

A Survey on Attitude of Mothers towards Immunization of Their Children

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Abstract: - Immunization programme has had a major impact on the health status of the world population, by preventing many cases of infectious disease through immunization. Efficient vaccine storage and handling is a key component of immunization programme. It is a shared responsibility from the time the vaccine is manufactured until it is administered. Thousands of children were dying and some are disable as a result of some common diseases which are measles, polio, tetanus, whooping cough, tuberculosis etc, hence, there is need to sensitize the parents towards the immunization of their children. This study therefore designed to investigate the attitudes of mothers towards immunization of their children in the North Eastern region of Nigeria. Questionnaires and face to interview were carried out on women in some local government areas from states in the North East to elicit relevant information regarding their general attitudes to child's vaccination. The following factor shall be considered mother's locality, place of vaccination, mother's educational status, age at vaccination, spouse's educational status, mothers' religious believes, mothers' age group, child's age at birth among others. Results from analyses showed that mothers locality, place of vaccination, mothers educational status, age at vaccination, spouses educational status, mothers' religious believes as well as mothers' age group, child's age at birth are all positively associated with attitudes of mothers towards vaccination. Further results finally revealed that donation of gift items to mothers serves as positive inducement towards improving the attitudes of mothers towards immunization of their children. This research work is recommended for a public enlightenment that to educate Nigerian women cum populace on importance of immunization as this work will generate information concerning the relationships between the attitude of mothers and immunization of children.

Keywords: Immunisation, attitude of mother, factors

I. INTRODUCTION

Immunization is one of the most essential public health interventions and cost effective strategy to reduce childhood morbidity and mortality. It is estimated to prevent between 2 and 3 million deaths each year (WHO, 2012). Despite this fact, vaccine-preventable diseases remain the most common cause of childhood mortality with an estimated three million deaths each year (Olugbenga et al, 2017). Childhood immunization is the initiation of immunity through application of vaccine (WHO, 2008). It is considered important for improving child survival. This is because more than 10 million children in developing countries die every year because they do not access effective interventions such as

immunization that could fight common and preventable childhood illnesses (Lee, 2005).

Although, about three quarters of the world's child population is reached with the required vaccines, only half of the children in Sub-Saharan Africa get access to basic immunization (Lee, 2005). Further, in poorer remote areas of developing countries, only one in twenty children have access to vaccination. Immunization against vaccination preventable diseases (VPDs) through the expanded programme of Immunization (EPI) is one of the most economical public health interventions available that contributes extensively to achieving the Millennium Development Goal to reduce the mortality rate of children under five by two thirds between 1990 and 2015 (UNICEF, 2009).

Routine immunization coverage in Nigeria is one of the lowest national coverage rates in the world with 38% for January-December 2005 and 50% January- May 2006 (NPI, 2005; 2006). In recent time, scholars working on child health in Nigeria have started documenting various factors militating against child survival and ethnic differentials in under-5 mortalities in the country (Adedini, et al, 2014).

Moreover, the attitude of mothers towards immunization services is quietly positive and relies on the efficiency of the vaccine to protect against diseases, among responds who believe that it contains anti-fertility agents, decision making of vaccination of a child lies predominantly on the father and was rejected because of rumors, non-payment or charges and priority accorded to it. Because of the attitude of mothers towards vaccination, thousands of children were dying and some are disable as a result of the some common childhood diseases which are measles, polio, tetanus, whooping cough, tuberculosis e.t.c. These as a result brought about the introduction of immunization, programmed by united Nation children fund (UNICEF, 2009).

The main objective is by establishing immunization programmed that will function smoothing year as part of the solid primary health care system. UNICEF worth with government and partners including the world health organization, the World Bank, the vaccine industry civil society groups, the Gate foundation, Technical health institutes and Research to make full immunization for children health.

1.1 Vaccine Schedule

This schedule may vary depending up on where you live, your child's health, the type of vaccine and the vaccines available. Some of the vaccines may be given as part of combination vaccine so that your child gets fewer shots.

At Birth: First dose vaccine administered are Hepatitis B vaccine (HBV₀), Bacillus Calmette Guerin (BCG), Oral Polio Vaccine (OPV₀),

1-2 Months: Second dose vaccine given are Pneumococcal conjugate vaccine (PCV), HBV, Pentavalent

2 Months: Third dose administered are Diphtheria tetanus and pertussis Vaccine (DPT), OPV₂, Pentavalent₂, PCV₂

3 Months: Fourth dose administered are OPV₃, PCV₃, Pentavalent₃

4 Months: Fifth dose given are DPT, PCV

6 Months: Sixth dose administered are, Vitamin A, Measles,

9 Months: Seventh dose given are, Vitamin A₂, Measles₂

5 – 18 Months: Eighth dose given are HBV, IPV

1.2 Brief History of How the Immunization Introduced into the Country.

Immunization remains the primary strategy in both the control and prevention of common childhood diseases, particularly in the developing countries. The Expanded Programme on Immunization (EPI) was first launched in the country in the year 1978. However due to number of factors that militated against its success such as lack of qualified trained personnel, poor transportation and inadequate equipment. The programme failed to achieve its objectives (WHO, 2002).

