PARTICIPATORY HEALTH NEEDS ASSESSMENT OF OBUFA ESUK COMMUNITY IN CALABAR SOUTH LOCAL GOVERNMENT, CROSS RIVER STATE, NIGERIA

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Abstract

Community needs assessment (CNA) is a diagnostic tool used for identifying strengths and weaknesses (needs) within a given community and involves gathering information about social, health, environmental and behavioural factors pertinent to their quality of life, level of community engagement through organized local policy structure. The paper describes the processes involved in implementing CNA for Obufa-Esuk community, and to document findings with recommendations for implementation of interventions for identified priority health challenges in the community. The CNA was conducted using the PRECEDE-PROCEED model as conceptual framework to guide the development of the instrument used and organizing the assessment of Obufa-Esuk community for indicators associated with their community social life, physical and mental health, environmental and spiritual health. The instrument (focus group discussion guide and key informant interview guide) for data collection were pretested, modified and adopted for the final study. The result of the findings shows that malaria, diarrhoea and poor personal/environment hygiene where the major health issues within the community, other themes in the FGD shows the practice of self-diagnosis and self-treatment, the use of the cemetery as farmland and poor utilization of the primary health center. The paper concludes that the use of a participatory approach to community health needs assessment remains an important strategy in community diagnosis as it helps to build trust and ownership of health intervention to address the public health challenges which exist in communities.

Key words: Community needs assessment, malaria, self-diagnosis and self-treatment, precede-proceed model, community

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INTRODUCTION

Insights into community health needs are crucial for the sustenance and development of the people, especially in sub-Saharan Africa. This is because having a good understanding of the individual needs and that of the wider community is important in the planning and provision of local health care services (Wright, Williams and Wilkinson, 1998, p.1310) for people. That is, understanding the actual public health challenges facing a community is important for health planning and execution of effective health interventions, despite the existence of physical, financial and social barriers to the use of such health interventions (Hanson, Ranson, Oliveira-Cruz and Mills, 2003).

Existing global health interventions, guidelines and programmes for the promotion of primary health care across communities (urban or rural) emanate from having sufficient information on the community in question. Hence, the need for conducting regular community health assessment to determine the state of health of a given communication has become paramount to the promotion of optimum population health.

According to Manitoba Health Guidelines (2010), the concept of community health needs assessment as a dynamic ongoing process undertaken to identify the strengths and needs of the community, enable the community-wide establishment of health priorities and facilitate collaborative action planning directed at improving community health status. Community health needs assessment is essential to the development of a community health improvement plan which is critical for developing policies and defining actions to target efforts that promote health. It’s a collaborative process and should help enlist the gamut of strengths, weaknesses, challenges, and opportunities that exist in the community (Healthy People, 2010), to “improve the efficiency and effectiveness of health improvement activities by defining priority strategies to reach the goals that
have been set” (Davis, 1998, p.1513), while the needs assessment is about identifying “what is” and “what should be” (Altschuldand Kumar, 2010).

Several studies have been carried out on community health needs assessment (Rao, 1972; Stromberg, 1975; Williams and Wright, 1998; Dowell, Crampton, and Parkin, 2001; Abanobi, 2012; Abdulraheem, 2007; Nnebue, Ebenebe, Adogu, Adinma, Ifeadike, and Nwabueze, 2014). Some of these studies have focussed on describing the state of health of local people; community participation and involvement; determining the adequacy of resources for provision of maternal health services at the primary health care level; enabling the identification of the major risk factors and causes of ill health; and identifying notable actions needed to address these (WHO, 2001). However, major risk factors can be associated with the incidence and prevalence of communicable, non-communicable or neglected tropical diseases depending on the context. As such the need for health literacy and advocacy has been shown to be of uppermost importance in ensuring that people within communities remain healthy at all times (Nutbeam, 2000). Although, most community projects are not strategically based on such systematic community diagnosis and prioritization process, hence projects (health) are being implemented that do not address any felt need or have relevance to problems emerging from the community especially in some underserved and developing communities. The main purpose of this theory-based CNA study therefore, is to show what health challenges exist within the community, proffer solutions to address the challenges and document outcomes to guide future health interventions required in Obufa-Esuk community.
STUDY AREA

