

EFFECT OF COMMUNITY ENGAGEMENT STRATEGIES ON MENINGITIS CONTROL IN NIGERIA

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ABSTRACT

This study examines the effect of community engagement strategies on meningitis control in Nigeria. The study specifically assesses the effect of policymakers' involvement of traditional rulers on accountability of meningitis control programmes, and also it ascertains the effect of policymakers' collaboration with Community-Based Organizations (CBOs) on the sustainability of meningitis control programmes in Nigeria. The study utilized a survey design to gather relevant data from relevant stakeholders and community members from north-western states of Nigeria. Questionnaire designed on five point Likert scale was used to gather data from the sampled respondents. Findings show that there is a positive relationship between involvements of traditional rulers and accountability of meningitis control in Nigeria. It further reveals that collaboration with CBOs cannot sustain meningitis campaign in Nigeria since the result indicates a negative relationship between collaboration with CBOs and sustainability of meningitis control programmes. Based on the findings, it was recommended amongst others that community engagement initiatives in Nigeria should be a two-way process, where suggestions and views of the community members should be considered and included in the campaign. It is also advised that traditional rulers and religious leaders should be fully involved and consulted in the campaign planning process and implementation for managing meningitis issues.

Keywords: Community Engagement, Meningitis Control, Health Management, Sustainability.

INTRODUCTION

The community engagement strategy, a subset of Corporate Social Responsibility (CSR) is used to engage people to become actively and genuinely involved in making decisions about factors affecting their lives. Usually, it is instrumentally undertaken following a normative position that sees engagement as simply the right thing to do or from a substantive position aiming to bring about wider benefits beyond a particular project (Bowen et al., 2010; Wilcox et al., 2007). In research on community engagement strategies, the underlying presumption has often been that wider public participation in decision-making processes where input from community and stakeholders usually gathered through a range of various strategies will lead to improving plans, policies, and more socially acceptable and hence sustainable outcomes. Incorporating the views of members of the public into planning decisions is therefore, seen to give greater legitimacy to those decisions (Buchy & Hoverman, 2000; Fraser, 2009). The exercise is about ensuring that those most impacted by social and health challenges have a say in designing and implementing solutions (Schmitz, 2017; Agrawal & Gibson, 1999; Buchy & Hoverman, 2000).

The essence of community engagement, therefore, is to keep the community informed and involves in health promotion through effective strategic community engagement approach such as information; involvement; collaboration; consultation and empowerment. These strategies provide a framework that guides the continuing improvement of community engagement practice (Attree et al., 2010). Thus, community engagement remains a useful Public Relations tool in many countries around the world. Full implementations and successful outcome of the concept is evident in various health promotions such as cancer, smoking cessation, measles, heart disease, obesity, polio HIV/AIDs, Meningitis, and other health concerns (Ahmed & Palermo, 2010; Minkler & Wallerstein, 2008). Meningitis is one of the devastating and recurrent diseases responsible for the loss of life since Gaspard Vieusseux first discovered it in Geneva 1805.

Vieusseux in Geneva 1805 first discovered meningitis, since; communities and cities around the world have been experiencing various degrees of outbreaks (Greenwood, 2006). Meningococcal disease, known as meningitis, is a contagious bacterial disease mainly caused by the *Neisseria meningitidis*. It is the only form of bacterial meningitis to cause epidemics, is potentially fatal (Mado et al., 2013). Among the patients, ten to five percent die, and those who survive suffer from the varying degrees of neurological dysfunctions such as deafness and mental disorder. The rapid spread of such disease has a catastrophic socio-economic impact on many families and the communities at large (Biya et al., 2010). The meningitis outbreak is usually spread rapidly and may last for several months. Major outbreaks around the world were noted throughout World War I and World War II (Greenwood, 2006). Since then, the disease increased in America and Asia. A significant increase was reported in Portugal, Spain, Italy, and Yugoslavia in 1970-1971 as well as Belgium in 1971-1972 and Argentina in 1974. In the United Kingdom, the outbreaks of meningitis were reported in 1974 to 1975 and France in 1973 to 1978 respectively.