The federal government was undoubted about the initial setback and reintroduced the programme again with the primary Health care plan (PHC) in August 1987 which President Ibrahim Babangida announced as the cornerstone entire national population.

Its main stated objectives included accelerated health care personnel development, improved collection and monitoring of health data, ensured availability of essential drugs in all areas of the country, improved nutrition throughout the country, promotion of health awareness and widespread promotion of vaccines for treatment of childhood diseases infant and children.

Implementation of this mainly through collaboration between the ministry of health and participating Local government councils which received direct grants from the federal government. The programme aimed also focused at ensuring that the children under age of 0-2 years were immunized against polio, tetanus, whooping cough, measles, tuberculosis, diphtheria etc. under these programme pregnant women were also immunized against the tetanus. This is done to ensure that the rate at which the children are contracting these diseases are reduced and consequently reduced the infant mortality rate (WHO, 2005).

The federal government being noted for her numerous medical problems; a campaign was carried out calculating the

nursing mothers on the essence of immunizing their children. Hope rate, due to the problem vaccine supply cold chain and vaccine delivery coverage was low, which impact minimal contribution of 10 percent to 20 percent compared to the population in need of it. The federal ministry of health and UNICEF, to correct identified deficiencies in the previous programme, a new vaccine distribution based on cold boxes and ice packs was developed after some months from 10 percent to 65 percent which is now functional in all 774 Local Government Area in the country as an entry points to primary health care (Babalola, 2009).

In 2005, in Bali Local Government Area of Taraba State, the primary health care was able to provide some gifts to women during vaccination and also advised them that children will not be admitted in nursery and primary school if is not fully vaccinated.

In the first year of the operation in Bali, immunization coverage increase from 35% to 65%. The attitude of mothers towards immunization of their children was set up to achieve some goals which are

1. To achieve 85% immunization coverage of the target population of children from 0-2 years and pregnant women.
2. To reduce by at least 60% of the incidence rate of the childhood diseases.

The State government produced E.P.I equipment through the United Nation International Children Fund (UNICEF) in collaboration with European Union and non-governmental Agency (NGA) while the Local Government provides offices, accommodation, transport, furniture and other materials (UNICEF, 2008).

Therefore, the epidemiological section of the state ministry of health, supply vaccines to the area selected for immunizing children against the diseases, such as federal medical centre (FMC), specialist hospital, primary health care, District unit (P.H.U) etc

Thousands of children were dying and some are disable as a result of some common diseases which are measles, polio, tetanus, whooping cough, tuberculosis etc, especially in the Northern part of Nigeria. Hence, there is need to sensitize the parents towards the immunization of their children. This study therefore focused on attitude of mothers towards vaccination of their children in the North Eastern part of Nigerian order to determine factors responsible for mothers' attitude towards immunization in the region.

II. METHODOLOGY

The study is designed to ascertain the relationship between some factors and attitude of mothers towards immunization. Data were gathered in this study through the use of questionnaire and face to face interview. Questions relating to the personal data, geographical and immunization data of each respondent as well as question relating to age, number of

children, sex of the child, immunization of children etc were investigated. The forms were made short with limited number of questions needed by the researchers. Data were collected via interview with the use of data sheets, Questionnaire method and records from Government hospital. The survey will cover all the states in the North Eastern part of Nigeria, which comprises; Taraba, Adamawa, Borno, Gombe, Bauchi and Yobe state. A selected number of married women in some selected local government area of the states were interviewed and the major hospitals in the states were visited.

III. DATA ANALYSIS

Data obtained via the survey were analyzed at the computing laboratory of department of Statistics, Federal Polytechnic Bali, with the use of symbolic algebraic program-R and SPSS software. This process is patterned to generate extensive attitude of mothers towards immunization in the North

Eastern of Nigeria. The Chi-square statistic is used to determine whether each of the factors is responsible for the positive/attitude of the mother towards immunization of their children in the region. The Chi-square values with their significant p-values in parenthesis are presented in the last columns of the table 1-6 for different state. The factor whose value is less than 5% level of significance are asterisk and indicates its significant impact on the immunisation

3.1 Data Analysis (Adamawa State)

The number of responses with percentage of their positive and negative response, which indicates whether a respondent ever vaccinated her children or not, are recorded and analysed across the variables of the factors at all states across the region. The Chi-square and its p-values in parenthesis are presented in table 1 below to show significant contributions of various factors to mother's attitude towards immunization

