's death and disease conditions?	Yes, I do No, I don't	326 77	80.9 19.1
Do you perceive that immunization is a social issue and it should therefore be voluntary?	Yes, I do	403	100.0
Do you perceive that religion and cultural influences are barrier to full immunization coverage?	Yes, I do	403	100.0
Do you perceive that immunization is central to child-health care practices in the all communities?	Yes, I do No, I don't	328 75	81.4 18.6
Do you perceive that immunization simply meant the practice of protecting every child and the entire family in any community against contracting itemized preventable diseases?	Yes, I do No, I don't	329 74	81.6 18.4

Do you perceive that immunization remains the only source of strength that covers children in their early period of development?	Yes, I do No, I don't	314 89	77.9 22.1
Do you perceive that regular Clinic attendance encourages.	Yes, I do No, I don't	308 95	76.4 23.6

From the table above, majority of the total participants 343(85.1%) perceived that ability of the government to understand level of immunization would help them to designed good interventions while the remaining 60(14.9%) don't perceived it by saying no. 326(80.9%) of the participants also perceived that ability of mothers' to ensure their children received full immunization would prevent lots of children's death and diseases condition, while the remaining 77(19.1%) don't perceived it. The table shows that all the participants agreed that immunization is a social issue and it should therefore be voluntary and also believed that religion and cultural influences are major barrier to full immunization coverage. 328(81.4%) of the respondents perceived that immunization is central to child-health care practices in all communities, while the remaining 75(18.6%) don't perceived it.

Majority of the participants 329(81.6%) perceived that immunization is the practice of protecting every child and the entire family in any community against contracting itemized preventable diseases, while the remaining 74(18.4%) don't perceived it. 314(77.9%) of the total participants also believed that immunization remains the only source of strength that covers children in their early period of development, while the remaining 89(22.1%) don't believed it. Also, more than half of the total participants perceived that regular clinic attendance encourages, and the remaining 95(23.6%) don't perceived that regular clinic attendance encourages immunization adherences by choosing no.

Table 4.4: Respondents' coping strategies on immunization regimen (N=403)

Variable	Responses	Frequency (403)	Percentage (100)
Would you able to cope with the stress of attending the regular booking appointment of all immunization regimen for you and your child?	Yes, I would No, I would not	311 92	77.2 22.8
Would you be able to cope with the attitude of health care workers when issues that upset you arises?	Yes, I would No, I would not	290 113	72.0 28.0
Would you be able to cope with the health care worker delay attitude especially when they ask you to wait for other Clients before certain vials of vaccines are open, to minimize waste?	Yes, I would No, I would not	317 86	78.7 21.3
Would you be able to cope with situation when you are asked to pay some money before some procedures are carried out on you and your child?	Yes, I would No, I would not	321 82	79.7 20.3
Would you be able to cope with situation when the child was sick and you are at the same time expected to bring the Child for immunization?	Yes, I would No, I would not	312 91	77.4 22.6

Would you be able to cope during immunization Clinic days for it looks like a social event due to dancing and singing that stimulate Nursing mothers and their children?	Yes, I would No, I would not	309 94	76.7 23.3
Would you be able to cope with the bubbling and social networking displayed during immunization Clinic days at infant-welfare Center?	Yes, I would No, I would not	323 80	80.1 19.9
Would you be able to cope with artificially created friendship in the clinic resulting in common spending like payment of every established friend's transport fare on your way home?	Yes, I would No, I would not	312 91	77.4 22.6

The table above table shows that out of 403 participants, 311(77.2%) of the participants think that they would be able to cope with the stress of attending the regular booking appointment of all immunization regimen for them and their child, while the remaining 92(22.8%) said they would not be able to cope with it by saying no. More than half of the respondents 290(72.0%) said they would be able to cope with the attitude of health care workers when issues that upset them arises, while the remaining 113(18.0%) said they will take it up, by choosing no, they would not be able to cope with it. The table above also revealed that 317(78.7%) of the participant said yes that they would be able to cope with the health care worker delay attitude especially when they ask them to wait for other Clients before certain vials of vaccines are open, to minimize waste, while the remaining 86(21.3%) said no.

