

RESEARCH NOTE

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“Are you sure you want to go to that village”; a qualitative review of the challenges, experiences and lessons learnt from a nutritional survey in rural and urban communities in Nigeria

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Abstract

Introduction The importance of community-based studies is not in doubt, however only few exist because of the complexity and challenges associated with them. Little data exists on these complexities and challenges in West Africa. This study aimed to describe the experiences, challenges and lessons learnt from a community-based Nutritional survey carried out in Nigeria. This was a qualitative review of the experiences and challenges involved in a community-based research project. A thematic content analysis was done and the findings were presented as themes and sub-themes, with the inclusion of quotes that accurately depicted the themes/sub-themes.

Results Two broad themes emerged from the study. For observations and experiences with community entry, sub-themes include the finding that community structure in the books were different from community structure on the ground, there was a general mistrust among community members, poor access to some communities and/or houses, there was a poor perception of need for the research, there was concern about risk to study participants and about benefit to the participants. The five sub-themes that pertained to the data collection process include the issues with timing, gender, data quality, men being at home and safety of the research team. Guided community engagements are recommended.

Keywords Community-based, Qualitative study, Experiences, Challenges, Lessons learnt, Nigeria

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Introduction

Community based studies are gaining increasing popularity in health research [1–3]. Over the last decade, increasing emphasis has been placed, not only on community-based data collection, but the involvement of communities in the different stages of research. The importance of community-based studies (not necessarily the community-based participatory research only [4, 5]) is not in doubt, however there are complexities and challenges associated with community engagement [1, 3–5]. A recent community-based Nigerian study reported experiencing such complexities and challenges, some of which were general misconceptions, difficulties in mapping houses, working in hard-to-reach communities as well as difficulty in collection of blood and naso-oropharyngeal swabs [6].

Data on the experiences or challenges with community engagement are generally scarce, but almost non-existent in Nigeria. After a diligent literature search, no study was found that focused on describing these experiences, or shared some lessons learnt within the Nigerian context. This is important because it will provide information that may help researchers in carrying out community-based studies in Nigeria and related settings. This study therefore aimed to describe the experiences, challenges and lessons learnt from a community-based Nutritional survey carried out in Nigeria.

Main text

Methods

Study setting

The study was conducted in Gombe and Osun states in Northeast and Southwest geo-political regions of Nigeria respectively. According to 2018 Nigeria Demographic and Health Survey [NDHS], Northeast and Southwest geo-political regions have the lowest and highest wealth index respectively [7]. Two local government areas (LGAs) were randomly selected from each of the two selected states (one from rural and one from urban LGAs), and two wards were also randomly selected from each of the selected LGAs making a total of eight wards. From each of the selected wards, five enumeration areas (EAs), which were intended to serve as the communities, were randomly selected making a total of 40 EAs.

Study design

This was an ethnographic review of the observations, experiences, challenges and lessons learnt while carrying out a community-based research project titled “the double burden of under- and over-nutrition among school-aged children and adolescents in two Nigerian states” [8–11]. The researcher and the supervisor, who were the data collectors for this study, lived within these communities during the period of data collection (3 months

each in Osun and Gombe communities). A great effort was made at bracketing the personal beliefs, perceptions, experiences and potential biases of the researcher and supervisor, by actively analyzing the beliefs, experiences and potential sources of bias concerning this subject, and consciously setting them aside so that the reality of the perceptions and lived experiences of the communities could be captured. The emic perspective was used to understand the insider perspective as explained above, while the etic perspective was used to analyze them as reflected in the presentation of the results/discussion of the findings.

Study population and procedure

Data for the present study were collected from observations over a six-month period of community entry and data collection, and key informants' interviews (KII) of 14 gate keepers and members of selected communities that were engaged from the conception to the conclusion of the research project. The gate keepers included community heads/chiefs, chairmen of landlord associations, executives of the landlord associations, town criers and religious leaders. Observation of the entire process was done by the researcher and the supervisor for the study. The 14 respondents for the KIIs were purposively selected. While eight of the KIIs were scheduled (four in Osun and four in Gombe States), the remaining six were spontaneous short physical or phone interviews that were carried out based on some observations by the researcher and/or supervisor. A self-developed KII guide was used for the scheduled ($n=8$) KIIs, but the other KIIs ($n=6$) were prompted by issues arising from the daily review of the research processes that involved the researcher and/or supervisor. Even after the completion of the initial or official data collection process, some community leaders were still contacted on phone to have more clarifications on some issues that came up during data analysis. All respondents were adults, 18 years or older.