This study was carried out in Obufa community; Obufa-Esuk is part of Calabar South Local Government Area. It is an Efik speaking community and shares most of the health concerns inherent in Cross River State with an estimated population of 3,801 as of 2008. Historically, members of the community migrated from Cameroun and settled in the present land. Immigration has formed the major source of its population growth in the community. The immigrant communities include Ibibio, Oron, Ibo, Ijaw, Anang, Urhobo, and other tribes within and outside Nigeria. Despite the ethnic intermix, a fraction of indigenous population mostly of the Efiks/Efut extraction are found in the locality (Okpiliya, Effiong, Imoke, and Eja, 2013). Predominantly, inhabitants of the community are mostly civil servants and subsistence farmers. Engaging and involving members of Obufa-Esuk community in identifying their health needs was very important as this will help develop a more culturally appropriate intervention in the community.

THEORETICAL FRAMEWORK

The PRECEDE-PROCEED model is an ecological model for needs assessment, programme planning, implementation and evaluation. It provides opportunity to conduct assessment on five domains of social determinants and quality of life measures in the community, epidemiological assessment of prevailing health issues, behavioural/environmental assessment responsible for the identified health-related problems, educational (Personal-level and environmental-level) antecedents directly responsible for the behavioural and environmental conditions and finally, the policy/administrative issues remotely driving the community status. Community participatory model is a tool for designing, implementing, and evaluating health behaviour change programs. It
was originally developed in the 1970’s by Green and colleagues (Malto, 2012). The PRECEDE-PROCEED model was developed for use in public health. Its basic principles, however, transfer to other community issues as well. It’s also applicable in community intervention in general. The assumption behind the PRECEDE-PROCEED lies on the prevention of illness and promotion of health, and, by extension, about other community issues as well. These include: Since the health-promoting behaviours and activities that individuals engage in are almost always voluntary, carrying out health promotion has to involve those whose behaviour or actions you want to change.

Health is, by its very nature, a community issue. It is influenced by community attitudes, shaped by the community environment (physical, social, political, and economic), and compounded by community history. This model requires that, when a problem affecting a particular population has been identified through community participatory diagnosis, there is need for a project team to develop an intervention with the help of the community to solve the identified health needs. The PRECEDE-PROCEED, has been the cornerstone of health promotion practice for more than three decades (Malto, 2012).
The PRECEDE-PROCEED model consists of 8 phases (four planning phases, one implementation phase and 3 evaluation phases) which included social assessment phase, epidemiological assessment, educational and ecological assessment, administrative and policy assessment, implementation, process evaluation, impact evaluation, and finally the outcome evaluation. The PRECEDE-PROCEED model (Green and Kreuter, 2005) is probably more widely known and understood by public health professionals. When PRECEDE-PROCEED model is properly applied will help improved rigor in identifying factors on which interventions can be based and to establish more appropriate objectives. This, in turn, Influences better quality evaluation designs.
for programs. Planning models can also provide a holistic picture of a health promotion program and thereby ensure that key components are appropriately and adequately addressed and evaluated (Peter, Steve, Marg, Donna, and Mark 1997).

METHODS

This CNA was designed based on the four main steps using the PRECEDE-PROCEED model as a conceptual framework to guide the development of the instrument used and organizing the implementation of assessing Obufa-Esuk community, for indicators associated with their community social life, physical and mental health, environmental and spiritual health. The instruments for data collection were pretested. Ten Key informant Interviews (KII) and three Focus Group Discussions (FGD) were conducted. The researcher applied four main steps in organizing the community which included planning, organizing, data collection using a multi-stage purposive sampling (Onwuegbuzie and Leech, 2005). Data collected were analyzed using thematic content analysis as the data (transcripts) was coded into themes and sub-themes (Strauss and Corbin, 1990). The coding, summarizing of the findings, and sharing the results with the community facilitated action planning. The PRECEDE/PROCEED model was used as a guide in the needs assessment process.

