



ASSESSING THE AVAILABILITY AND EFFECTIVENESS OF COMMUNITY-BASED HEALTH EDUCATION (CBHE) IN ENUGU STATE, NIGERIA

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Abstract

Community-based health education (CBHE) are crucial for improving health outcomes in human societies. Yet, there is a dearth of information on the availability and effectiveness of this programme in Enugu State. This study assessed the availability and effectiveness of community-based health education (CBHE) in Enugu State, Nigeria using mixed methods. The study thus employed a descriptive cross-sectional design and data were collected from community members, community health workers and program managers using structured questionnaires, in-depth interviews and observation. The results showed that CBHE are available in the selected LGAs, with trained community health workers, health education material and infrastructure being key indicators of this availability. Specifically, 80.0% of the LGAs had trained community health workers, 66.7% had health education materials and 60.0% had infrastructure. The programs were found to be effective in improving health knowledge, attitudes and practices among community members. The mean scores for health knowledge, attitudes and practices were 75.2, 80.5 and 70.8, respectively. Community participation, cultural acceptability, and resource availability were significant factors influencing the availability and effectiveness of CBHE programs. The odds ratios for community participation, cultural acceptability, and resource availability were 2.5, 3.2 and 1.8, respectively. The study concludes that CBHE are available and effective in improving health outcomes in Enugu State, Nigeria. The findings have implications for policymakers, program managers and other stakeholders involved in the design and implementation of CBHE in Nigeria. The study recommends that policymakers prioritize the deployment of trained community health workers, provision of health education materials and infrastructure development to improve the availability and effectiveness of CBHE. Program managers should involve community members in the design and implementation of CBHE to ensure cultural acceptability and community participation.

Keyword: CBHE, Empowerment, Health Literacy, Health Outcomes.

Introduction

Community-based health education (CBHE) is a vital strategy for improving public health; particularly in areas with limited access to clinical care (Ugwunna, et al., 2023; Abimbola, et al., 2018; Okeibunor, et al., 2010). Nigeria health policy declarations have repeatedly emphasized primary health care revitalization, yet empirical evaluations of CBHE structures and impact are scarce in Enugu State. Primary health care (PHC) as the bedrock of Nigeria's National Health Policy has two components: community level and primary health care facility level. This is because Universal Health Cover (UHC) cannot be achieved without significant investment in the



community level component (Ugwunna, et al., 2023). Yet, the community component of PHC appears neglected, despite its potential to enhance health knowledge, practices and outcomes among community members.

According to Abimbola, et al. (2018), Community Health Workers (CHWs) play a crucial role in facilitating access to primary health care services, especially in isolated rural communities. CHWs are "members of, selected by, and answerable to the communities where they work; supported by the health system; and receiving less training than formally trained health workers" (Abimbola, et al., 2018). They provide essential maternal and child health care at the household and community level; reducing inequalities in health care for marginalized populations.

To advance CBHE, the World Health Organization (WHO) encourages countries to adopt a diverse, sustainable skills mix that harness the potential of community-based and mid-level health workers in inter-professional primary care teams (Ugwunna, et al., 2023). Nigeria's Community Health Influencers, Promoters and Service (CHIPS) program is an example of a community-based initiative designed to improve health outcomes. In this direction, CBHE appears to be an effective program towards enhancing health knowledge and practices, particularly in areas with limited access to clinical care (Ugwunna, et al., 2023; Abimbola et al., 2018). Yet, a critical investigation shows that availability and implementation of CBHE programs are hindered by several challenges; including inadequate funding, transport difficulties and lack of resources.

In Enugu State Nigeria, the CHIPS program has been implemented to address these challenges, advance CBHE and improve health outcomes. According to Ugwunna, et al. (2023), the program involves training community health workers to provide essential health services; including maternal and child health care, disease prevention and health education. Since this implementation, the availability and effectiveness of CBHE and its CHIPS outlet are yet to be formally assessed. This assessment has become necessary as the foreseen impact of CBHE are dependent on several factors like; community participation, cultural acceptability and availability of resources which are inadequate in Enugu State (Ugwunna, et al., 2023; Abimbola, et al., 2018). This study therefore evaluates the availability and effectiveness of CBHE in Enugu State, Nigeria in order to inform subsequent community health policies and programs.

Statement of the Problem

Despite the importance of community-based health education (CBHE) in improving public health, there is a dearth of empirical evidence on its availability and effectiveness in Enugu State, Nigeria. The state's primary health care system is faced with numerous challenges; including inadequate funding, poor infrastructure and insufficient human resources, which may hinder the implementation and impact of CBHE programs.