In Nigeria, the *Neisseria meningitidis* is the leading cause of epidemic cerebrospinal meningitis in the country and responsible for many loss of life since it was first discovered in 1905 at Zungeru area of Niger state (Mado et al., 2013). The disease remained prevalent despite the availability of safe and cost-effective vaccines in the country (Biya et al., 2010). Based on that and coupled with other prevalent outbreaks in the country Nigeria was among the Africa meningitis belt (Greenwood, 2006). However, it was recorded that Northern Nigeria is the hotbed area of the meningitis outbreak. The region reported more than 105,000 cases of meningitis in 1996. Most serious cases occurred is in Northwestern states. In Kano State, for example, the epidemic was responsible for the death of almost 12,000 people in less than a year. This outbreak constituted a strict public health crisis for the government of Nigeria in general and Kano State government in particular.

Arguably, community engagement is among the crucial strategy that can be used to curb the scourge of the disease especially in Nigeria, especially in the northern region where the disease becomes a serious socio-economic health challenge (Ahmed & Palermo, 2010; Attree et al., 2010). Based on the considering of the foregoing, the present study has taken community engagement strategies of involvement of traditional rulers, and collaboration with Community Based Organization's (CBOs) as the independent variables of the study. Studying these strategies together will give incisive and better insight into their individual contributions to the collective effort of meningitis control programmes in Nigeria. This is in line with what Aitken et al. (2016) said:

“Thinking of the different approaches to community engagement not as alternatives to one another but

rather as complementary may be helpful in both planning and evaluating community engagement”.

There have been relatively few attempts to study the impact of community engagement strategies on public health campaign despite its widespread importance (Attree et al., 2010). This has prompted Viswanathan et al. (2004) to call for empirical studies in this area and asserted that community engagement improves health promotion but benefits of the exercise are still a relatively new field of study. Unfortunately, in Nigeria, there is very few research of that nature particularly on the impact of community engagement strategies on meningitis control programmes. Few of the existing studies conducted were on Polio eradication and Malaria control initiatives. It is against this background that this study seeks to assess the impact of these strategies on meningitis control programmes in Nigeria. Specifically, this study assesses (i) the effect of policymakers' involvement of traditional rulers on accountability of meningitis control programmes in Nigeria and; (ii) ascertains the effect of policymakers' collaboration with community-based organizations on the sustainability of meningitis control programmes in Nigeria.

REVIEW OF LITERATURE

Conceptual Framework

Meningitis Control and Accountability

This is the decomposed dependent variable of meningitis control obtained and adopted from Fraser (2009) to examine the effect of tradition rulers' involvement on meningitis control programme. The involvement refers to inputs and contributions of traditional rulers drive from the interview, contact and physical involvement in the campaign planning process and implementations to produce information that will be honored and capable of building trust and credibility among the community members. Fraser (2009) like many other studies, specified that for a public health campaign to be honored and capable of building trust it should be transparent, accurate, accessible and credible stressing that building trust and credibility with communities (through community leaders) is an essential ingredient in health promotion. Accountability according to Greenwood (2006) is interactive and iterative processes of deliberation between citizens and government officials with the purpose of contributing meaningfully to specific public policy decisions in a transparent, accurate, and accessible way. To have literature-based measure of accountability of meningitis control, transparent, credibility and accessibility were adapted. Hence, it is therefore hypothesized that:

H_{a1}: Policymakers' involvement of traditional rulers would positively affect the accountability of meningitis control programmes in Nigeria.

Minkler & Wallerstein (2008) observed that a strategically based community engagement in epidemic control programme is the fundamental effort to improve the public campaign. Butterfoss & Kegler (2007) suggests that positive change is more likely to occur when community members are an integral part of a program's development and implementation, collaborating with the community is, therefore, necessary to create change and improve health. One begins to speculate that limited consideration of community engagement strategies in conducting meningitis control programmes in the North-West might be a great factor contributing to the dismal performance of meningitis control programme in the region. It seem therefore

necessary to go beyond speculation and establish fact and empirical evidence of this neglect or inadequate use of community engagement strategies in planning and execution meningitis control programme, as this work hoping to do. There is evidence that community involvement in decision-making and in the design, governance, and delivery of public services can enhance ownership and empowerment amongst, engaged lay people, and make policy initiatives more accountable to users (Attree et al., 2010).

