



Challenges Of Eradication Poliomyelitis In Borno State, Nigeria

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Abstract

Fighting poliomyelitis in a challenging environment has to overcome many hurdles. The study centered on fighting poliomyelitis in a challenging environment. Both qualitative and quantitative research were used, the research design used in this study was descriptive survey. Data was collected using a semi-structured questionnaire. The target population was 148 respondents. The sample size for the study comprises of 145. Based on the findings and analysis, it could be concluded that, It may be difficult for polio to be eradicated in Borno state, nigeria, due to persistent insurgency in the local government areas and the impact on health, infrastructure and socioeconomic situation of the populace. Urgent attention is required. The government should intensify efforts in curbing the spate of attacks and insecurities and complete restoration of peace and tranquility to the affected communities and states.

Keywords: Insecurity, Poliomyelitis, Challenged Environment.

Introduction

Since its identification of poliomyelitis in 1909, it was classified as a Member of the Picornaviridae family and belonging to Enterovirus group C, the Poliovirus (PV) has been the Subject of extensive research to better understand its Life Cycle, restrict its Spread, and treat poliomyelitis, a crippling Condition it produces. The word poliomyelitis Originates from the Greek word " Polio" meaning "gray" and "Myelon" meaning "Marrow" representing the most fear concern.

Picornaviruses are the Causative agents of variety of significant human and animal illnesses, including poliomyelitis, hepatitis A, Foot-and-Mouth disease, and others. PV is undoubtedly the best-known enterovirus and one the most studied viruses. PV is a human Pathogen that may spread in cultured, non-neural human Cells. It not only ended in the creation of Polio Vaccinations but also significantly aided in the emergence of Molecular Virology as a distinct field of study. It was the first animal RNA Virus whose entire genome sequence was identified and for which a reverse genetic technique was developed (Racaniello & Baltimore, 1981).

Polioviruses Cause an acute enteric infection that can clinically manifest as Acute Flaccid Paralysis (AFP) and possibly death. In 1988, the world Health Assembly (WHA) Formally endorsed efforts to eradicate polio through the Global Polio Eradication Initiative (GPEI). Cases of Paralytic Polio have decline enormously, from Some 350000 Cases in 1988 to only 37 Cases in 2016 (Global Polio Eradication Initiative (2016).

The discovery of the wild poliovirus in July 2016 in the state of Borno after more than two years without reporting, shocked the Eradication endeavours in Nigeria.



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The biggest challenge faced by Local Government Areas (LGAs) teams, was reaching missed children in Security challenged Areas in Borno, mainly because their locations (Geo-Coordinates) were Unknown. The lack of district ward Boundaries exacerbated this issues, as these LGAs teams were unclear on their areas of Coverage's and responsibility. For the farther and hard-to-reach settlements with in this these LGAs it was Logistically impossible to main Vaccine, due to Unavailability of refrigeration Units or ice Packs.

The Five (LGAs) liasons officers were trained & monitored. So as to better able to ensure the accountability of Vaccination teams. Applications on these phones created in this regard, to help them track mobile accountability of Vaccinations, Vaccination teams and how to locate hard to reach settlements leading to greater immunization Coverage for Borno state. The E-Health Africa Consultants are involve at every stage of the Life-Cycle of Campaign supporting with the above & feedbacks using Maps, which allows the Primary Health Care Liason officers to make data driven and informed decisions about the future to the International Donors and Partners Like WHO, CDC, Solina Health.

Borno state's Polio eradication programme has come Under International Scrutiny due to its position as active conflict and insecurity. Caused by Armed opposition Groups (AOGs) which has resulted in the persistent failure of effective Immunization Campaigns to reach all areas of the state and also cause a great risk impediment to the global eradication efforts.

Nigeria has faced numerous challenges, in its fight against poliomyelitis. Challenges bedeviled by insecurity, extremism, hindered access to remote areas, and most importantly the numerous misconceptions of the general public regarding the Polio Vaccine are just some of the reasons why Bomo State, has failed to eradicate polio. Certain Vaccination Myths have been quite Common in Nigeria.

Method

The respondents Comprised of individuals working with the government of Nigeria at national, state, and local Levels, Multilateral agencies, (World Health Organisation, Bill and Melinda Gates foundation (BMGF), E - Health Africa, Solina Health, US Centre for Disease Control (CDC) and Unicef), were Involve in polio eradication activities for at least 12 months Continuously between 2019 - 2023 in Borno, and the Use of Innovative tools and strategies, especially in a challenging environments.

Three (3) Intervention Models to suit the Local Context and improve Workers Safety

1. IPDS ,2. RES, and 3. RICs,

these are used as Health Emergency Response Tools (HERT) preparedness Supported by all partners & donors, and Implemented by e-Health Africa, to Collect settlement Data, tracking of house to house Data, Vaccine Carrier Device Called Indigo to refrigerate vaccines no matter the farther Distance, Creation of Maps for Setting Boundaries between LGAs & Feed Back Analysis Map illustration Report, Develop a software to Daily settlement visitation Status run by e-Health Africa Consultants.

