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Assessment of Factors Influencing Uptake of National Programme on Immunization among People in Chanchaga L.G.A., Niger State, Nigeria

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Abstract

This study assessed the Factors influencing uptake of national immunization programme among people in Chanchaga L.G.A., Niger state. Immunization has brought sound health to many children in the world, reduced the agony experienced by parents during child rearing and reduced the mortality rate among children. The purpose of this study was to examine cultural belief, fear of parents, religion, level of service and uptake of national immunization programme among people in Chanchaga L.G.A., Niger state.

Descriptive research design of survey type was adopted for the study. The population comprised of all people in Chanchaga L.G.A., Niger state. A multistage sampling technique which consist of simple random sampling technique, purposive and convenience sampling technique was used to select 384 respondents for this study. Questionnaire was validated by three experts in the Department of Health Promotion and Environmental Health Education for data collection from the respondents. A reliability coefficient (r) of 0.76 was obtained through split half method using Spearman Brown for analyzing data generated. The inferential statistics of Chi-square was used to analyze the data collected for the postulated null hypothesis at 0.05 alpha level.

The findings revealed that:

1. Cultural belief of people is a significant factor influencing the uptake of National Immunization Programme among people of Chanchaga Local Government Area, Niger State because the calculated value 271.20 is greater than the table value 21.3

2. Fear of parents about immunization is a significant factor influencing the uptake of National Immunization Programme among people of Chanchaga Local Government Area, Niger State because the calculated value 175.76 is greater than the table value 21.3

3. level of coverage of service of people will significantly be a factor influencing the uptake of National Immunization Programme among people of Chanchaga Local Government Area, Niger State because the calculated chi-square value 247.09 is greater than critical table value of 21.03 (Cal $\chi 2$ val > Tab $\chi 2$ val)

The study concluded that cultural belief, fear of parents, religious belief and level of service are factors influencing the uptake of National Immunization Programme among people of Chanchaga Local Government Area, Niger State. It was therefore recommended among others that there should be

sensitization programme by health workers to community leaders and indigenes in villages in order to publicize the benefits of immunization, parents should be well informed by health workers or through media before the start of immunization programmes to reduce the fear about immunization among others.

Keywords: *Assessment, Factors, Uptake, National, Programme, Immunization*

Introduction

Immunization is an effective public health intervention to reduce morbidity and mortality among infants. It is an important means of controlling diseases, and has been considered the most cost-effective health intervention programme[1]. Immunization has brought sound health to many children in the world, reduced the agony experienced by parents during child rearing and reduced the mortality rate among children[2]. The use of immunization services however requires acceptability from the target community. This means that for immunization services to be generally accepted, there must be a clear understanding of the benefits of vaccination among community members, a readiness for providing vaccination by the health services, and intervention to overcome barriers to immunization services[3].

The Increasing uptake of immunization and coverage for childhood diseases has become an important developmental issue and an area that requires more research[4]. Based on World Health Organisation/ United Nations Children's Emergency Fund (2008) report, there have been considerable increase in the global immunization coverage. The report shows that an infant under age 0-1year immunized with DPT increased from 20% in 1980 to 79% in 2006[5]. It was further revealed that percentage of children immunized with three doses of polio vaccine in 2006 rose from 22% in 1980 to 80%. Global coverage for measles increased from 16% in 1980 to 80% in 2006. However, these increasing coverage are still falling short of the 2010 target of 90% set by WHO/UNICEF Global Immunization Vision and Strategy. It has been argued that further increases in coverage of DPT, Polio and Measles would save millions of infant lives. The current immunization coverage in Africa is 70%, the acceptable minimum coverage of 80% is yet to be reached.

The Inadequacies in immunization coverage are due to a variety of variables, including health workers' degree of sensitization and political leaders' unwillingness to mobilize and support immunization services[6]. Other factors that influence the coverage of immunization programmes are low parent acceptability in terms of expected benefits, social mobilization of various elements of society for a common developmental goal, insufficient community participation due to lack of awareness, distance from the health facility, place of delivery, migration of families, mothers knowledge and attitudes towards immunization, weather conditions and low literacy levels of the parents[7]. Social mobilization of various elements of society for a common developmental goal can overcome long odds and reach goals hitherto thought unattainable in a limited time-frame. The emphasis on attaining universal coverage of immunization programmes had helped to induce improved programme management and there was a noticeable increase in equitable access[8]. However, sustained immunization coverage especially at the peripheral levels - can be challenging as it significantly increases the costs, and requires improvements in staffing, financing and guidelines, as well as in the ability to procure a constant vaccine supply[9].