Progressive Collaborations and Sustainability of Meningitis Control

Sustainability is the decomposed dependent variable of meningitis control that was used to measure the independent variable such as empowerment and collaboration with CBOs. Consultation refers to inputs and contributions of religious leaders in designing and implementing meningitis control and prevention programmes. While progressive partnership refers to developing bridges between various religious groups and campaign managers to bring a diverse range of partnerships into planning process. Variables like quick in reporting, positive input, advice and guidance were used to measure both dependent and independent variables. The choice of these variables is based on the discussions in the literature. Collaboration also refers to working together with Community Based Organizations' and support they render to nourish wide acceptance, mobilization, and participation for steady positive outcome of meningitis control programmes. As it was discussed in the literature, that sustainability appears to be determinant of community engagement initiative. Community should be able to see the impact of their involvement and input in the campaign, therefore, engagement of the community should be reinforced by sustaining various achievements of community engagement. Pointed out that sustainability in community engagement is facilitation, increase community response, and steady positive outcome. According to Fraser (2009), sustainability in community engagement is facilitation, increase responses, and steady campaign positive outcome stability. These variables of Fraser (2009) are therefore adapted to measure sustainability of meningitis control programmes in North-West, Nigeria. Hence, it is therefore hypothesized that:

H_{a2}: Policymakers' collaboration with community-based organizations would have a significant positive effect on the sustainability of meningitis control programmes in Nigeria.

However, there are various studies conducted on community engagement, which shows direct link between community engagement and improvement in health campaign. According to Salami (2016), the success now recorded in polio eradication campaign in Nigeria has a direct link to community engagement initiatives. According to Bracth (2001), the historic achievement of 1930 in the mental illness campaign was recorded with the full contributions of citizen-based groups involved in the campaign. In England, Attree et al. (2010), conducted a study entitled: The experience of community engagement for individuals: A rapid review of evidence, after studying the impact of community engagement on community participation in health promotion found the evidence of community engagement effectiveness in health promotion. The finding of the study further revealed that, majority of engaged individual in health promotion understand benefit for their physical involvement in the campaign. However, one of the pioneering community-based studies on reduction of heart disease has established correlation between participation of local community and reduction of heart related ailment. Based on these facts therefore, community engagement can be an effective approach to control wide spread of meningitis outbreaks among the most affected communities of North-Western Nigeria.

Theoretical Anchor: Social Relationship Theory

It is a theory that focuses on interactions between individuals in their micro social group. The theory opines that people discuss issues and events in a face to face encounter, which orders their opinion, attitude and perception of such issues. As it relates to media messages thus, TV commercials and public relations activities and programs are further discussed by individuals in their informal settings. This theory as developed by Shutz in 1970 explained that media audience members as active participants in the communication process. It therefore suffices that community and policymakers do discuss relationship strategies. The discussions and scrutiny therefore go a long way at determining the effect of such relationship. Ajzen (2001) while elaborating on the theory emphasized that it talks about interaction between different members of the society. In these interactions, interpersonal communication in a face to face situation takes pre-eminence and it is in this process that different members of the social group are able to influence one another.

METHODOLOGY

The study adopted a descriptive survey design. The study area was Northwestern Nigeria. The population consisted of the members of the community and stakeholders in the management of meningitis in North-west Nigeria. Key communities in the Sokoto, Zamfara, Kebbi, Kano, Jigawa, Kaduna, and Katsina States of Northwestern Nigeria. Sample size of 389 was drawn from the study population of 2557 with the method of Trek (2004) formula. The sample size defined above was selected from the respective population group with convenience sampling technique. The convenience sampling technique gives rooms to select the samples based on the ease of accessibility to them. Data for the study was collected from the primary source through questionnaires that were self-administered to the sample selected. Information collected through the questionnaire was analyzed with a frequency mean and standard deviation. The test instrument was validated with content method, and a Cronbach's method of reliability was carried out on the instrument to determine the reliability. The results show a score of 0.79, indicating high reliability and validity. Three hundred and eighty-nine (389) questionnaires were administered, out of which 337 (86.7%) questionnaires were returned for the data analysis. Linear regression was used to test the validity of the formulated hypotheses.