Data management

The different notes taken by the principal investigator and the supervisors, and the audio recordings during the interviews were all transcribed verbatim. The researcher, supervisor and a post-graduate student in public health checked the transcripts to make sure that they matched the recordings. The transcripts were carefully reviewed and a set of codes were developed to describe groups of words or categories with similar meanings. Initial broad coding was done according to major themes from the KII guide (deductive), but new codes and themes were also developed as they emerged from the data (inductive) using open coding [12]. Fine codes were developed under each of the initial broad codes. To increase reliability, 20% of the transcripts were double coded by a senior

Table 1 Major themes concerning observations and experiences with the community entry process

SN	Major themes	Matching Quotes
1	Community structure in the books different from community structure on the ground	<i>"All those documents you are holding are very old, I don't even understand them very well. I am very sure they (referring to the documents) will call this area a rural place. But you judge yourself, is this place rural? What is the difference between this place and ...? (mentions the nearby community) and yet they are called urban and we are called rural."</i>
2	General mistrust	<i>"The country is very hard now, we cannot just allow people to enter our houses, especially because we men are not usually at home"</i>
3	Poor Access	<i>"Are you sure you want to go to that village? The rain has washed away the road, you will have to pass through water"</i>
4	Poor perception of need	<i>"If you are looking for malnourished children, why don't you go to the IDP (internally displaced persons) camps, you will not find them here"</i>
5	Concern about risk to study participants	<i>"It is good that you are not collecting blood, because we cannot allow people using our children's blood for something"</i>
6	Benefit to the participants	<i>"So, if I choose to participate in this study, what will you give me and my child? Or we will just sit-down talk talk talk, upon nothing"</i>

Table 2 Major themes concerning observations and experiences with the Data Collection process

SN	Major themes	Matching Quotes
1	Timing of data collection	<i>"Haa, that one is hard o. In my family for example, we don't get home until about 5:30, 6:00 (in the evening). And when we get home, we want to rest a little, cook and stuff like that. Is it at that time that someone will now say he wants to fill questionnaire?"</i>
2	Gender issues	<i>"We cannot allow these men (male data collectors) into our houses because there is ba siga (a Hausa word for no entrance by men) in this community."</i>
3	Data quality issues	<i>"The anthropometric measurements were difficult to do in that village. Most of the houses did not have concrete floors and the weighing scale was just giving different readings when we used the bare floor (unpaved floor). We had to take all of them to the front of the church which had concrete floor"</i>
4	Men not at home	<i>"You don't know that if men come home early, their wives will just be troubling them with issues that don't concern them"</i>
5	Safety of research team at night	<i>"At a point, they had to bring a rechargeable lamp for us because it was dark and we had not finished. I was scared o, but thank God I had a man (the male data collector) with me"</i>

qualitative expert in a tertiary institution in Southwest Nigeria. The definitions of both the broad and fine codes were put together in a code book. Once the code book was established, transcripts were coded using NVivo version 11 software (QSR International Pty Ltd, Doncaster, Australia). A thematic content analysis was done by the researcher and the findings were presented as themes and sub-themes. Some quotes that accurately depict the themes or sub-themes were included in the result/discussion session. The author of the present study was the principal investigator of the research, and was involved at every phase of the study, therefore ensuring trustworthiness [13, 14] and dependability of the report. Triangulation was done with data from different sites and sources and the findings and discussion were presented in a synchronized form. Additionally, the consolidated criteria for reporting qualitative research (COREQ) was followed in the reporting of the present study [15].

Results and discussions

The themes and sub-themes generated are grouped into two broad groups; those related to the community entry process (Table 1) and those related to the data collection process (Table 2).