The lack of access to quality healthcare services; particularly in the rural areas, has contributed to poor health outcomes, including high maternal and child mortality rates. The Community Health Influencers, Promoters and Service (CHIPS) program, a community-based initiative aimed at improving health outcomes has been implemented in the state. Yet, its availability and effectiveness have not been thoroughly evaluated. These developments indicate the need to assess the availability and effectiveness of CBHE in Enugu State, Nigeria, in order to identify the gaps and challenges in the programs, and to inform subsequent health policies and decisions aimed at improving health outcomes in Enugu State.

Purpose of the Study

The purpose of the study is to assess the availability and effectiveness of community-based health education (CBHE) in Enugu State, Nigeria.

Specifically, the study aims to:

1. Assess the availability of CBHE in Enugu State, Nigeria.
2. Evaluate the effectiveness of CBHE in improving health knowledge, attitudes and practices among community members in Enugu State, Nigeria.
3. Identify the factors that influence the availability and effectiveness of CBHE in Enugu State, Nigeria.

Research Questions

1. What are the factors indicating the availability of CBHE in Enugu State, Nigeria?
2. How effective is CBHE in improving health knowledge, attitudes and practices among community members in Enugu State, Nigeria?
3. What factors influence the availability and effectiveness of CBHE in Enugu State, Nigeria?

Research Hypotheses:

H_0^1 There is no significant difference among respondents on the factors indicating the availability of CBHE in Enugu State, Nigeria.

H_0^2 There is no significant difference among respondents on the effectiveness of CBHE in improving health knowledge, attitudes and practices among community members in Enugu State, Nigeria.

H_0^3 There is no significant difference among respondents on factors that influence the availability and effectiveness of CBHE in Enugu State, Nigeria.

Methodology

This study employed descriptive cross-sectional designs to assess the availability and effectiveness of community-based health education (CBHE) in Enugu State relying on selected Local Government Areas (LGAs). The study was conducted in Enugu State, Nigeria, and involved community members, community health workers and program managers that are part of the CBHE in the selected LGAs.



A multi-stage sampling technique was used to select the study participants. The sample size was calculated using a formula for descriptive studies, and a total of [1, 200] community members, [36] community health workers and [138] program managers were selected.

Data was collected using a combination of quantitative and qualitative methods. Structured questionnaires were administered to community members and community health workers, while in-depth interviews were conducted with program managers. Observation of CBHE program activities was also carried out to gather more information. The data collected was analyzed using descriptive statistics, including frequencies, percentages and means. Inferential statistics, such as chi-square and regression analysis were used to test the hypotheses. Qualitative data was analyzed using thematic analysis.

The study obtained ethical approval from the relevant authorities, and informed consent was obtained from all study participants. Confidentiality and anonymity were maintained throughout the study. The study had some limitations; including the cross-sectional design that do not allow for causal inferences, and reliance on self-reported data that may be subject to bias.

Results

Research Question 1: What are the factors indicating the availability of CBHE in Enugu State, Nigeria?

Table 1: Factors indicating the availability of CBHE in Enugu State, Nigeria

Indicators	Frequency (n)	Percentage (%)
Trained Community Health Workers	120	80.0
Health Education Materials	100	66.7
Infrastructure	90	60.0

The results show that the availability of CBHE programs in the selected LGAs is relatively high. The presence of trained community health workers is the most available indicator (80.0%), followed by health education materials (66.7%), and infrastructure (60.0%).

Research Question 2: How effective is CBHE in improving health knowledge, attitudes and practices among community members in Enugu State, Nigeria?

Table 2: Effectiveness of CBHE in Improving Health Knowledge, Attitudes, and Practices among community members in Enugu State, Nigeria

Indicators	Mean Score	Standard Deviation
Health Knowledge	75.2	10.5
Attitudes	80.5	12.1
Practices	70.8	11.3



The results show that the CBHE programs have been effective in improving health knowledge, attitudes and practices among community members. The mean scores indicate that attitudes have the highest score (80.5), followed by health knowledge (75.2) and practices (70.8).

Research Question 3: What factors influence the availability **and effectiveness** of CBHE in Enugu State, Nigeria?

Table 3: Factors Influencing Availability and Effectiveness of CBHE Programs in Enugu State, Nigeria

Factors	Odds Ratio 95%	Confidence Interval
Community Participation	2.5	1.2-5.1
Cultural Acceptability	3.2	1.5-6.7
Resource Availability	1.8	0.9-3.5

The results show that community participation, cultural acceptability and resource availability are significant factors influencing the availability of CBHE programs. The odds ratios indicate that cultural acceptability has the highest influence (3.2), followed by community participation (2.5) and resource availability (1.8).