Majority of the participant 321(79.7%) said they would be able to cope with situation when they are asked to pay some money before some procedures are carried out on them and their child, and the remaining 82(20.3%) said they would not be able to cope with it by choosing no. Also, 312(77.4%) of the participants said they would be able to cope with situation when their child is sick and they are also expected to bring the Child for immunization, while the remaining 91(22.6%) said no. Also, more than half of the total participants 309(76.7%) they would be able to cope during immunization Clinic days for it looks like a social event due to dancing and singing that stimulate Nursing mothers and their children, while 94(23.3%) disagree by choosing no.

Majority of the respondents 323(80.1%) said they would cope with the bubbling and social networking displayed during immunization Clinic days at infant-welfare Center, and the remaining 80(19.9%) said no, they won't be able to cope. More than half of the total participants 312(77.4%) said they would be able to cope with artificially created friendship in the clinic resulting in common spending like payment of every established friend's transport fare on your way home, while the remaining 91(22.6%) said they are not comfortable with it by choosing no.

BIVARATE ANALYSIS USING CHI-SQUARE METHOD

Hypothesis Testing

This study tested three hypotheses

Ho: There is no significant association between age of the respondents and their knowledge on immunization regimen in infant welfare clinic in Olabisi Onabanjo University Teaching Hospital Sagamu, Ogun State, Nigeria

Ho: There is no significant association between level of education of the respondents and their perception on immunization regimen in infant welfare clinic in Olabisi Onabanjo University Teaching Hospital Sagamu, Ogun State, Nigeria

Ho: There is no significant association between knowledge of the respondents and their perception on immunization regimen in infant welfare clinic in Olabisi Onabanjo University Teaching Hospital Sagamu, Ogun State, Nigeria

Table 4.5 First Hypothesis:Age against knowledge score

Age	Knowledge categories					
	Fair knowledge (%)	Good knowledge (%)	Total (%)	df	Chi-square	P-value
20-26	3 (33.3%)	6 (66.7%)	9 (100.0)	3	4.787	0.188
27-33	46 (22.0%)	163 (78.0%)	209(100.0)			
34-40	17 (14.7%)	99 (85.3%0	116(100.0)			
41-46	10 (14.5%)	59 (85.5%)	69 (100.0)			
Total	76 (18.9%)	327 (81.1%)	403(100.0)			

