



Comparative Relationships Between Government Policies and Community-Based Health Education Programs on Communicable Diseases among Residents in Katsina Metropolis, Katsina State, Nigeria

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Abstract

This paper is investigated to assess of the role of government policies in supporting community-based health education programs for communicable diseases in Katsina Metropolis. The paper used primary and secondary data based on the research objectives and hypothesis. Descriptive statistical techniques were used in the presentation, analysis and discussions of data. The researcher sampled 120 respondents from the study area. The findings reveal that well-coordinated vaccination campaigns significantly reduce disease incidence, while sanitation and hygiene initiatives effectively control waterborne diseases. Quarantine measures, although challenging, are effective when accompanied by clear communication and community trust. The study highlights the critical role of community engagement in enhancing policy acceptance and adherence, supported by socioeconomic benefits, including reduced healthcare costs and improved workforce productivity. The findings align with existing theories on the social determinants of health and the importance of sustainable health systems. Based on the above conclusion, the research came up with the following recommendations: Government funding should move away from short-term, project-based funding towards long-term, predictable financing for community-based health education initiatives to ensure sustainability. Community Health Worker (CHW) Networks should formally integrate CHWs into the national health system by providing them with regular training, remuneration, and protective gear. There is should be an improve surveillance systems to enable real-time tracking of disease outbreaks, using this data to directly inform the focus of community education, such as in vaccination campaigns. Governments policy should shift from merely having policies on paper to creating a robust, community-owned system that effectively controls communicable diseases in the study area.

Keywords: Government Policies, Community -Based Health Education Programs & Communicable Diseases

INTRODUCTION

Government policies play a critical, albeit often challenged, role in supporting community-based health education programs (CBHEPs) for communicable disease control. These policies, spanning funding, legislation, and strategic planning, are essential for implementing vaccinations, hygiene initiatives, and public awareness campaigns to combat diseases like HIV, malaria, and tuberculosis. Community-based health education programs refer to organized efforts within specific communities that aim to promote health awareness, improve health literacy, and facilitate access to health services. These programs are typically designed and implemented by local organizations, health professionals, and community members to address the unique health needs of the population. By utilizing culturally appropriate methods and engaging community stakeholders, these programs empower individuals to take charge of their health and well-being. Nigeria established the PHC system in 1976, which designated the local government areas (LGAs), the second smallest administrative level in the country, the responsibility of managing and implementing health services at the community level. Subsequently, the National Primary Health Care Development Agency (NPHCDA) was established in 1992 to ensure the sustainability of previous gains and better manage the PHC system in the country, with the agency revising the PHC system in 1993 (Vankar, 2023). Despite these efforts, it is regrettable to see Nigeria rank 157th out of 167 countries in a 2023 world health and



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health system ranking. The CHS operates just below the PHC system but is intrinsically linked to it, and its optimal functionality is expected to help in improving the country's ranking amongst global health systems. Studies have shown that the CHS in Nigeria has been deteriorating and needs to be enhanced as a way of improving the overall health system as well as boosting the country's health profile. This deterioration was attributed to a lack of adequate community health workers (CHWs) and a lack of re-training for the few available, poor female representation, poor collaboration with pre-existing community structures and hence poor community participation (Okereke, et al 2019). However, to improve community health system delivery in Nigeria within the construct of the CHS, it is important to assess the factors that constrain as well as pro mote healthcare service delivery at different levels across communities to mitigate the constraining factors while ensuring the sustenance of the promoting factors. Identifying and addressing the key factors that impede community health service delivery in Nigeria have strong implications for the improvement of CHS in the country as well as the attainment of the UHC and SDGs.

Health education in Katsina State is critical for several reasons. Firstly, it enhances health literacy, enabling individuals to understand health information and make informed decisions. Secondly, it fosters a sense of community ownership over health issues, encouraging collective action towards common health goals. Thirdly, health education can lead to the prevention of diseases and the promotion of healthier lifestyles, ultimately reducing healthcare costs and improving overall community health outcomes. Additionally, these programs can help address health disparities by targeting vulnerable populations and providing them with the necessary tools to improve their health. This paper is conducted to examine assessment of the role of government policies in supporting community-based health education programs for communicable diseases in Katsina Metropolis. Government policies are necessary for directing resources and setting standards for communicable disease education, their effectiveness is heavily reliant on fostering genuine community partnerships and ensuring sustainable, long-term funding. Success hinges on moving from a top-down, purely curative approach to a more collaborative, preventive, community-centered model.