Observations and experiences with the community entry process

Community structure in the books different form community structure on the ground

Firstly, the designation of some communities as "rural" or "urban" did not seem accurate based on what was found in the communities. Some of the communities designated rural by the State Government should have been more appropriately urban, or at least semi-urban because of their similarities to the urban communities. Similarly, some communities designated "urban" should have been labelled "rural" or at most semi-urban for a similar reason as above. Another similar observation was that some communities designated urban were actually urban communities, but had communities within them that could best be described as rural. This was noticed in both states, but the rural that should have been urban communities were more in Osun, while urban that should have been rural were more in Gombe state.

Furthermore, using enumeration areas (EAs) as the communities or primary sampling units [7] for this study was challenging for two main reasons; defining the boundaries of the EAs was challenging and there was no leadership structure at that level especially for urban communities of the two states. These findings were corroborated by about 80% of the interviewees, and according to one of them; (responding to some of the

documents collected from the State and Local Government headquarters)

All those documents you are holding are very old, I don't even understand them very well. I am very sure they (referring to the documents) will call this area a rural place. But you judge yourself, is this place rural? What is the difference between this place and ...? (mentions the nearby community) and yet they are called urban and we are called rural.

Lessons learnt Almost all the urban areas visited (all in Osun state, and more than 70% in Gombe state) had been structured into smaller communities led by what is popularly called the landlord association (called landlord association defined communities (LADC) in this study). It is made up of house-owners and other household heads living in that LADC, and they met regularly (monthly in most places). They had clearly defined boundaries, and clearly defined leadership structure headed by a chairman. It was hence easier to work with LADCs in the urban communities.

Community entry was relatively easier in the rural communities for both states, because of the relatively simpler leadership structure. Most of the rural communities were headed by a chief (called different names depending on the locality), and his council.

General mistrust

There was a general mistrust for the study and the research team among about 70% of the community leaders, and about 80% were initially reluctant to give their permission for the study. This community mistrust in research has been similarly reported by previous researchers working on community-based research [1, 2]. The initial mistrust was due mainly to security concerns according to majority of them. One of them said;

The country is very hard now, we cannot just allow people to enter our houses, especially because we men are not usually at home.

The initial responses by the chairmen/community leaders are grouped into three;

Outright refusal A few of the chairmen or their representatives (about 10%) refused outrightly to permit the study or even speak to the other leaders about it. One of them said;

No o, not here. That is how we allowed some people the other time and they came here to cause confusion.

This refusal to participate in research due to previous unfavourable experience was also reported by an author in India [1].

Letters to the landlord association A very common response (about 60%) among the chairmen in urban communities was for the research team to write a letter to the landlord association stating the nature of the research, and their requests.

Invitation to the landlord association meeting Some of the chairmen (about 30%) invited the research team or the representatives to attend their landlord association meeting (with or without an official letter) and explain to the whole association.

Lesson learnt Doing some of the following (not necessarily all) helped to ease the mistrust and reluctance in most communities; going in project/official vehicles, having identity cards/badges on, wearing project T-shirts, caps or any identifiers, going as a team, not just a single person, and having preferably a mix of elderly, middle aged, young, females and males in the team. Other things like ethical approval, and letters of permission from the respective local government area headquarters also helped. Another thing that helped is leveraging on any form of social capital (i.e. occupational/professional affiliations, tribal affiliations or religious affiliations) that any member of the research team could have in the communities. This also makes the case for involving members of the study community(ies) into the research team as supervisors, data collectors or research assistants. Just writing letters to the association was not very effective, in most cases the letters were not considered at all, or it took a long time due to other matters, or the letters were not understood, or the request was denied. Attending the meetings were more effective, it afforded the opportunity to address the concerns and explain better.

Poor access

The challenges with accessibility were encountered at two levels during the research project. The first level involved poor access due to bad or non-existent roads to some communities, which was commoner in Gombe state. According to one community leader;

Are you sure you want to go to that village? The rain has washed away the road, you will have to pass through water.

The second level was a challenge mainly in the urban communities where many of the houses had high fences and tall gates which made access to the inhabitants difficult, and this was commoner in Osun state. Some of the

houses also had weapon-wielding security guards and/or fierce looking security dogs, which made access even more challenging.