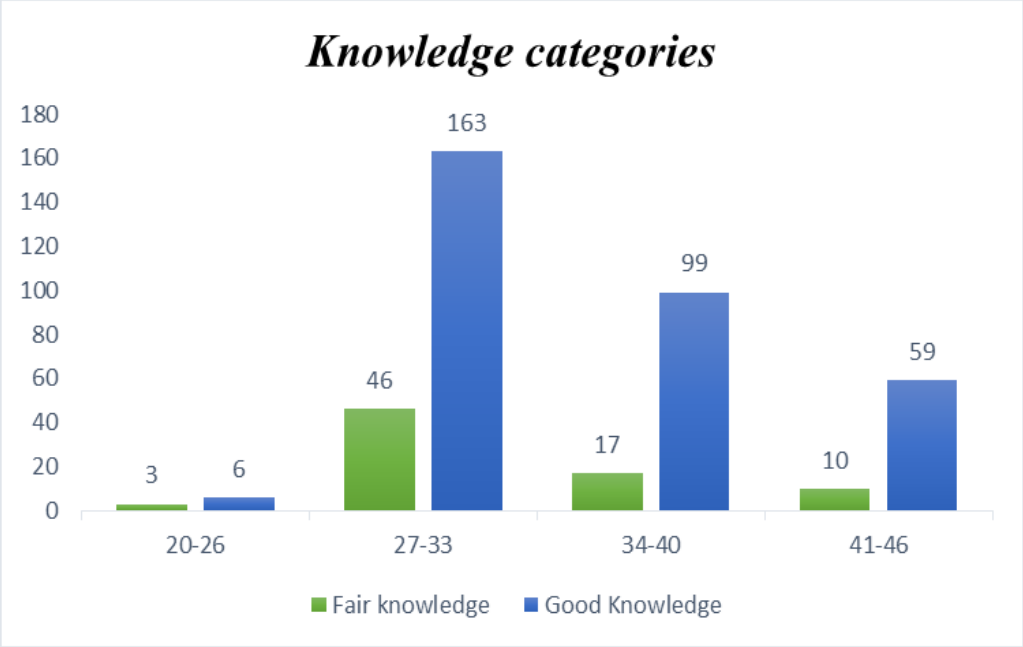

Table above revealed that level of respondents age is found to be statistically significant with the level of knowledge of nursing mothers & their under-five infants on routine immunization regimen (chi -square =4.787, p-value >0.0188) decision: since the calculated value is more than the tabulated value, we therefore reject the null hypothesis and conclude that respondent age has a positive influence on their knowledge on immunization regimen which reflect how exposed they are.

Table 4.6 Second Hypothesis : Level of education against perception score

Level of education	Perception categories					
	Fair	Good	Total (%)	df	Chi-square	P-value
Secondary	83 (26.4%)	231 (73.6%)	231(100.0)	1	12.550	0.000
Tertiary	41 (46.1%)	48 (53.9%)	89 (100.0)			

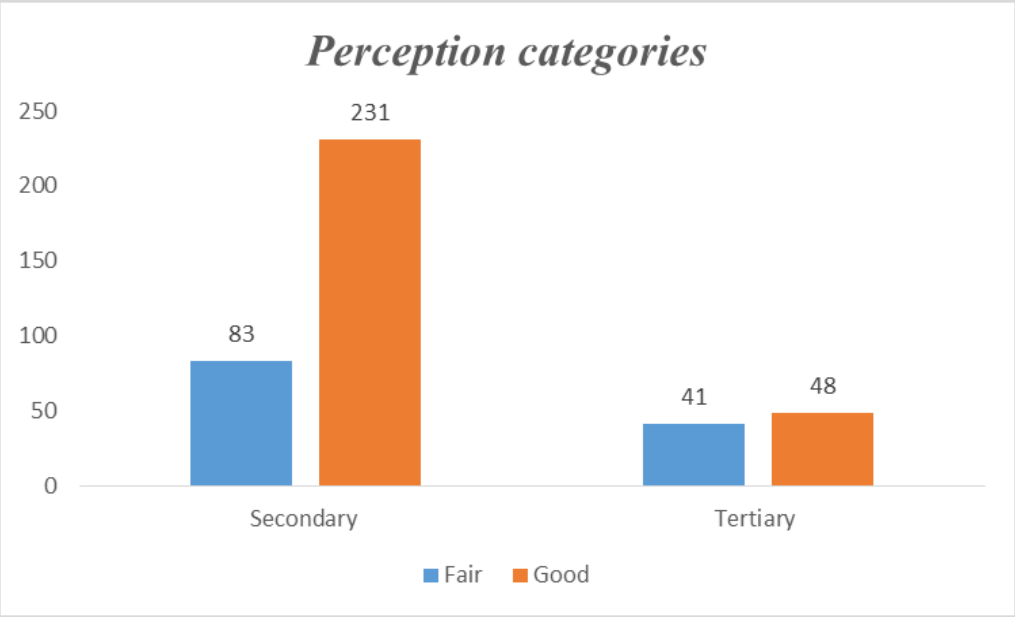

Table above revealed that level of respondents education is found to be statistically significant with the level of perception of nursing mothers & their under-five infants on routine immunization regimen (chi - square =12.550, p-value >0.000) decision: since the calculated value is more than the tabulated value, we therefore reject the null hypothesis and conclude that respondent level of education has a positive influence on their perception towards immunization regimen which reflect on their level of adherence toward uptake of vaccine..