Table 1: Significant Contributions of Various Factors to Mother's Attitude towards Immunization (χ^2 and p - values)

State Factors	Adamawa	Borno	Bauchi	Taraba	Gombe	Yobe
Marital status	0.623 (0.960)	0.643 (0.75)	0.338 (0.652)	0.729 (0.140)	33.967 (0.000*)	0.75 (0.993)
Mother's age group	9.85 (0.43)	2.138 (0.544)	5.338 (0.002*)	0.010 (0.312)	3.175 (0.014*)	3.276 (0.774)
Spouse age group	3.560 (0.469)	1.462 (0.481)	7.049 (0.000*)	0.328 (0.421)	7.268 (0.007*)	2.635 (0.977)
Mother's educational status	4.176 (0.005*)	9.141 (0.027*)	11.475 (0.000*)	4.137 (0.001*)	12.366 (0.008*)	11.670 (0.007*)
Spouse educational status	3.623 (0.002*)	7.141 (0.027*)	21.544 (0.000*)	7.452 (0.047*)	13.284 (0.001*)	11.670 (0.007*)
Mother's religion	2.186 (0.011*)	3.132 (0.016*)	19.549 (0.000*)	11.43 (0.001*)	10.215 (0.003*)	8.196 (0.042*)
Spouse religion	3.186 (0.001*)	3.101 (0.012*)	40.24 (0.000*)	12.34 (0.001*)	10.331 (0.002*)	8.196 (0.042*)
Mother's occupational status	5.892 (0.000*)	2.643 (0.025*)	7.114 (0.001*)	2.138 (0.544)	5.342 (0.501)	6.185 (0.021*)
Spouse occupational status	4.538 (0.000*)	2.643 (0.025*)	6.985 (0.001*)	14.23 (0.002*)	5.185 (0.738)	3.120 (0.959)
Mothers' locality	2.578 (0.013*)	3.132 (0.026*)	10.335 (0.000*)	14.34 (0.002*)	11.432 (0.009*)	6.159 (0.040*)
Spouse locality	1.934 (0.048*)	4.281 (0.009*)	11.678 (0.000*)	8.237 (0.001*)	11.519 (0.008*)	30.016 (0.003*)
Number of children	3.121 (0.002*)	1.728 (0.786)	12.529 (0.404)	1.43 (0.239)	46.822 (0.000*)	59.570 (0.000*)
Frequency of vaccination	9.689 (0.000*)	3.250 (0.022*)	13.472 (0.006*)	12.861 (0.001*)	44.810 (0.000*)	50.800 (0.000*)
Number of Children That Are Alive	10.869 (0.000*)	2.873 (0.019*)	32.780 (0.001*)	19.091 (0.021*)	45.567 (0.000*)	52.381 (0.000*)
Number of Children Vaccinated	10.971 (0.000*)	1.834 (0.021*)	29.143 (0.004*)	12.861 (0.001*)	53.980 (0.000*)	52.693 (0.000*)
Age at vaccination	3.461 (0.002*)	3.121 (0.002*)	3.443 (0.001*)	7.45 (0.001*)	37.242 (0.000*)	51.573 (0.000*)
Presented last child	6.125 (0.000*)	1.125 (0.289)	21.415 (0.005*)	17.89 (0.000*)	42.265 (0.000*)	26.152 (0.036*)
Received full vaccine for all child	6.12 (0.000*)	4.28 (0.000*)	5.952 (0.114)	16.38 (0.001*)	5.185 (0.738)	42.327 (0.000*)
Full vaccine for last child	0.623 (0.732)	0.12 (0.981)	4.925 (1.177)	9.872 (0.003*)	4.105 (0.738)	6.12 (0.000*)
Sex of children	0.186	0.87	80.571	1.023	1.432	10.141

vaccinated	(0.911)	(0.760)	(0.000*)	(0.706)	(0.839)	(0.007*)
Frequency of vaccination	11.123 (0.000*)	3.250 (0.022*)	46.286 (0.000*)	12.86 1(0.001*)	1.519 (0.823)	12.861 (0.001*)
Place of vaccination	9.474 (0.009*)	4.132 (0.016*)	40.131 (0.000*)	10.083 (0.002*)	34.305 (0.000*)	12.861 (0.001*)
Distance from place of vaccination	2.353 (0.001*)	4.11 (0.016*)	30.884 (0.000*)	23.773 (0.000*)	24.165 (0.000*)	0.186 (0.911)
Opinion about immunization	1.740 (0.019*)	0.028 (0.867)	43.755 (0.000*)	5.721 (0.012*)	24.165 (0.000*)	22.302 (0.003*)
Someone discouraged you	3.186 (0.001*)	0.028 (0.867)	8.900 (0.711)	31.095 (0.000*)	7.890 (0.011*)	8.900 (0.711)
Report negative reaction	4.314 (0.034*)	6.328 (0.000*)	1.125 (0.289)	9.136 (0.002*)	9.136 (0.002*)	9.136 (0.002*)
Received gifts during vaccine	4.176 (0.005*)	11.848 (0.00*)	42.327 (0.000*)	9.872 (0.001*)	41.306 (0.000*)	42.327 (0.000*)