Lesson learnt It may be helpful to exclude communities with very poor, or unsafe geographical access. However, in some cases, the challenge/difficulty with access were only found out while on the field. For these, the situation was assessed by the research team and decisions were made to either replace the communities or continue with them when there was a way out. Concerning the second level of poor access, two things were found to be helpful. Since many of the household heads attended the regular (usually monthly) landlord association meetings, it was helpful for the research team or its representatives to discuss and agree on the dates, days, time and modalities for the data collection during their visits to the landlord association meetings. Secondly, it was helpful to request that the community select chaperon(s) to go along with the data collectors from house to house that will be compensated for their time and efforts.

Poor perception of need

A common perception among many of the leaders especially in the urban communities of Osun state was that there was nothing wrong with the nutritional status of the children, adolescents and their mothers. According to one of them;

If you are looking for malnourished children, why don't you go to the IDP (internally displaced persons) camps, you will not find them here.

This assertion, and similar ones by community leaders were actually not true, because the research project found that there was one form of malnutrition in every community included [8].

Lesson learnt The research team should be prepared to explain the rationale, significance and/or the implication of the study, and any other questions raised or clarifications sought during the community engagement process.

Concern about risk to study participants

A major concern for the leaders in majority of the communities visited in both Gombe (about 60%) and Osun (about 80%) states was the risk(s) involved in the study process. Many were especially interested in whether any biological sample will be obtained from the study. One of the leaders said;

It is good that you are not collecting blood, because we cannot allow people using our children's blood for something.

Lessons learnt It will be challenging collecting biological samples in community-based studies in this setting. Furthermore, taking the research instruments to the meetings with the community leaders was very helpful. It helped for the community leaders to see them and get familiar with them, and even learn how they worked.

Benefit to the participants

A major concern in both Osun and Gombe states was the benefit/compensation that they will receive if they chose to participate in the study. As captured by a prospective study participant (mother);

So, if I choose to participate in this study, what will you give me and my child? Or we will just sit-down talk talk talk, upon nothing.

Lessons learnt An appropriate and worth-while compensation is very important when considering community-based studies, especially in this study setting. While care must be taken to ensure the compensation does not exert undue influence that could affect the quality of data collected, yet consideration for compensation for study participants cannot be over-emphasized. Saleh et al. [16] worked on participants' compensation in the context of a community-based study and also similarly found that compensation was important.

Observations and experiences with the data collection process

Timing of data collection

Majority of the households were practically empty during the day because most of the children would go to school and the parents would go to work during the day. This was especially the case in urban communities of Osun state. This corroborates a similar report by researchers in India [1]. According to one of the community leaders;

Haa, that one is hard o. In my family for example, we don't get home until about 5:30, 6:00 (in the evening). And when we get home, we want to rest a little, cook and stuff like that. Is it at that time that someone will now say he wants to fill questionnaire?

Lessons learnt: Data collection was better done late in the day (usually after 4 pm) or at weekends. Apart from agreeing with the community leaders on the time for data collection during weekdays and weekends, and also engaging chaperons to go with the research teams, some other things were found to help in managing this potential challenge with the time for data collection. Firstly, a detailed mapping of the houses and/or households, and well-organized movement schedules for the research assistants/data collectors was very helpful. Secondly,

a reasonable and appropriate compensation should be given for the respondents' time. Thirdly, the time for data collection from each respondent should not be too long, and the data collectors should be well trained, with many prior role-plays, to ensure data collection is as smooth and fast as it should be. Lastly, the constraints of time as described above will potentially imply a relatively longer time for data collection, and this should be factored into the proposal, planning and budgeting.

Gender issues

During data collection, the data collectors were paired with a male and female in each team, and the female data collector took the measurements that involved contact with the women or their female adolescents. However, in some communities in Gombe state, male data collectors were not even allowed into the houses at all, and/or were not allowed to interview or take measurements from women or female adolescents. One of the community leaders in Gombe State said;

We cannot allow these men (male data collectors) into our houses because there is ba siga (a Hausa word for no entrance by men) in this community.

While it is not possible to rule out the possibility of this in Osun state, such data was not obtained in this study.

Lesson learnt While the pairing of male and female data collectors worked well, it is important to be aware of this challenge, especially in some parts of Northern Nigeria. Although this is not limited to Nigeria [1].