Table 4.7 Third Hypothesis :Knowledge score against perception score

Knowledge score	Perception categories					
	Fair	Good	Total (%)	df	Chi-square	P-value
Fair	0 (0.0%)	124 (100.0%)	124(100.0)	1	41.628	0.000
Good	76 (27.2%)	203 (72.8%)	279(100.0)			
Total	76 (18.9%)	327 (81.1%)	403(100.0)			

Table above revealed that level of respondents knowledge is found to be statistically significant with the level of perception of nursing mothers & their under-five infants on routine immunization regimen (chi - square =41.628, p-value >0.000) decision: since the calculated value is more than the tabulated value, we therefore reject the null hypothesis and conclude that respondent level of perception has a positive influence on their knowledge towards immunization regimen which reflect on their level of adherence and compliances toward intake of immunization vaccine.

CHAPTER FIVE

SUMMARRY, CONCLUSION AND RECOMMENDATION

Summary of findings

Socio-Demographic Characteristics of Respondents surveyed

The study consists of respondent from age 22 to 45year old and the mean and standard deviation of the ages of the respondents were found to be 34.04years and 5.6years respectively. More of the respondents had secondary school certificate, follow by tertiary school, but minority had primary education. Majority of the respondents are married which implies that more married women participated in the study with

more from Yoruba ethnic group. Majority of the respondents are having at least three children and majority of the respondent are Christians.

Respondents' Level of Knowledge on immunization regimen

All the participants know that aim of immunization is to protect the individual and the public from vaccine-preventable diseases. This is in line with study conducted by (Obasoha, Mustapha et al 2018) who stated that childhood Immunization is one of the greatest public health and Nursing interventions as it helps to reduce the amount of disease-related morbidity and mortality at little to no cost. Also partially in line according to a study by (Adefolalu, Kanma-Okafor, & Balogun, 2019),who stated that all respondents were aware of immunization, more than half of the mothers had good knowledge about the immunization of under five children. All agreed that modern vaccines are safe, especially those recognized by W.H.O. and produced by accredited manufacturers. Majority of the respondents know that some vaccine present with some adverse effect. Higher number of the respondent knows that children having serious illness should be vaccinated as soon as their general condition improves. This is in line with the study by (Nafila,2019), who state that majority of the mothers believed that vaccination could be done even if the child had fever. Majority of the participants knows that when a child had severe adverse effect from a vaccine, subsequent dose of same vaccine should not be given. It was also revealed that majority of the participants knows that a malnourished child can be allowed to receive normal dose of next vaccine. More than half of the participants knows that a child with history of jaundice after birth can be allowed to receive vaccine. All the participants knows that pain, swelling and redness are common vaccination reactions. Also, majority of the participants knows that fever, weakness and irritability are normal immune response. This study also shows that majority of the respondent knows that support from significant others enhance appropriate utilization of immunization regimen.

Respondents' level of perception on immunization regimen

This study reveals that majority of the total participants perceived that ability of the government to understand level of immunization would help them to designed good interventions. Majority of the participants also perceived that ability of mothers to ensure their children received full immunization would prevent lots of children's death and diseases condition. This is in line with the study conducted by (Etana B, Deressa W, 2012) who stated that mothers who knew the benefits of childhood immunization, had supportive partners, and have a good source of income were six times more likely to have their children fully immunized to prevent children motility compared with their counterparts. All the participants agreed that immunization is a social issue and it should therefore be voluntary and also believed that religion and cultural influences are major barrier to full immunization coverage. Majority of the respondents perceived that immunization is central to child-health care practices in all communities. Majority of the participants perceived that immunization is the practice of protecting every child and the entire family in any community against contracting itemized preventable diseases. This is in line with the study conducted by (Verulava, Jaiani, Lordkipanidze, Jorbenadze, & Dangadze, 2019) who stated that majority of mother show positive attitude towards immunization and believe that vaccination plays an important role in disease prevention. Higher number of the participants believed that immunization remains the only source of strength that covers children in their early period of development. Also, more than half of the total participants perceived that regular clinic attendance encourages, minority don't perceived that regular clinic attendance encourages immunization adherences by choosing no. This is in line with the study conducted by (Pore, 2012) who stated that factors for incomplete vaccination as maternal education, socioeconomic status of the family, lack of knowledge about immunization, ignorance and fear of losing daily employment