To be culturally sensitive, the research team visited the court of the clan head of the researched community and other key stakeholders living within the community to make findings about the community. Participants in the focus group discussion were drawn from people who lived and work in Obufa-Esuk community, including the key informants based on certain inclusion and exclusion criteria. A simple interview protocol comprising of questions that focused on indicators
of physical, mental, social, environmental and spiritual health was used. Recurrent themes from the key informant interviews were collated to form the focus group protocol. A maximum of nine (9) community members participated in each the FGDs which were done in three phases.

All participants of both the key informant interviews and focus group discussions were adults, aged 18 and older. They were informed that their participation was voluntary and they could withdraw at any time during the interview process, should they feel uncomfortable with answering the questions or talking in the presence of others (FGD participants). A number of questions guided the FGD protocol, such as; what are those most common health needs and health issues within this community? What are the leading causes of death or disability? What are the leading Causes of premature death or disability? What are the most common diseases or injuries? What is the burden of illness, or the cost of resources use, for these diseases or injuries? What are the most common reasons for hospitalization? Do community members use emergency services? What are the reasons for the use of emergency service and out-patient visits? Are there opportunities in this community to make substantial gains in health status? What are the key areas where we think we can improve the system to reduce the spread of disease avoid injury/accidents and reduce cases of hospitalization? Also, what alternative health interventions can be used to promote health and wellbeing?

General observation and community needs assessment was necessary as it helped the research team to know the health status of the community. A thematic content analysis was done based on open and axial coding (Strauss and Corbin, 1990) approach to analyse the transcripts derived from
the key informant interviews and FGDs. Ethics approval was sorted for from the department IRB at University of Calabar, Cross River, Nigeria.

RESULTS

A total of ten KII and three FGDs were conducted. Data collected were analyzed by thematic appraisal. The results derived were summarized shared with primary stakeholders in the community to facilitate action planning and implementation of findings. Data collated from the focus group discussion (FGD) and key informant interviews provided base line information on the current health status of the community and possible health intervention.

The priority health issues identified were the prevalence of malaria and poor sanitary conditions especially in the Goldie Market as one of the main cause of their health problems. The inability of the Government to implement the monthly sanitation exercise was also blamed for the poor sanitary conditions of Obufa-Esuk; however, personal responsibility on maintaining a clean environment was not strongly expressed or supported when few focus group participants suggested it. Participants were of the opinion that:

“*The Government is no longer doing their work. The monthly environmental sanitation which is often carried out every last Saturday of the month is no longer been observed in this community because the Governments are no longer interested*” (*FGD phase 1 participant*).

“*We cannot blame the Government because if anything happen to our health we will be held responsible. We will spend money and time in the health facility*”. (*FGD phase 2 participant*)
“Apart from the inability of the state government to implement monthly sanitary regulation, people are not ready to change, knowing very well that when they fall sick, they will be the one to pay in the hospital” (FGD phase 3 participant)

Some participants in the focus group discussion also identified self-diagnosis and self-treatment of malaria as the major cause of deaths from malaria. When participants where ask what where the reasons for the use of emergency service and out-patient visits? A high majority of participants said its malaria. While the emergent theme was the use of the cemetery as farmland and participants had opposing views about its health implications. A participant stated that:

“Goldie cemetery is now used as farmland for the cultivation of vegetables and other food crops, I don’t know if there is any health implication of eating crops cultivated in such land” (FGD phase 1 participant).

However, it was deemed disrespectful towards the dead and the community leaders asked for help in creating awareness and asking community members not to use the Goldie cemetery as farmland. The authors observed that there were blocked drainage systems within the community and the cemetery was overgrown with weeds, providing breeding place for most disease vectors. Since the health implications of farming in cemeteries are not well known, members of the community showed less concern. Another participant elaborated on the issue and said that:

“It is disrespectful to the death, although our tradition has not made any law on cultivating crops where corps is buried. The cemetery is bushy and those who are supposed to take care of the cemetery are not doing their work. We are calling on the government for their assistance” (FGD phase 3 participant)

When they were asked to offer suggestions for improving the health status of Obufa-Esuk community, the participants were interested in having health information sessions and
interventions by both government and non-governmental agencies to increase their level of health literacy. This was explained by some participants that:

“We are ever ready for any intervention if the Government or Non-Governmental Organization can implement the intervention for the priority health issues in this community” (FGD Phase 2 participant)