Partners, and Primary Health Cares and Security Agencies are also to work in these models. A standard Questionnaire was administered to individuals Within respective agencies to better

understand the security challenges faced in polio eradication and identify lessons learned in these far north local government areas.

Survey data were analyzed to ascertain each LG's Largest challenges in polio eradication. Named change agents at national and field Levels who responded to the survey, indicated that they played a role in working to resolve these challenges, and agreed to participate in follow-up activities were identified by each LG's study team and selected to participate in Key Informant, Interviews. Semi-structured Interviews were conducted by trained qualitative Re- searchers the LGs teams.

Table 1:Fighting Poliomyelitis in Challenging Environment

Statements	SA		A		UD		DA		SD		Total	
	F	%	F	%	F	%	F	%	F	%	F	%
Insecurity and terrorism have been a persistent barrier to polio eradication efforts.	27	19	114	79	1	0.7	1	0.7	2	1.4	145	100
Attacks on healthcare workers have cultivated fear among healthcare workers	12	98.3	121	83.4	3	2.1	4	2.8	5	3.4	145	100
The targeted killing of a healthcare worker in Northern Borno led to healthcare workers avoiding those areas	30	20.7	110	76	1	0.7	3	2.1	1	0.7	145	100
Healthcare workers frequently experienced verbal abuse when delivering polio vaccinations	8	6	132	91	0	0.0	4	2	1	0.7	145	100
Working insecurity challenged environment had a negative impact on worker motivation.	13	9	126	87	1	0.7	3	2.1	2	1.4	145	100
Challenge for poliomyelitis vaccination as displaced populations moved into crowded as results of Insecurity.	64	44.1	77	53.1	0	0.0	3	2.1	1	0.7	145	100
Vaccination campaigns exposed to any amount of	25	17.2	118	81.4	1	0.7	1	0.7	0	0.0	145	100

insecurity had significantly lower rates of vaccination.												
reduction in vaccination rates in high-insecurity areas compared with secure campaigns	28	19.3	115	79.3	0	0.0	1	0.7	1	0.7	145	100
Insecurity and terrorism have been a persistent barrier to polio eradication efforts.	19	13	124	86	0	0.0	0	0.0	2	1	145	100
Attacks on healthcare workers have cultivated fear among healthcare workers	24	17	117	80.7	2	1	1	0.7	1	0.7	145	100

Source: Analysis of Survey data 2023, using SPSS Version 20.0

Table 1: of the analysis which sought to find out the challenges of fighting poliomyelitis in a challenging environment. Five questions were raised and analyzed, from which the first question shows that 27(19%) of the total respondents strongly agreed that Insecurity and terrorism have been a persistent barrier to polio eradication efforts. 114(79%) agreed to that assertion, 1(0.7%) of the respondent fail to decide, while only 1(0.7%) and 2(1.4%) strongly disagreed and disagreed to that statement, which implies that 79.% of the total respondents is in agreement with the statement because majority of the respondents Insecurity and terrorism have been a persistent barrier to polio eradication efforts.

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The second question of the analysis revealed that 12(8.3%) of the respondents strongly agreed that Attacks on healthcare workers have cultivated fear among healthcare workers, 121(83.4%) agreed to that statement, 3(2.1%) of the respondents fail to decide, while 4(2.8%) and 5(3.4%) strongly disagreed and disagreed to that, which implies that 83.4% of the total respondents belief that Attacks on healthcare workers have cultivated fear among healthcare workers.

The third question also shows that 30(20.7%) and 110(76%) of the total respondents strongly agreed and agreed that The targeted killing of a healthcare worker in Northern Borno led to healthcare workers avoiding those areas, 1(0.7%) of the respondent fail to decide on this statement, while only 3(2.1%) and 1(0.7%) of the respondents strongly disagreed and disagreed, with this



statement. The result of this analysis revealed that 76% of the total respondents believe that the targeted killing of a healthcare worker in Northern Borno led to healthcare workers avoiding those areas.

The fourth question shows that only 6(6%) strongly agreed, 132(91%) agreed that healthcare workers frequently experienced verbal abuse when delivering polio vaccinations, while only 4(2%) and 1(0.7%) strongly disagreed and disagreed to these statements. The result of this analysis shows that 91% of the total respondents' belief that healthcare workers frequently experienced verbal abuse when delivering polio vaccinations.

While question five of the analysis table shows that 13(9%) of the total respondents strongly agreed that working insecurity challenged environment had a negative impact on worker motivation., 126(87%) of the respondents agreed to this assertion, 1(0.7%) of the respondent fail to decide on this statement, while only 3(2.1%) of the respondents strongly disagreed and 2(1.4%) of the total respondents disagreed to that assertion which means that only few of the respondents are with the opinion Working insecurity challenged environment had a negative impact on worker motivation, 87% of the total respondents believe that There is persistent failure of effective Immunization Campaigns because of Insurgency.