One possible explanation for the failure to improve access to the immunization system may be related to the socio-cultural acceptability of some of the new vaccines[10]. For example HPV vaccines – may be associated with Sexually Transmitted Infections [STIs] and therefore can encourage stigmatization. It has been found that the introduction of HPV led to media messages that adversely affected HBV uptake. Similarly, messages need to be more pertinent to the situations of migrant and ethnic minorities[11]. Opposition from socially conservative groups and ethical considerations have been found to negatively affect the social acceptability of new vaccines, indeed, it has been found that an increase in uptake sometimes required changes in the types of messages provided [12].

If the training programmes are not accompanied by necessary adjustments to the human resource frameworks and career paths, or to adequate remuneration arrangements[13].In some instances especially where the levels of financial involvement and commitment by the national governments have been very limited, it may not be possible to sustain the necessary level of effort - with negative outcomes for the longer term sustainability of the immunization programme. A study on health infrastructure and immunization coverage of 43,416 children aged 2-35 months residing in rural India was conducted[15]. The researchers found out that the availability of health infrastructure significantly improved immunization coverage for non-Polio vaccines. The study further revealed that larger and better equipped facilities such as hospitals and health centres had bigger effects on immunization coverage including the nature of health infrastructure i.e. hospitals and health centres play an important role in increasing immunization coverage.

Parental or caregiver's factor such as knowledge is another factor which influence the immunization status of the child. These include knowledge and attitude toward vaccination and vaccine preventable disease. Study done in Nigeria on determinants of immunization status children in rural areas showed that mothers with high knowledge level score have fully immunize their children. Also more than half of mothers can correctly call the symptoms of vaccine preventable disease. And 99% of the mothers felt immunization is good for the child [15]. Health facility is another factor which contributed to full immunization of the child. Different studies showed the importance of availability and accessibility of health facility in immunization coverage. Families nearer to the health facility are more likely to complete the immunization than those far from it. In a cross sectional study done in India, Assam district showed that immunization status of the children was significantly higher where the distance of the health centre was less than 2km compared with those residing in remote inaccessible areas with a distance of more than 5km to the health centre[16].

Maternal characteristics is one all known determinants of uptake National Programme immunization. A comparative study done among slum and non-slum dwellers in Bangladesh shows that children age below 2 years in three zone of Dhaka demonstrated that complete immunization coverage is associated with educational status of the mother, income and living conditions. The study revealed that mothers with lowest education, households with limited monthly income and people living in slum area were less likely to complete a child immunization[17]. The report of the study also indicated that children whose mothers were born in a rural area or an urban slum, and those whose mothers were aged less than 30 years are 0.35 and 0.43 times less likely to be fully immunized respectively[17]. The study outcome revealed that poor uptake of immunization in urban areas was associated with lack of mother's awareness about repeat visits to achieve complete immunization rather than overall vaccine awareness. Furthermore, anti-vaccine rumours such as pathogenicity of a

vaccine and propaganda of vaccines weakening their children which were encountered in the community, affected immunization coverage. Negative perception about vaccination and antivaccinerumours in some communities were found to affect the level of immunization coverage. Mis-information about the side effects of vaccine during illness and false contraindications also contributed to the level of immunization coverage.

The report of 2007 found out that immunization coverage was 95% for BCG, 82% for DPT, 81% for Polio and 77% for Measles. The study revealed that immunization coverage was due to knowledge of immunization, attitudinal beliefs and social influence of the mothers and fathers. The mothers and fathers believed that routine immunization were well conceived and meant to eradicate childhood diseases. In terms of social influence, the study revealed that while it was the woman who decides the issue of routine immunization, the man was regarded as the one who makes the very important decision not to immunize in exceptional situation when immunization strengthen endication of diseases[18].