“Our community is peaceful and ever ready to accept any intervention”. (Key informant one)

Participants in the focus group discussion also identified poor utilization of the health center and the inability of pregnant women to sleep under insecticide treated net (ITN) as one of factor that contribute miscarriages among pregnant women. Most participants complain of epileptic power supply that they cannot sleep under insecticide treated when there is no light in hot weather that they prefer using the ITN during raining season. Also one of the participant in the focus group identified diarrhoea as one of the health issues in the community that the prevalence rate is usually high during rainy season. The participant stated that:

“I think diarrhoea is also one of the health issue affecting this community, recently my child was defecating watery faeces and when I rushed him to the hospital, after medical diagnosis, the health worker told me that my child was diagnosed of diarrhoea” (FGD Phase 3 participant)

Some other participants were of the view that:

“Causes of malaria in our community are as a result of the presence of water bearing plants, urbanized containers, block drains, bushy surroundings and our inability to acquire or use insecticide treated nets.” (Key informant three)

“Two weeks ago, I was sick, and when I went to the hospital, I was told that it was malaria, I spent about ₦1300 to get drugs” (FGD phase 3 participant)
DISCUSSION

Data gathered from Obufa-Esuk community during social diagnosis reveals that members of the community live a communal Efut life, still maintaining the cultural integrity of people, they celebrate cultural festival, bringing family members from far and near which serves as a bonding factor, some are Christians while few members of the community are pagans. The community owns a central market known as Goldie market where they buy and sell food stuffs. As a result of the social assessment done, this study was able to articulate the community’s needs and desires while considering the communities problem solving capacity, strengths, and resources, and the readiness to change. That is, their readiness which can influence whether health interventions can be implemented in, and ultimately integrated into the community (Castañeda, Holscher, Mumman, Salgado, Keir, Foster-Fishman, and Talavera, 2012).

From the assessment, the study indicates that the community lacks enough resources to address the health problems existing within the community. While behaviours or lifestyles that contribute to severity of the identified health problems include poor personal hygiene among some community members, opened waste bins closer to homes, and not sleeping under ITN. Behaviour of other members of the community that can impact negatively on the health of community members most at risk groups within the community includes, dumping of refuse on drainage system and littering of rubbish within the market. As of the time this research was carried out, no epidemiological data was available for Obufa-Esuk community on the prevalence of the identified problem.

Life in a clean environment is vital in the prevention of communicable diseases such as Malaria. That is, not having stagnant water and heap of refuse dump close to your abode was necessary to
ensure that people in the community will be healthy. As reported by Conant (n.d), keeping a clean environment and the proper disposal of human waste are necessary for good health. That is, a clean environment is pertinent to keeping people healthy at all times. Therefore the lack of a clean environment and surrounding within the community was seen a major cause of poor health conditions. However, self-diagnosis and self-treatment remains a public health treat globally (Abosed, 1984; Geissler, Nokes, Prince, Odhiambo, Aagaard-Hansen, and Ouma, 2000; Chang and Trivedi, 2003; Solomon and Abede, 2003; Sharma, Verma, Sharma, and Kapoor, 2005; PhalkePhalke, and Durgawale, 2006; Ali, Ibrahim and Palaian, 2010; Joshi, and Shalini, 2011; Shveta and Jagmohan, 2011; Fadare and Tamuno, 2011; Kumar, Kanchan,Unnikrishnan, Rekha, Mithra, Kulkarni, Papanna, Holla, and Uppal, 2013; Bennadi, 2014), especially in developing countries (Shakoor, Taylor and Behrens, 1997; Harpham andMolyneux,2001; Kumar et al, 2013; Ansumana, Jacobsen, Gbakima, Hodges, Lamin, et al, 2013; Metta, Haisma, Kessy, Hutter and Bailey, 2014) were access to health services remains a challenges and cost of care is high for the poor (Lawal, 2014). As a major cause of self-diagnosis and self-treatment is out-of-pocket expenditure for health services which forces many families into poverty and pushes people to result to self-care. Various studies (Reeves, Finch, Bax, Davey, Wan Po, Lingam, Mann and Pringle, 1999; Kayalvizhi and Senapathi, 2010;Osemene and Lamikanra, 2012) on self-medication show that as a practise it disadvantages outweighs its advantages because the knowledge of its benefits and risk among users is inadequate. In addition to the other issues raised by the participants in Obufa-Esuk community, the use of the cemetery for farming activities by some community members contributes to the worsening health condition people are being faced with. This action
by some members of the community is attributable to the absence of land to carrying out their farming and the complexity involved in the acquisition of farmland by residents.