RESULTS

The data collected on both dependent and independent variables were used to run descriptive, and inferential data analyses for study. The statistical indices were shown in the mean and standard deviation columns as well as output Tables of the regression analysis.

The results of Table 1 indicates that a greater number of the respondents perceived that traditional rulers' involvement has an effect on accountability in meningitis control, as it was indicated in the Table the mean of 3.806 is above 3.00, which is the minimum mean of the agreement. Looking at the individual responses to statements in the Table, involvement of traditional rulers in Meningitis control, provide transparent, accurate and accessible information on meningitis control programmes that will be honored and capable of building trust and credibility among the community members. However, responses of item three with the mean score 3.55 indicated that meningitis control policymakers did not involve traditional rulers in the campaign.

S. No.		N	Mean	SD
1	Meningitis campaign planners are in contact with our traditional rules throughout meningitis control process.	337	3.79	1.363
2	Interview with our traditional rulers in our community is paramount to the success of meningitis control.	337	3.84	1.275
3	Meningitis campaign planners engage our traditional rules with all information require for meningitis control.	337	3.55	1.353
4	Meningitis control programmes are transparent because our traditional rulers encourage us to practice preventive measures.	337	3.90	1.258
5	Meningitis control programmes are credible because our traditional rulers allow health officers to educate us on preventive measures.	337	3.84	1.156
6	Meningitis control programmes are accessible because our traditional rulers allow health officers to educate us.	337	3.92	1.191
Aggregate Mean and SD			3.806	1.266

S. No.		N	Mean	SD
1	Meningitis campaign planners carryout their campaign together with our CBOs in our community.	337	3.61	1.291
2	Meningitis campaign planners keep our CBOs well informed of the intervention goals and design.	337	3.75	1.259
3	Meningitis campaign planners are always in touch with our CBOs throughout meningitis control process.	337	3.45	1.290
4	The door-to-door campaign of our CBOs facilitates meningitis control programmes in our domain.	337	3.58	1.404
5	The information our CBOs provide encourages me to practice meningitis control preventive measures.	337	3.40	1.366
6	Door-to-door mobilization of our CBOs made meningitis control programme more responsive in our domain.	337	3.13	1.489
Aggregate Mean and SD			3.486	1.349

Table 2 shows the descriptive statistics on the effect of collaboration with Community-Based Organizations on sustainability in Meningitis control indicated positive responses. Findings revealed that a greater number of the respondents believe that collaboration with CBOs sustained meningitis campaign. This is based on the aggregate mean score 3.486 obtained from the output of the statistical tool of analysis which is above 3.00, the minimum mean of the agreement. Looking at the responses from the output, the mean score of each statement of the two variables (dependent and independent) in the Table indicated that, the responses perceive positively that collaboration between policymakers of meningitis control programme and Community Based Organizations increased positive responses and sustain campaign positive outcome among the engaged communities in northwest Nigeria.

The data collected on involvement of traditional rulers and accountability of meningitis control using questionnaire were used to test the first hypothesis.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.440 ^a	0.193	0.191	1.006

Note: ^a. Predictors: (Constant), Involvement of Traditional Rulers

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
	(Constant)	2.311	0.184		12.592	0.000
1	Involvement of Traditional Rulers	0.421	0.047	0.440	8.957	0.000

A linear regression analysis was conducted to assess the extent to which involvement of traditional rulers affect accountability of meningitis control programmes in North-West Nigeria (Tables 3A and 3B). The result of the linear regression reveals that there is a positive relationship between involvements of traditional rulers and accountability of meningitis control programmes in North- West Nigeria ($R=0.440$, $p=0.000$). Thus, the Null hypothesis based on the decision rule is therefore not confirmed. With the linear regression model, the R square, the coefficient of determination, showed only 19.3% of the variation in accountability of meningitis control.

The data collected on collaboration with CBOs and sustainability of meningitis control using questionnaire were used to test hypothesis two of this research work.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	-0.434 ^a	0.188	0.186	1.141

Note: ^a. Predictors: (Constant), Community Based Organization

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	1.647	0.205		8.023	0.000
1	Community Based Organization	0.478	0.054	-0.434	8.814	0.000

Note: ^a. Dependent Variable: Sustainability

Source: Fieldwork (2018).