A study that was meant to assess the immunization coverage of BCG, DPT, OPV and Measles, and factors affecting the coverage in 693 children aged 24 to 47 Months in two urban villages of East Delhi was carried out[19]. The authors revealed that immunization coverage was: 82.7% for BCG, 81.5% for DPT1/OPV1, 76.8% for DPT2/OPV2, 70.7% for DPT3/OPV3 and 65.3% for Measles vaccine. The coverage levels were associated with education of mothers and fathers, father's occupation, residential status and place of delivery. A survey to describe the immunization coverage in a rural part of North India was undertaken[20]. The study sampled 747 children and the results revealed that 94.8 % eligible children were immunized and had received the required doses of the primary schedule vaccines. The coverage was (BCG (94.8%), OPV/DPT (91.6%), and Measles (72.6%). Only 39 (5.2%) of the eligible children had not completed immunization schedule for BCG, DPT, Polio and Measles due to temporary or permanent migration of the children or family to the village or went back to the parents' home or divorce or the child was adopted by relative.

Scientists conducted a study to explore factors influencing urban and rural immunization coverage in 220 households with children 12-13 months of age in Ethiopia. The authors revealed that higher community awareness was associated with effective community mobilization for immunization. The study also found out that immunization service for DPT, Polio and Measles in these areas were 97.3% for DPT1/OPV1, 92.7% for DPT3/OPV3 and 75.5% respectively and the reason for this high coverage was that mothers were literate[21].

Statement of the Problem

It is a known fact that prevention is better and cheaper than cure. The pattern of illness and diseases outbreak have made initiation of preventive and control measures inevitable in Chanchaga Local Government Area, Niger State. The researchers observed that despite government efforts towards achieving hundred percent coverage rate, the acceptance rate is too low in the Local Government Area of the state. There are many reasons responsible for the poor uptake of National Programme on immunization in Chanchaga Local Government Area, Niger State. The researchers observed that one of the factors responsible for poor uptake of the programme is strict adherence to cultural norms and values of the community. The people of Chanchaga Local Government Area have the erroneous belief that God is the utmost healer and has given them natural healing herbs and concortions. This binding force has always reflect on their decision on issues relating to intervention programmes such as immunization programme, distribution of free

preventive drugs, free medical services and so on.

The researchers also observed from the field experiences that majority of immunization defaulters mostly nursing mothers among people of chanchage Local Government Area, Niger State have the fear that the vaccine given to them and the children often affect their physiological and psychological wellbeing. The parents fear that the vaccine are sterile induce drugs aim at weakening the reproductive health efficiency of the people. This fear by the parents, the researchers noted as one of the reasons for low services coverage.

The quality of immunization services rendered in some of the designated health centres are inadequate and low when compared with the target population. The poor service provision by the health workers account for high rate of immunization defaulter and non-acceptance of National Immunization Programme. In line with the observations above, this study was carried out to assess factors influencing uptake of National Programme on Immunization among people of Chanchaga Local Government Area, Niger State.

Research Questions

The following research questions were answered in this study:

1. Will cultural belief of people influence the uptake of national programme on immunization among people of Chanchaga Local Government Area, Niger State, Nigeria
2. Will Fear of parents about immunization influence the uptake of national programme on immunization among people of Chanchaga Local Government Area, Niger State, Nigeria
3. Will Quality of services rendered influence the uptake of national programme on immunization among people of Chanchaga Local Government Area, Niger State, Nigeria

Research Hypotheses

The following research hypotheses were tested in the study:

Ø Cultural belief of people will not significantly influence uptake of national programme on immunization among people of Chanchaga Local Government Area, Niger State, Nigeria.

Ø Fear of parents about immunization will not significantly influence uptake of national programme on immunization among people of Chanchaga Local Government Area, Niger State, Nigeria.

Ø Quality of services rendered will not significantly influence uptake of national programme on immunization among people of Chanchaga LGA, Niger State, Nigeria.

Methodology

A descriptive research design of survey type was adopted for this study. The population for the study comprises of all residents of the L.G.A totally Three Hundred and thirty two thousands, six hundred and six (332,606) according to the National Programme on Immunization (NPI Office) in Chanchaga local government area. A multistage sampling technique that comprises simple random sampling technique, purposive and convenience sampling technique was used to select sample of 384 respondents used for the study.The instrument used for data collection was researchers structured questionnaire adequately validated by three experts in the department of Health Promotion and Environmental Health Education, and department of Epidemiology and community Health in University of Ilorin, Nigeria. The suggestions of the jurors were incorporated to the final draft of the instrument used for the study. The reliability of the instrument was carried out using split-half method of reliability in which a reliability correlation coefficient of 0.76 were obtained, making the instruments

reliable enough for the study. The data generated for test of hypotheses formulated were analyzed using inferential statistics of Chi-square (x^2) at 0.05alpha level. The result of the analysis were presented below.