Having an efficient health information system (HIS) and service desk at the community primary health care centre is paramount to ensuring that people are well informed on health issues (Higgins TC, Crosson J, Peikes D, McNellis R, Genevro J, Meyers, 2015; Tomasi, Facchini and Santos Maia, 2004). Health information remains a core part of the building blocks for strengthening any health system (WHO, 2007). That is, a well-functioning HIS should offer reliable and timely information on health determinants, health status and health system performance, and be capable of analysing all this information to guide activities across all other health system building blocks (WHO, 2007). Therefore a HIS as a tool for community health assessment, provides up-to-date information and use of data for policy and programmes (AbouZhar, 2013) channelled to improve health of a given community and the health status of its inhabitants. However, available health information within Obufa-Esuk was inadequate for its residents as reported in this study. This in turn adds to the poor health literacy and health outcomes among residents on certain health issues which affect them in the community. But having an effective and efficient HIS will enable decision-makers at all levels of the health system to identify progress, problems, and needs; make evidence-based decisions on health policies and programs; and optimally allocate scarce resources (Bodart and Sapirie, 1998; Simba and Nwangu, 2004; WHO, 2008 in Mutale, Chintu, Amoroso, Awoonor-Williams, Philips, Baynes, Michel, Taylor and Sherr, 2013) to the needed community.

Finally, the under utilisation of the existing health care centre within the community possesses a continued challenge for health promotion within the community. Studies (Ibrahim, 2001; Ballard,
2003; Awofeso, 2010; Ezeonwu, 2013; Peabody, Taguiwalo, Robalino & Frenk, 2006) have reported that the following factors (1) cost of care and access to the service; (2) Outcome of treatment; (3) Quality of care; (4) Service delivery (prompt, efficient and effective); (5) Availability of drugs, medicines and vaccines; (6) Staff strength (health workforce available); (7) Equipment (e.g. Number of beds, machines for treatment); (8) Health information (useful health tips and basic knowledge to stay healthy); (9) and Availability of health and social support groups or networks tend to influence people to utilise a given health service. Some of these factors were also found to be present in Obufa-Esuk community of Cross River state, Nigeria.

On the other hand, diarrhoea was reported as a major health challenge for residents within the community and sometimes leads to loss of live. Globally, deaths from diarrhoea among children aged less than five years have been estimated at 1.87 million (Boschi-Pinto, Velebit, and Shibuya, 2008). Seventy-eight per cent of these occur in the developing world. In 2009, both the United Nations Children’s Fund (UNICEF) and World Health Organization (WHO) estimated that 151,600 children die annually from diarrhoea in Nigeria. A complete state of health is a desire goal by every Nigerian, including freedom from all kinds of diseases not excluding malaria which is an endemic disease in Cross River state of Nigeria. Malaria remains one of the most endemic diseases of the tropics despite several years of concerted efforts towards its control. Hundreds of millions of people are being affected and pregnant women are more susceptible together with little children (Aluko and Oluwatosin, 2012).

According to Adefioye, Adeyeba, Hassan and Oyeniran, (2010), studies have shown that more than 300-500 million individuals throughout the world are infected with malaria and 1.5-2.7
million people die of it yearly. In Nigeria malaria, efforts to curb the spread of Malaria led to the establishment of the Roll Back Malaria campaign. In the campaigns report of 2008, there are an estimated 300 million acute cases of malaria every year around the world, resulting in more than one million deaths. While in Nigeria, according to the 2008 report, in an estimated population of over 140 million people, about 97% are exposed to stable malaria transmission.