Data quality issues

The design of the survey meant that data collectors had to be carrying the research instruments, including instruments for anthropometric assessment from house-to-house, and this posed some challenges to data quality management. This challenge ranged from not finding a conducive place that will afford some privacy and confidentiality for data collection in some settings, and finding paved floors or solid flat and smooth floors for placing the bathroom weighing scales and stadiometers in other settings. One of the data collectors noted;

The anthropometric measurements were difficult to do in that village. Most of the houses did not have concrete floors and the weighing scale was just giving different readings when we used the bare floor (unpaved floor). We had to take all of them to the front of the church which had concrete floor.

Lessons learnt Adequate engagement with household heads and/or concerned adults was enough to address the

issue in many cases. In some other instances, the use of chaperons chosen by the household head or concerned adults was helpful. While the interviews were mostly done within the selected houses, other settings outside but not too far from the selected houses had to be used for anthropometric measurements in houses lacking the appropriate floors for placing weighing scales and stadiometers. In some of the cases, respondents were pooled to a central, not so distant place to have their anthropometric assessments done.

Men not at home

Fathers were part of the study population, but less than 10% of the selected households had the fathers present in both states. While it could be reasoned that men were not at home because they were busy working to provide for their homes, there seems to be some cultural side to it. According to one of the male members of the community;

You don't know that if men come home early, their wives will just be troubling them with issues that don't concern them.

This view was corroborated by other men in different communities.

Lessons learnt It is challenging to include men/fathers in community-based studies. However, if men/fathers need to be included, informing them before-hand and provision of compensation for the respondents' time could be helpful.

Safety of research team at night

The plan was for data collection to end by 6pm daily, however this was not always possible. This made some of the data collectors (about 40% reported some forms of safety concern) uneasy. According to one of them;

At a point, they had to bring a rechargeable lamp for us because it was dark and we had not finished. I was scared o, but thank God I had a man (the male data collector) with me.

Lessons learnt Community involvement/engagement, use of chaperons, pairing male-female data collectors, use of supervisor, daily provision of mobile phone call cards, and provision of a project vehicle that conveyed data collectors to and from the communities were found to be helpful.

Limitation of the study It is important to note that the findings reported in this study may not be generalizable to other parts of Nigeria or other countries, however they

provide some general principles, as corroborated by other researchers, that may be generally helpful when designing community-based studies in Nigeria and similar settings.

Conclusion

The study highlights the challenges and complexities involved in community-based studies in two Nigerian states, and some lessons learnt which could guide future community-based research in the study setting. Some of the challenges include discrepancies between community structure in the books and on ground, general mistrust, poor access, poor perception of need, concern about risks and benefits to participants, timing of data collection, gender of data collectors, data quality, absence of men in the households and safety of research team. It is recommended that prospective community-based researchers should be guided by these findings before, during and even after the research projects.

Abbreviations

CARTA	Consortium for Advanced Research Training in Africa
COREQ	Consolidated criteria for reporting qualitative research
EA	Enumeration areas
KII	Key informants' interviews
LADC	Landlord association defined communities
LGA	Local government areas
NDHS	Nigeria demographic and health survey

Supplementary Information

The online version contains supplementary material available at <https://doi.org/10.1186/s13104-024-07061-7>.

Supplementary Material 1

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Author contributions

AAA conceived and coordinated the entire research project, including data management and the writing of the final report.

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Data availability

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request. They could not be publicly banked because of some ethical concerns.

Declarations

Ethics approval and consent to participate

Ethical clearance was obtained from the Human Research Ethics Committee of University of the Witwatersrand (certificate No: M190514) as well as the Ministry of Health in Osun State (certificate No: OSHREC/PRS/569T/155) and Gombe State (certificate No: MOH/ADM/621/1/142). In accordance with the Nuremberg code and the Declaration of Helsinki, the principles of informed consent, respect for participants, fair subject selection, and favourable risk-benefit ratio were followed for this study. A great effort was also put into maintaining the confidentiality of the participants. Permission to conduct the study was sought and obtained from all relevant gate-keepers including community heads, other community leaders, religious heads and household heads, and informed consent to participate was obtained from all participants.

Consent for publication

Not applicable.

Competing interests

The authors declare no competing interests.

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