A linear regression was conducted to ascertain the extent to which collaborations with CBOs and policymakers of meningitis control in North-West Nigeria affect sustainability of the control programmes (Tables 4A and 4B). The result of the regression indicates that there is negative relationship between collaboration with CBOs and sustainability of meningitis control programmes ($R=-0.434$, $P=0.000$). Thus, based on the decision rule the Null hypothesis is therefore not confirmed. With the linear regression model, the R square, the coefficient of determination, showed only 18.8% of the variation in sustainability of meningitis control.

DISCUSSION

The first finding of this research as indicated by hypothesis one revealed that there was a positive relationship between involvement of traditional rulers and accountability of meningitis control programmes ($R=0.440$, $p=0.000$). This can be interpreted that, the effect of traditional rulers' involvement in the campaign is strong and positive. The implication of this finding is that policymakers of meningitis control programme in Nigeria are properly involving traditional rulers in the campaign. The results obtained from descriptive statistics in Table 3 of research question one support this assertion. The responses of statement three in the Table, which says, meningitis campaign planners engage our traditional rules with all information to require for meningitis control, has a mean score of 3.55. Compare with the mean score of other statements is low. This result is in consonant with the Duflon (2004), who concluded in his study that for effective community engagement outcome, traditional rulers must be engaged in all segments of the campaign. It is also in line with the findings of the Ojo (2009) who explained that the involvement of traditional rulers in community engagement initiatives will help in creating change in the society and improve general well-being. This conclusion was concretized by Uwaze & Ojebode (2013). They maintained that because of their positions and political influence in the society, traditional rulers enjoy an endless regard therefore, anything coming from them will be considered to be transparent, accurate, clear, accessible, true, genuine, authentic and acceptable, capable of building trust and credibility among the community members.

The second finding of this research showed a negative effect of policymakers' collaboration with CBOs on the sustainability of meningitis control programmes in Nigeria ($R=-0.434$, $p=0.000$). That means the effect of collaboration with CBOs to control meningitis outbreaks is weak and negative. This statement is clear in the survey conducted for this study. This finding is inconsonant with Abegunde (2009) in the study entitled: The role of community-based organizations in economic development in Nigeria: The case of Oshogbo, Osun State, Nigeria. He pointed out that, CBOs are the effective instrument in reaching people directly considering their existing structure and communication network. This study is also in line with the contribution of Adisa (2001) where he said CBOs have the ability and skills to influence ideas and actions of others and because of this; they are regarded as effective change agents.

CONCLUSION AND RECOMMENDATIONS

Previous studies done on community engagement mainly focused on the impact of public participation. On the contrary, the focus of this study was on the strategies of community engagement by looking at their impact on specific goals of meningitis control programmes. The findings of this study, therefore, gave insight into their individual contributions to the overall effort of meningitis control in Nigeria. It was revealed from the earlier studies that policymakers of meningitis control relied heavily on radio (that is not trusted by some people and makes the campaign one-way) instead of traditional rulers and religious leaders who were usually considered trustworthy among the target audience. This study revealed that the involvement of rulers produced accountability on the management of meningitis.

In line with the evidence deduced from the study, the study concluded that when community engagement strategies are more intense and carefully coordinated, it can effectively minimize the prevalent of meningitis in Nigeria. It also concluded that when policymakers of the campaign consult and involve traditional rulers and religious leaders in the campaign's planning

process and implementation, it results into accountability. Lastly, collaboration with community based organizations helps to sustain and increase positive responses of community engagement initiative and steady campaign positive outcome. Based on the study key findings, the following submissions were offered:

1. Traditional rulers and religious leaders should be fully involved and consulted in the campaign planning process and implementation. In order to have effective and positive meningitis control programmes outcome, living standard of the people in the northern Nigeria should be improved where socio-economic challenges such as poverty, hunger, and acute water shortage are properly tackled and resolved.
2. Instead of over reliance on radio and posters, policymakers of meningitis control programmes should utilize other community engagement channels such as community forum that will allow face-to-face discussion with the community members. The present system of disseminating information on meningitis control seems to be not effective, therefore, there should be a shift towards the participatory model of communication where people will be involved in the formulation of their own messages that they will identify with.

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