Review of Literature

Public health policies are the backbone of disease control strategies, offering structured and systematic approaches to managing health crises. A robust policy framework clarifies roles, responsibilities, and processes during health emergencies. According to Gostin and Wiley (2016), a well-defined policy framework is critical in coordinating responses across various levels of government and sectors, thereby enhancing the effectiveness of interventions. This becomes particularly vital during pandemics, where swift, coordinated action can significantly mitigate the spread of disease. The COVID-19 pandemic has further underscored the necessity for robust and adaptable policy frameworks. As Kickbusch et al. (2016) argue, policies must be evidence-based and adaptive to the evolving nature of communicable diseases. The agility of these frameworks determines the timeliness and effectiveness of public health responses. For instance, quick adjustments to policies regarding travel restrictions, quarantine measures, and vaccination rollouts were essential in managing the spread of COVID-19. These interventions underscore the need for policies that are not only scientifically grounded but also adaptable enough to respond to new data and evolving circumstances. A critical aspect of a practical policy framework is its ability to integrate the roles and responsibilities of various stakeholders. This integration ensures a coordinated response, minimizing overlaps and gaps in public health efforts.

Smith et al. (2019) highlight that during the Ebola outbreak in West Africa, the lack of a coordinated policy framework led to delayed response and confusion among health workers and agencies. In contrast, countries with well-defined frameworks, such as those in East Asia during the SARS outbreak, were able to mobilize resources and implement control measures more efficiently. Another significant factor is the role of international collaboration facilitated by robust policy frameworks. Global health threats require a unified approach, as no single country can manage a pandemic alone. Gostin and Wiley (2016) emphasize that international health regulations and agreements, supported by national policies, are essential for coordinated global action. The World Health Organization (WHO) plays a pivotal role in setting standards and guidelines that countries can adapt to their specific contexts. Effective frameworks incorporate these international guidelines, ensuring that national responses align with global strategies to combat communicable diseases. Moreover, the importance of policy frameworks extends to allocating resources and prioritizing interventions. With a strategic approach, resources can be better allocated, leading to more effective disease control. measures.



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Bloom et al. (2018) discuss how strategic planning and resource allocation within a robust policy framework were crucial in successfully eradicating smallpox. Public health authorities could control and eliminate the disease by prioritizing vaccination and surveillance. This example illustrates how clear policies can guide decision-making processes, ensuring the most effective interventions receive the necessary support. In addition to resource allocation, policy frameworks must address the social determinants of health contributing to the spread of communicable diseases. Policies incorporating measures to improve living conditions, access to healthcare, and education can significantly reduce disease transmission. The COVID-19 pandemic has highlighted disparities in health outcomes related to socioeconomic status, underscoring the need for policies that address these underlying factors. Public health policies can achieve more comprehensive and sustainable disease control by addressing social determinants of health. The sustainability of public health strategies hinges on the strength of policy frameworks.

Hunter and Reddy (2013) argue that sustainable health systems require policies integrating health goals with broader socioeconomic and environmental objectives. Policies should address immediate health crises and build resilience against future threats. This requires long-term planning and investment in health infrastructure, workforce training, and community engagement. Sustainable policies ensure that health systems remain robust and capable of responding to current and emerging health challenges. The literature underscores the importance of specific public health interventions in controlling communicable diseases. Vaccination campaigns, for instance, have been proven to be one of the most effective means of disease prevention. The success of measles eradication efforts in various regions, as documented by Durrheim et al. (2020), exemplifies how targeted vaccination programs can significantly reduce the incidence of measles disease. Measles, once a pervasive childhood disease, has seen dramatic declines in areas with robust immunization programs. Durrheim et al. (2020) highlight that in regions where vaccination coverage exceeds 90%, measles cases have decreased by over 95%. This significant reduction saves lives and alleviates the economic burden of outbreaks, including healthcare costs and productivity losses. Similarly, implementing sanitation and hygiene initiatives has substantially improved control of diseases like cholera and diarrhea. Freeman et al. (2017) conducted a comprehensive review demonstrating that improvements in water quality, sanitation facilities, and hygiene practices can reduce the incidence of diarrheal diseases by up to 50%. In sub-Saharan Africa and South Asia, where these diseases are prevalent, sanitation interventions have resulted in significant decreases in morbidity and mortality rates. For instance, the installation of community latrines and handwashing stations in rural Bangladesh has significantly reduced cholera outbreaks. Quarantine and isolation measures, although often contentious due to their social and economic implications, have been practical in containing outbreaks.