Furthermore, malaria in Nigeria, according to the Federal Ministry of Health (FMoH, 2005a), is responsible for 60 percent of outpatient visits to health facilities; 30 percent of childhood deaths; 25 percent of deaths in children under one year; and 11 percent of maternal deaths. Additionally, the FMoH (2005b) estimates a financial loss from malaria (in the form of treatment costs, prevention, loss of man-hours, etc.) to be roughly 132 billion Naira per year (approximately $838,564,000 USD). The malaria situation in Nigeria is very burdensome and it impedes human development. It is both a cause and consequence of underdevelopment (Department for International Development, 2008). Malaria remains a public health threat in developing countries. In Africa, approximately 90 percent of these deaths occur across the sub-Saharan region, mostly in young children. Malaria is not just a disease commonly associated with poverty: some evidence suggests that it is also a cause of poverty and a major hindrance to economic development (Wogu, Nduka and Wogu 2013). Although tropical regions are most affected, malaria's furthest influence reaches into some temperate zones that have extreme seasonal changes. The disease has been associated with major negative economic effects on regions where it is widespread. During the late 19th and early 20th centuries, it was a major factor in the slow economic development of the American southern states (Hartman, 2010).
Poverty can increase the risk of malaria, since those in poverty do not have the financial capacities to prevent or treat the disease. In its entirety, the economic impact of malaria has been estimated to cost Africa $12 billion USD every year. The economic impact includes costs of health care, working days lost due to sickness, days lost in education, decreased productivity due to brain damage from cerebral malaria, and loss of investment and tourism (Greenwood, Bojang, Whitty, and Targett, 2005). The disease has a heavy burden in some countries, where it may be responsible for 30–50% of hospital admissions, up to 50% of outpatient visits, and up to 40% of public health spending. Cerebral malaria is one of the leading causes of neurological disabilities in African children (Isahand Nwoboda, 2009).

Studies comparing cognitive functions before and after treatment for severe malarial illness continued to show significantly impaired school performance and cognitive abilities even after recovery (Fernando, Rodrigo, and Rajapaske, 2010). Consequently, severe and cerebral malaria have far-reaching socioeconomic consequences that extend beyond the immediate effects of the disease. Therefore, the degree of malaria infestation varies from region to region in Nigeria. This spatial attribute of malaria infestation across regions necessitate the needs for malaria mapping among researchers. The mapping of patterns in the spatial distribution of features has been of great significance in virtually all fields. The primary aim in the mapping process is to bring out hidden relationships among variables (Oluwafemi, Babatimehin, Oluwadare, and Mahmud, 2013). Detailed mapping of malaria in Africa using actual malaria data have been very difficult due to paucity of data (Hay, Myers, Burke, Vaughn, Endy, Ananda, Shanks, Snow, and Rogers, 2002). Malaria situation in ObufaEsuk community is not different from the situation generally experienced at both the state and national level in Nigeria. The need to educate members of the
community on the effect of self-diagnosis and self-treatment is hardly emphasized at community level; the target of government to eradicate malaria in Nigeria becomes a challenge as some members of the community are not ready to take preventive approach towards malaria eradication.

CONCLUSION

The use of PRECEDE/PROCEED model is very relevant in health needs assessment if a health programmer really wants community participation, involvement and continuity of the programme. As at the time of writing this paper, the implementation phase of PRECEDE/PROCEED in Obufa-Esuk community was about to commence. There is need for timely interventions to reduce the burden of the identified health problems in the community. Also further research in Obufa-Esuk community to understand the dynamics of health care delivery, and factors influencing the spread of diseases. The use of a participatory approach to health needs assessment is recommended before carryout any needs assessment in a rural/peri-urban communities within the region because participatory approaches tends to create conducive environment for the identification of health issues and involves the community in the implementation of health programmes.

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Author’s contribution

The work was conceived by Emmanuel E. Ugobo, SomtoAmanambo, Antor O. Ndep, Mary E. Okon, and Michael Bepeh. Data was analysed by SomtoAmanambo, Antor O. Ndep, Mary E. Okon, and Michael Bepeh. Initial draft was written by Emmanuel E. Ugobo. The paper was then reviewed and finally written up for publication by S. Akinmayọwa Lawal.
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REFERENCES