Respondents' coping strategies on immunization regimen

This study reveals that majority of the participants think that they would be able to cope with the stress of attending the regular booking appointment of all immunization regimen for them and their child. More than half of the respondents said they would be able to cope with the attitude of health care workers when issues that upset them arises This is not in line with the study conducted in Gabon by (Nobert George, 2009) on the reason for non – Adherence to immunizations it was shown that important reason for non-attendance to mother – child clinics (MCC) included transport costs, negative experiences at MCC such as interactions with unfriendly staff. Majority of the participant said yes that they would be able to cope with the health care worker delay attitude especially when they ask them to wait for other Clients before certain vials of vaccines are open, to minimize waste. More than half of the participant said they would be able to cope with situation when they are asked to pay some money before some procedures are carried out on them and their child. This is not in line with the study conducted in Gabon by (Nobert George, 2009) on the reason for non – Adherence to immunizations it was shown that important reason for non-attendance to mother – child clinics (MCC) included transport costs, negative experiences at MCC such as interactions with unfriendly staff, Also, majority of the participants said they would be able to cope with situation when their child is sick and they are also expected to bring the Child for immunization. More than half of the total participants stated that they would be able to cope during immunization Clinic days for it looks like a social event due to dancing and singing that stimulate Nursing mothers and their children. Majority of the respondents said they would cope with the bubbling and social networking displayed during immunization Clinic days at infant-welfare Center. More than half of the total participants said they would be able to cope with artificially created friendship in the clinic resulting in common spending like payment of every established friend's transport fare on your way home

Age against knowledge score

The study revealed that level of respondents age is found to be statistically significant with the level of knowledge of nursing mothers and and conclude that respondent age has a positive influence on their knowledge on immunization regimen which reflect how exposed they are.

Level of education against perception score

The study revealed that level of respondent's educational level is found to be statistically significant with the level of perception of nursing mothers and their children on routine immunization regimen and conclude that respondent level of education has a positive influence on their perception towards immunization regimen which reflect how exposed they are. This is on the contrary from the study conducted by (Pore, 2012) which stated in one of his studies that he also cited factors for incomplete vaccination as maternal education, socioeconomic status of the family.

Knowledge score against perception score

The study revealed that level of respondent's knowledge is found to be statistically significant with the level of perception of nursing mothers and their children on routine immunization regimen and conclude that respondent level of perception has a positive influence on their knowledge towards immunization regimen which reflect on their level of compliances toward intake of immunization vaccine.

CONCLUSION

Furthermore, on a general scale, a high number of the respondents showed a good perception and knowledge towards adherence to routine immunization. Chi square analysis further revealed that mother's level of education is statistically significant with the level of perception of routine immunization regimen also, age of the mothers towards adherence to immunization regimen was also found to be significant with the level of knowledge of routine immunization regimen by the mothers

RECOMMENDATIONS

The researcher proposes that there is need to put in place strategies found in the study that would improve adherence to immunization schedule:

1. Text message reminders. The health institutions should put in place mechanisms of reminding the caregivers on the return date using text messages. This will solve the problem of forgetfulness by the care giver.
2. Flexible clinic hours will allow a good number of children to get immunized. Health care providers working in the immunization clinics should get a way of ensuring that all children who come to the clinic are immunized without compromising the cold chain.
3. Health care providers should create awareness of importance of keeping appointments by caregivers.
4. More emphasis should be laid on educating head of homes and religious groups on the importance of routine immunization in the lives of children and mothers

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