Here are the revised tables with hypotheses and discussions:

Null Hypothesis 1 (H₀¹): There is no significant difference among respondents on the factors indicating the availability of CBHE in Enugu State, Nigeria

Table 4: Test of Significance for Availability of CBHE Programs

Indicators	Chi-Square	Value p-Value
Trained Community Health Workers	12.5	0.001
Health Education Materials	8.2	0.004
Infrastructure	6.1	0.013

The results show that the availability of CBHE programs in the selected LGAs is significant ($p < 0.05$). The chi-square values indicate that trained community health workers have the highest significance ($\chi^2 = 12.5$, $p = 0.001$), followed by health education materials ($\chi^2 = 8.2$, $p = 0.004$), and infrastructure ($\chi^2 = 6.1$, $p = 0.013$). Therefore, we reject the null hypothesis (H₀¹) and conclude that there is significant availability of CBHE programs in the selected LGAs.

Null Hypothesis 2 (H₀²): There is no significant difference among respondents on the effectiveness of CBHE in improving health knowledge, attitudes and practices among community members in Enugu State, Nigeria

**Table 5: Test of Significance for Effectiveness of CBHE Programs**

Indicators	t-Value	p-Value
Health Knowledge	4.2	0.000
Attitudes	3.5	0.001
Practices	2.8	0.005

The results show that there is a significant difference in health knowledge, attitudes and practices among community members exposed to CBHE programs and those not exposed ($p < 0.05$). The t-values indicate that health knowledge has the highest significance ($t = 4.2, p = 0.000$), followed by attitudes ($t = 3.5, p = 0.001$), and practices ($t = 2.8, p = 0.005$). Therefore, we reject the null hypothesis ($H02$) and conclude that CBHE programs are effective in improving health knowledge, attitudes and practices among community members.

Null Hypothesis 3 ($H0^3$): There is no significant difference among respondents on factors that influence the availability and effectiveness of CBHE in Enugu State, Nigeria.

Table 6: Test of Significance for Factors Influencing Availability and Effectiveness of CBHE Programs

Factors	F-Value	p-Value
Community Participation	6.5	0.002
Cultural Acceptability	8.1	0.001
Resource Availability	4.3	0.014

The results show that community participation, cultural acceptability and resource availability significantly influence the availability of CBHE programs ($p < 0.05$). The F-values indicate that cultural acceptability has the highest significance ($F = 8.1, p = 0.001$), followed by community participation ($F = 6.5, p = 0.002$) and resource availability ($F = 4.3, p = 0.014$). Therefore, we reject the null hypothesis ($H03$) and conclude that community participation, cultural acceptability and resource availability are significant factors influencing the availability of CBHE programs.

Discussion of the findings

The study investigated and evaluated the availability and effectiveness of community-based health education (CBHE) programs in Enugu State Nigeria, relying on selected local Government areas. The results of the study showed that CBHE programs are available in the selected LGAs, with trained community health workers, health education materials and infrastructure being the key indicators of availability. The study also found that CBHE programs are effective in improving health knowledge, attitudes and practices among community members.

The findings of the study are consistent with previous studies that have shown the importance of CBHE programs in improving health outcomes in Nigeria (Okafor, et



al., 2018; Uzochukwu, et al., 2019). The results highlight the significance of community participation, cultural acceptability and resource availability in influencing the availability and effectiveness of CBHE programs. One of the key implications of the study's findings is that policymakers and program managers should prioritize the deployment of trained community health workers, provision of health education materials and infrastructure development in order to improve the availability and effectiveness of CBHE programs. Additionally, the study's results suggest that community participation and cultural acceptability are crucial factors that should be taken into account when designing and implementing CBHE programs.

The findings also have implications for the scaling up of CBHE programs in Nigeria. This is as the results suggest that CBHE programs can be effective in improving health outcomes in different contexts, and that these programs should be considered as key strategies for improving health outcomes, not only in Enugu State but Nigeria in general.

Conclusion

This study investigated and assessed the availability and effectiveness of community-based health education (CBHE) programs in selected Local Government Areas (LGAs) of Enugu State, Nigeria. The results showed that CBHE programs are available and effective in improving health knowledge, attitudes and practices among community members. Community participation, cultural acceptability and resource availability were found to be significant factors influencing the availability and effectiveness of CBHE programs. The findings of the study findings have implications for policymakers, program managers and other stakeholders involved in the design and implementation of CBHE programs in Nigeria. The results suggest that CBHE can be an effective strategy for improving health outcomes in Nigeria; hence the program should be scaled up and sustained across the States of the Federation.

Recommendations

Based on the findings, the study makes the following recommendations.

For Policymakers: They should

- Prioritize the deployment of trained community health workers, provision of health education materials and infrastructure development to improve the availability and effectiveness of CBHE programs.
- Integrate CBHE programs into the national health policy and provide adequate funding for their implementation.

Program Managers:

- Community members should be involved in the design and implementation of CBHE programs to ensure cultural acceptability and community participation.
- Should provide regular training and support for community health workers to improve their skills and knowledge.



Other Stakeholders should

- Support the development of CBHE programs in Nigeria through partnerships and collaborations with government agencies, non-governmental organizations and community-based organizations.
- Advocate for the scaling up and sustaining of CBHE programs in Nigeria.

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