64(44.1%) of the total respondents strongly agreed that Challenge for poliomyelitis vaccination as displaced populations moved into crowded as results of Insecurity., 77(53.1%) agreed to that assertion, 3(2.1%) of the respondents fails to agree, while only 1(0.7%) of the respondents strongly disagreed, which implies that Challenge for poliomyelitis vaccination as displaced populations moved into crowded as results of Insecurity. The second question shows that 25(17.2%) of the respondents strongly agreed that Vaccination campaigns exposed to any amount of insecurity had significantly lower rates of vaccination.. 118(81.4%) agreed that Vaccination campaigns exposed to any amount of insecurity had significantly lower rates of vaccination. 1(0.7%) of the respondents fail to decide, while only 1(0.7%) of the respondent disagreed to these statements.

The third question also shows that 28(19.3% and 115(79.3%) of the total respondents strongly agreed and agreed that reduction in vaccination rates in high-insecurity areas compared with secure campaigns, while 1(0.7%) of the total respondents disagreed and 1(0.7%) of the respondent strongly disagreed to these statements. The analysis shows that 79.3% of the respondents are of the opinion that, reduction in vaccination rates in high-insecurity areas compared with secure campaigns.

The fourth question of the analysis table shows that 19(13%) of the total respondents strongly agreed and 124(86%) of the respondents agreed that Insecurity and terrorism have been a persistent barrier to polio eradication efforts., while 2(1.4%) of the respondents strongly disagreed to these assertions. the analysis indicates that 86% of the respondents believe that Insecurity and terrorism have been a persistent barrier to polio eradication efforts..

Lastly, fifth question of the analysis reveals that 24(17%) of the respondents strongly agreed that Attacks on healthcare workers have cultivated fear among healthcare workers. 117(80.7%) of the respondents agreed to these statements, 2(1%) of the respondents fail to decide, while 1(0.7%) of the respondents strongly disagreed and 1(0.7%) of the respondents disagreed to these statements.

This analysis shows that 81% of the respondent’s belief that Attacks on healthcare workers have cultivated fear among healthcare workers.

4.2 Testing of Hypotheses

To achieve the objective of the study, there (1) hypothesis were formulated to address the research problem. Therefore, data from table 1 calculated hypothesis. The study used simple regression as a tool of analysis of alpha 5% level of significant.

Ho1: There is no significance relationship between Fighting Poliomyelitis and Insurgency in Borno State Nigeria.

Table 4.17 Model Summary

Model	R	R. square	Adjusted R. square	Std. Error of the estimate	Durbin Watson
1	.794 ^a	.768 ^a	.696	.778	1.2187

Source: SPSS Version 20.0

a. Predictors (constant), Fighting Poliomyelitis

b. Dependent variable: Insecurity

Table 2. show a strong correlation between Fighting Poliomyelitis and Insecurity, with an R. value of 0.794 which is 79.4%, the R-square value of 0.768 which shows that 76% of the variability in Fighting Poliomyelitis are explain by insecurity. It indicates that there is positive correlation between Fighting Poliomyelitis and Insecurity.

Therefore, R-value had a value of 0.794 (79.4%) and adjusted R-square s 0.696 (approximately 5% percent of the dependent variable was explained by the independent variables).

Table 4.18 Regression Coefficient^a

Model	Unstandardized coefficient		Standardized coefficient	T	Sig.
	B	Std. error	Beta		
Constant	19.989	1.001		19.946	.000
Fighting Poliomyelitis	.376	.221	.089	1.593	.000

Source: SPSS, Version 20.0

Table 4.18 shows that standardized beta weight of the R² between recognition and employee job satisfaction with a p-value < 0.05 which implying that insecurity has significant effect on Fighting Poliomyelitis in the study area. Therefore, the null hypothesis which state that insecurity has not significantly affected Fighting Poliomyelitis is accepted.

Decision: Since the R-square value of (0.768) which represent 76.8% by which the variables explained the model fits of the data. However, T-value of the coefficient of multiple regression is 1.593. therefore, the Beta value which is 89% of the coefficient in response to P-value of regression coefficient are also significant at level of (0.000) which is less than alpha value of (0.05) that is P < 0.000 P < 0.05. This concludes that null hypothesis is rejected and the result shows that there is significant relationship between insecurity and Fighting Poliomyelitis, Borno State, Nigeria.

Conclusion and Recommendations



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In spite of efforts by the WHO and the government on polio eradication in LGA in Borno State, Nigeria insurgency remain a major barrier. It may be difficult for polio to be eradicated in Borno State, Nigeria due to persistent insurgency in the LGA and the impact on health, infrastructure and socioeconomic situation of the populace. Urgent attention is required. The government should intensify efforts in curbing the spate of attacks and insecurities and complete restoration of peace and tranquility to the affected communities and state. It is only when there is security of lives and properties together with freedom of movement that success can be recorded on surveillance, tracking of children vaccination status and immunization schedule on poliomyelitis disease. Therefore, access constraints related to insecurity must be effectively tackled for global effort on total poliomyelitis eradication in LGA in Borno State, Nigeria to be an achievement.

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