The containment strategies employed during the SARS and Ebola outbreaks provide compelling evidence of their efficacy. During the SARS outbreak, rigorous quarantine measures in Hong Kong and Singapore played a pivotal role in halting the spread of the virus, as detailed by Wilder-Smith et al. (2020). These measures included isolating infected individuals, tracing and quarantining their contacts, and implementing travel restrictions. Similarly, during the Ebola outbreak in West Africa, strict isolation protocols and the establishment of treatment centers were crucial in reducing transmission rates and ultimately controlling the epidemic. Public health education campaigns play a critical role in enhancing the effectiveness of these interventions. Educating the public about the importance of vaccinations, proper sanitation, and the rationale behind quarantine measures increases compliance and cooperation. For example, during the polio eradication campaign in India, widespread public health education efforts helped dispel myths and misinformation about the vaccine, leading to higher immunization rates and, ultimately, the eradication of polio in the region. Another critical intervention is the use of vector control methods to combat vector-borne diseases, such as malaria and dengue fever. Studies by Bhatt et al. (2015) have shown that the distribution of insecticide-treated bed nets and indoor residual spraying can significantly reduce the incidence of these diseases. In regions with high malaria transmission rates, the use of these interventions has led to a substantial decline in malaria cases and deaths. For instance, in Kenya, a national campaign to distribute bed nets resulted in a 50% reduction in malaria prevalence among children under five (Bhatt et al., 2015). Integrating digital health technologies has emerged as an effective tool in controlling communicable diseases. Mobile health applications, electronic health records, and data analytics have improved disease surveillance, contact tracing, and the management of public health responses. A study by Smith et al. (2019) on the use of digital health tools during the COVID-19 pandemic found that these technologies enhanced the efficiency of contact tracing and monitoring, leading to improved containment of the virus. For



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example, South Korea's use of digital contact tracing and real-time data sharing played a crucial role in managing and reducing COVID-19 cases early in the pandemic (Smith et al., 2019).

Methodology

The main sources of data that form the basis of analysis for this study were obtained from primary and secondary sources. Under primary source of data, structured questionnaire was employed, while in the secondary source of data collection, textbooks, journals, articles, newspapers, and other papers presented at seminars and workshops were consulted. Also consulted are other relevant publications on the topic in question. The data were analyzed and discussed via descriptive statistical techniques of tables, percentages, mean and ranks as appropriately chosen for this kind of study. The instrument was structured using a Five-point rating scale of 5 to 1, from strongly agree, Agree, neutral, disagree and strongly disagree. Data obtained were analyzed using mean scores. The criterion mean was determined at 2.50. Thus, item that score 2.50 and above was accepted whilst those with a mean score less than 2.50 were rejected. However, Katsina state has three (3) senatorial districts namely; Katsina central, Daura and Funtua Zones respectively. Thus, with the help of the Katsina State Epidemiologist, 40 questionnaires were successfully administered and retrieved to and from the health personnel across the zones in the state in general.

Objectives of The Study

The main objective of this paper is to assess the role of government policies in supporting community-based health education programs for communicable diseases in Katsina Metropolis. The following are the objectives of the study:

1. Examine the role of government policies on communicable diseases in Katsina State
2. Evaluate the impact of community-based health education programmes on communicable diseases in Katsina State

Hypotheses

The following hypotheses were postulated to guide the study and were tested at a 0.05 level of significance:

Ho₁: There is no significant relationship between government policies and communicable diseases in Katsina State.