Remark: The p-value asterisk for a factor show the significant contribution of attitude of mother towards immunization of their children at 5% level of significant ($p < 0.05$)

IV. CONCLUSION

The basic objectives of this research is to determine the significance difference on the attitude of mothers towards immunization, to determine the significance impact of all factors with ever vaccinated, to determine the significance difference between donation of gift items to mothers with other factor and to help in educating the mothers on relevant of vaccination so as to eradicate the disease. Base on the whole analysis carried out, it revealed that there is significance difference between the attitude of mothers from one state to others. Also, there is significant relationship between mother's locality, mothers' religious, place of vaccination, mother's educational status, Age at vaccination, frequency of vaccination, spouse educational status as well as giving of gifts to mothers'. These mean that the factors mentioned above are the main effect that contributed to the attitude of mothers towards immunization which gives an indication that those factors should considered as early as possible in North Eastern region of Nigeria.

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APPENDIX

A SURVEY ON ATTITUDE OF MOTHERS TOWARDS IMMUNIZATION OF THEIR CHILDREN

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Dear Sir/Ma

A research is being carried out on attitude of mothers towards presenting their children for immunisation in North Eastern zone of Nigeria. Please check (✓) only the box that most correctly answers the question, making sure you make only one selection for each question except where otherwise indicated.

Note: This questionnaire is anonymous; please do not write your name on it. Kindly give an answer to all the questions as it pertains to you and please answer as truthfully as you can.

Section A: Demographic Questions

1. What is your Marital status?

- Single
- Married
- Widowed
- Divorced

2. What is your age?

- Less than 18 years
- 18 – 30 Years
- 31 – 50 Years
- 51 Years and above

3. What is your Spouse age?

- Less than 18 years
- 18 – 30 Years
- 31 – 50 Years
- 51 Years and above

4. What is your Education Status?

No Education

Primary

Secondary

Higher Education

Quranic/ Islamic Education

5. What is your Spouse Education Status?

No Education

Primary

Secondary

Higher Education

Quranic/ Islamic Education

6. What is your Religion?

Islam

Christianity

Others

7. What is your Spouse Religion?

Islam

Christianity

Others

8. What is your Occupation Status?

Civil Servant

Private Employee

Self Employed

No Employment

9. What is your Spouse Occupation Status?

- Civil Servant
- Private Employee
- Self Employed
- No Employment

10. What is your Locality?

- Rural
- Urban

11. What is your Spouse Locality?

- Rural
- Urban

12. How many children do you have?

- One
- Two
- Three
- Four
- More than Four

13. What is your first child age?

- Less than 1 year
- 1-2
- 3-4
- 5-6
- 7 years and above

14. What is your last child age?

- Less than 1 year

- 1-2
- 3-4
- 5-6
- 7 years and above

15. How many of the children are alive?

- 0
- 1
- 2
- 3
- 4 and above

16. How many of your children are vaccinated?

- 0
- 1
- 2
- 3
- 4 and above

17. What is the age of your children at vaccinations?

- Less than 1 year
- 1-2 years
- 3-4 years
- 5-6 years
- 7 years and above

18. Do you present your children for vaccination?

- Yes
- No

19. Do you present your last child for vaccination?

Yes

No

20. Do you receive full vaccine for all your children?

Yes

No

21. Do you receive full vaccine for your last child?

Yes

No

22. Which gender of your children do you receive vaccine for?

Both Boys and Girls

Boys only

Girls Only

23. How many times do you receive vaccines for your children ?

Once

2-3 times

3-4 times

5-6 times

More than 6 times

24. Where do you receive vaccines for your children?

Hospital

Home

Road

Market

25. What is the distance between place of the vaccination and your residence?

- Far
- Moderate
- Close

26. What is your opinion about immunizations?

- Vaccine is good for child
- Vaccine protects diseases/ reduces sickness
- Report negative reaction. Please specify
- It control birth

27. Does somebody discourage you from taking vaccines for your children?

- Yes
- No

28. Who discourage you from taking vaccines for your children?

- Husband
- Father
- Mother
- Friends
- Religion Leaders
- Others. Please Specify

29. Do you receive gift during vaccines?

- Yes
- No