Results/Discussion of Findings

Hypothesis 1: Cultural belief of people will not significantly be a factor influencing the uptake of National Immunization Programme among people of Chanchaga Local Government Area, Niger State. The hypothesis which was tested at 12 degree of freedom of 0.05 alpha level of significance was rejected because the calculated value (271.20) is greater than the table value (21.3). The result revealed that cultural belief of people will not significantly be a factor influencing the uptake of National Immunization Programme among people of Chanchaga Local Government Area, Niger State. Cultural beliefs in herbs, witches as causes of diseases, anger of ancestors, preaching of priests and traditional birth attendants against immunization were found to be common influencing the uptake of National Immunization Programme among people of Chanchaga Local Government Area, Niger State. This in line with findings of [22], who found out that misconceptions regarding the aetiology of disease apply to most Nigerian cultures and societies. Belief in the efficacy of native medicine and patronage of traditional health care providers is common among Nigerians.[23] It was observed that what the Yorubas of Western Nigeria perceive about the aetiology of most childhood diseases constitute a great hindrance to national immunization programme and other intervention by the government of Nigeria [24].

Hypothesis 2: Fear of parents about immunization will not significantly be a factor influencing the uptake of National Immunization Programme among people of Chanchaga Local Government Area, Niger State. The hypothesis which was tested at 12 degree of freedom of 0.05 alpha level of significance was rejected because the calculated value (175.76) is greater than the table value (21.3). The result revealed that fear of parents about immunization will not significantly be a factor influencing the uptake of National Immunization Programme among people of Chanchaga Local Government Area, Niger State. Parents who disallowed their children from being immunized, negative perception of parents and guardians towards immunization, inadequate knowledge of parents were mostly found factors influencing the uptake of National Immunization Programme among people of Chanchaga Local Government Area, Niger State. This in line with findings of [25], who found out that parents play a vital role in the uptake of immunization by children under their care. It is often necessary to take children to the health facility for vaccination since they cannot do so by themselves. Their perception of immunization is therefore an important determinant of whether or not they will avail their children of immunization services. The findings in a study are similar to that of a study in New Zealand, where a survey of healthcare providers showed that 53% of them believed that parental fear was the greatest barrier to uptake of immunization programme.

Hypothesis 3: Level of coverage of service will not significantly be a factor influencing the uptake of National Programme on Immunization among people of Chanchaga Local Government Area, Niger State. The hypothesis which was tested at 12 degree of freedom of 0.05 alpha level of significance was rejected because the calculated value (154.47) is greater than the table value (21.3). The result revealed that level of coverage of service of people will significantly be a factor influencing the uptake of National Immunization Programme among people of Chanchaga Local Government Area, Niger State. Inaccessible road to health centres, inadequate awareness, low standard of health centres were found to be factors influencing the uptake of National Immunization Programme among people of Chanchaga Local Government Area,

Niger State.This in line with findings that ascertained that strengthening surveillance systems as part of improvement of immunization programs is therefore of vital importance. The author further explained that achieving high levels of coverage is, by itself, not a sufficient indication of the effectiveness of a health care system, as deficiencies in other areas could be widespread. However, *lack* of progress in moving towards high levels of coverage is a strong indication of failure to provide essential services to protect the health of the most vulnerable segment of a population. For diphtheria, pertussis, tetanus (DPT), a minimal coverage goal of 80 percent (three doses) as at 2005 has been proposed by the Global Alliance for Vaccines and Immunization (GAVI), to be achieved in all districts in all countries across the world[26]

Recommendations

Based on the findings, the following recommendaions were made:

1. There should be sensitization programme by health workers to community leaders and indigenes in villages in order to publicize the benefits of immunization

2. Parents should be well informed by health workers or through media before the start of immunization programmes to reduce the fear about immunization.

3. There should be government intervention in the provision of adequate social amenities in order to promote the coverage of immunization programme.

Ethical Clearance- Taken from Faculty of Education Ethical Review Committee, University of Ilorin.

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Conflict of Interest- Nil

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