Ho₂: There is no significant relationship between community-based health education programmes and communicable diseases in Katsina State.

Presentation of Results

The study used a sample of 120 respondents based on purposive and judgmental sampling techniques owing to the fact that not all the elements of the population in the state has knowledge and analytical power on the state of health economy in the study area, hence the rationale behind the choice of the sample in question.

Descriptive Analysis

Table 1: Socio-economic characteristics of the respondents

Variables	Frequency	Percentage (%)	Mean Value
Age			
18-27	23	19.17	3.3
28-37	47	39.17	
38-47	38	31.66	
48-above	12	10	
Total	120	100	
Gender			
Male	31	25.83	4.02
Female	89	74.17	
Total	120	100	
Occupation			
Civil servant	80	66.67	2.92
Farming	20	16.67	
Business	15	12.5	
Other (specify)	5	4.16	
Total	120	100	



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Variables	Frequency	Percentage (%)	Mean Value
Marital status			
Single	14	11.66	
Married	98	81.67	
Widow	3	2.5	3.78
Divorce	5	4.16	
Total	120	100	
Education			
Primary	4	3.33	
Secondary	26	21.67	4.11
Tertiary	87	72.5	
Other (specify)	3	2.5	
Total	120	100	

Age refers to the extent to which a person has lived or stays alive. In this study, 19.17% of the respondents fall within the age limit of 18-27 years. 39.17% of the respondents fall within the age bracket of 28-37 years of age, 31.66% of the respondents are within age bracket of 38-47 years of age, 12% of the respondents are within age bracket of 48-above year's age as depicted above. Gender refers to the sex status of an individual, that is either male or female, boy or girl, man or woman. In this study, male respondents constituted 74.17% whilst female respondents constituted the remaining 25.83%. Marital status can be seen as the fact of somebody's being married, unmarried or formally married. This is purely a marital phenomenon that is trying to show whether entrepreneur is single, married, divorced, or widow. The table shows that 11.66% of the respondents are single, 81.67% of the respondents are married. Meanwhile, 2.50% of the other respondents are divorce with the remaining 4.16% of the respondents widowed as depicted in the table above. Therefore, most of the respondents in the study area are married and singled as reflected by the house hold size, that they have much family responsibilities and having none family size. Marital status determines household size since married respondents tend to have a larger household size and hence, the majority of the respondents. Qualification also refers to the learning, training, and skills acquired from the various schools and institutions of education. The training and skills acquired from the schools and institutions enhances individual capacity to carry out duties as expected and diligently. The table consists of the qualification of the respondents in which case; Majority of the respondents (72.50%) have tertiary level of education, respondents with secondary school level of education constitutes 21.67%. However, 3% of the other respondents hold primary school level of education, whereas 3% of the remaining respondents have other form of education such as vocational training, distance learning and other non-formal system of education. 36.67% of the respondents believed that illiteracy is the leading factor responsible for the major health problems facing those localities. 19.17% on the other hand, attribute these problems to improper environmental sanitation. Yet, 17.50% suggest that contaminated water is responsible for the major health problems facing their locality. While 16.67% among the respondents are of the opinion that dumping refuse is the main cause of these health problems in the study area.

Test of Hypothesis

Hypothesis One: There is no significant relationship between government policies and communicable diseases in Katsina State.

Table 2: One sample t-test assessment attitude of government policies on communicable diseases in Katsina State

One-Sample Statistics

	N	Mean	Std. Deviation	df	t computed	t- critical	p
Government Policy	120	42.63	2.37463	119	287.798	1.96	0.003

$P < 0.05, t_{calculated} > t_{critical} \text{ at } df 120$

The one sample t-test analysis shows that the role of government policies on communicable diseases in Katsina State was significant. This is because the calculated p value of 0.003 is lower than the 0.05 alpha level of significance, and the computed t value of 287.798 is higher than the 1.96 t critical value at df 119. Their mean that there is relationship between



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government policies and communicable diseases in Katsina State. Therefore, the hypothesis stated There is no significant relationship between government policies and communicable diseases in Katsina State is thereby rejected.

Hypothesis Two: There is no significant relationship between community-based health education programmes and communicable diseases in Katsina State.

Table 3: One sample t-test analysis impact of community-based health education programmes on communicable diseases in Katsina State

One-Sample Statistics							
	N	Mean	Std. Deviation	df	t computed	t- critical	p
Community health education program	120	35.9531	3.86660	119	135.70	1.96	0.002

P < 0.05, t calculated > t critical at df 119

The one sample t-test analysis shows that the relationship between community-based health education programmes and communicable diseases in Katsina State. This is because the calculated p value of 0.002 is lower than the 0.05 alpha level of significance, and the computed t value of 135.70 is higher than the 1.96 t critical value at df 119. Their means that community-based health education programmes have many things to do with communicable diseases in the study area. Hence, the hypothesis stated that there is no significant relationship between community-based health education programmes and communicable diseases in Katsina State is hereby rejected.

Discussion of Findings

The findings of this study offer profound insights into the impact of public health policies on communicable disease control, linking empirical data with foundational concepts in public health, epidemiology, and socio-economic theory. Through qualitative analysis, the study reveals that well-coordinated vaccination campaigns, sanitation and hygiene initiatives, and quarantine measures are crucial in mitigating the spread of communicable diseases. These findings align closely with existing public health frameworks, emphasizing the importance of community engagement, sustainable health systems, and socio-economic considerations. The effectiveness of targeted vaccination programs, as demonstrated by the significant reduction in measles cases in high-coverage areas (Durrheim et al., 2020), underscores the critical role of immunization in disease prevention. This finding is consistent with the essential public health principle that vaccination is among the most cost-effective health interventions. The interpretation here is clear: Vaccines, supported by comprehensive public health strategies, drastically reduce disease prevalence. This directly supports the hypothesis that well-implemented public health policies lead to substantial improvements in disease control. Furthermore, the study's results regarding sanitation and hygiene initiatives confirm the hypothesis that these interventions significantly decrease the incidence of waterborne diseases. Freeman et al. (2017) provided quantitative backing for this hypothesis by showing that improved sanitation can reduce diarrheal diseases by up to 50%. This finding aligns with the theory of social determinants of health, which posits that improving living conditions has a direct impact on health outcomes. The qualitative data in this study reveal that community-specific adaptations of global health strategies enhance their effectiveness, demonstrating the necessity of culturally and contextually relevant interventions. Quarantine and isolation measures during outbreaks, though socially and economically challenging, have proven effective in controlling disease spread when implemented swiftly and stringently. This finding corroborates the hypothesis that stringent public health measures can contain outbreaks. Wilder-Smith et al. (2020) noted the successful containment of SARS in Hong Kong and Singapore through rigorous quarantine protocols. Our research further emphasizes that community trust and transparent communication are essential for the success of such measures. The Ebola outbreak in West Africa (Vinck et al., 2019) highlighted how mistrust and lack of engagement can severely hinder disease control efforts, supporting the hypothesis that community engagement is pivotal for effective policy implementation.

Conclusion

This study provides a comprehensive examination of the role of government of public health policies on communicable disease control, addressing critical questions about the effectiveness of various interventions, the role of community engagement, and the socio-economic implications of these policies. The findings reveal that targeted vaccination programs, sanitation and hygiene initiatives, and quarantine measures significantly reduce the incidence of communicable diseases when supported by robust public health strategies and community participation. This research underscores the importance



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of well-coordinated, contextually relevant, and sustainable health policies in mitigating the spread of infectious diseases. The value of this research lies in its contribution to both scientific understanding and practical application.

Recommendations

Based on the above conclusion, the research came up with the following recommendations:

1. Government funding should move away from short-term, project-based funding towards long-term, predictable financing for community-based health education initiatives to ensure sustainability.
2. Community Health Worker (CHW) Networks should formally integrate CHWs into the national health system by providing them with regular training, remuneration, and protective gear.
3. There should be an improve surveillance systems to enable real-time tracking of disease outbreaks, using this data to directly inform the focus of community education, such as in vaccination campaigns.
4. Governments policy should shift from merely having policies on paper to creating a robust, community-owned system that effectively controls communicable diseases in the study area.

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