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MULTIDIMENSIONAL POVERTY IN GENDER-HEADED FARMING HOUSEHOLDS IN PERI-URBAN BADAGRY LGA, LAGOS STATE, NIGERIA

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ABSTRACT

This study explored the multidimensional poverty in gender-headed farming households in peri-urban Badagry LGA, Lagos State, Nigeria. The study involved the random selection of 120 male and female household heads in equal proportions using a multistage sampling technique. Descriptive statistics were used to describe the socioeconomic characteristics of the respondents; the Multidimensional Poverty Index was used to measure their multidimensional poverty status as well as the headcount and the incidence of poverty; and a Student's T-test was used to test the differences in the mean of the dimensions of multidimensional poverty. The MPI scores were 18.7% and 23.8% for male headed and female headed households, respectively. The living standards and financial standards of the female respondents contributed most to their deprivations; education and health dimensions were the case for the male respondents. No significant differences existed between the two categories of respondents on the dimensions of living standards and financial standards, but significant differences existed in the dimensions of education and health in favour of the female respondents. The study recommended an urgent need for government policies directed at finding sustainable solutions to the problem: the provision of more primary healthcare services, employment opportunities, and strengthening social inclusion. The state government's free education programme should be utilised by children of male heads of households. International and national non-governmental organisations should assist in providing health care and other rural infrastructure to peri-urban communities.

Keywords: Dimensions of multidimensional poverty; Gender-headed household; Multidimensional poverty; Multidimensional Poverty Index; Peri-urban household

INTRODUCTION

Gender-headed households are households where the primary decision-makers or heads of the households are of a specific gender, typically either a male or a female. In many societies, gender-headed households can have implications for issues such as access to resources, economic opportunities, and social dynamics. Thus, this designation is often used to highlight the gender dynamics within households and can be important for understanding issues related to power dynamics, resource allocation, and decision-making processes within the household.

Patriarchy is considered the norm, such that the household headship is in many societies in Africa associated with men. The social and cultural recognition of men's household head position earns them support from individuals and institutions unlike for women-headed households; whose households are perceived as a deviation from the norm (Fuller & Lain, 2020). Female household heads are often widows and/or single parents with no male provider to assist with generating an income (Ashagidigbi, *et. al*., 2022, Habib, 2020). Female headed households are characterized by the tendency for the households to be overrepresented among the poor, lack of free time and leisure, relatively lower education, smaller in size than male headed households and are also likely to have smaller numbers of adults and children. Nazri, (2020) highlighted that female-headed households tend to have higher poverty rates and face more significant economic challenges compared to male-headed household. The specific challenges faced by female- headed households are related to access to land, credit, and other resources, while male headed households may have different sets of responsibilities and expectations (Mukundane et al., 2024).

Social, political and economic constructed differences between men and women, have resulted in cultural expectations and stereotypes of gender differences between men and women heading households (Mukundane et al., 2024). This disparity also observed by Negesse et al. (2020) and Akande, Oniru, and Ajayi (2018), has an impact on household conditions because male-headed households have better economic and political stability compared to female-headed households, who earn significantly less and spend most of their earnings on feeding.

Multidimensional poverty is a situation in which deprivations concerning multiple dimensions are used to identify whether a person is multidimensional poor and to describe the extent of their poverty (Alkire, 2010). Bourguignon and Chakravarty (2003) used the term 'multidimensional poverty' to designate a situation in which deprivations concerning multiple dimensions are used to identify whether a person is multidimensional poor and to describe the extent of their poverty. The multidimensional poverty measurement is based not only on monetary indicators but on variables that directly reflect the deprivation suffered by households, therefore, it aims at extending the concept of poverty and linking it to social exclusion (Yenneti, 2020). Oxford Poverty and Human Development Initiative (OPHI) explained that

multidimensional poverty is made up of several factors that constitute poor people's experience of deprivation – such as poor health, lack of education, inadequate living standard, lack of income (as one of several factors considered), disempowerment, poor quality of work and threat from violence (Alkire & Santos, 2014).

The Multidimensional Poverty Index (MPI) is a methodology developed by Alkire and Foster (2010) for measuring multidimensional poverty. While the global MPI is an internationally comparable index across countries, the national MPIs tailor the same weighted indicators of multidimensional poverty to reflect national priorities and allow for more precise country-specific sub-national analyses of multidimensional poverty. National Bureau of Statistics, NBS, (2022) reported that in 2022, of the 133 million people in Nigeria, about 62.9% were multidimensional poor, showing that 62.9% of Nigerians experience deprivation in more than one dimension; while the intensity of poverty among the average poor Nigerians was 40.9%. However, the NBS (2022) did not break down the MPI along household headship. Irrespective of these deprivation cuts across genders but intensity may not be the same. Understanding the dynamics of gender-headed households is important for addressing gender-based disparities and developing targeted interventions to support the needs of different household types. This is germane because, at the national level, the households headed by males constituted 83.5 per cent, while the female heads constituted 16.5 per cent (NBS, 2007).

This study therefore undertook a multidimensional poverty study of gender-headed farming households in peri-urban Badagry LGA, Lagos State, Nigeria. Specifically, the study determined the poverty headcount, the intensity of poverty and the contribution of poverty indicators to poverty in gender-headed households.

The scope of this study is the Badagry Local Government Area, a peri-urban area of Lagos State, Nigeria. Peri-urban areas are areas where there is urban and rural fusion, features and processes meet, intertwine and interact, such areas are usually located between the city and the countryside. Peri-urban areas are usually characterized by mixed populations, important environmental services and natural resources consumed in towns and cities (Ricci, 2012).

This study focused on farming households in the peri-urban area because of their relationship to environmental changes and their heavy dependence on natural resources, which may have been modified by the rural and the urban intertwine, which may constitute institutional handicap for socio-ecological planning and vulnerability assessment (Eakin et al., 2010). This research will be a good repository and can be valuable to policymakers, researchers, and organizations working to address issues related to poverty, gender equality, and social development, as it will help address the issues of poverty (SDG 1) and gender equality (SDG 5).

MATERIALS AND METHODS

The study is limited to Badagry Local Government Area, Lagos State. Badagry LGA lies on the Atlantic Ocean shorelines and was a notable pre-colonial trade route, especially for slaves. Badagry LGA has a land mass of 363km^2 and a water area of According to the 2006 census population figures of 380,420 people comprising 187,427 males and 192,993 females (National Bureau of Statistics, NBS, 2008). Badagry town is widely called the slave port through which slaves from West Africa were transported to the Americas and the Caribbean. It is a border town between Nigeria and the Republic of Benin. It is about an hour from Ikeja, the capital city of Lagos State and a half-hour from the Republic of Benin (Eruotor, 2014). Badagry LGA is bordered on the south by the Gulf of Guinea and surrounded by creeks, islands and a lake. Because of the position of the area on the seashores, it is known as a fishing and agricultural town. Badagry is well-known for its coconut plantations. The coastal environment provides ideal conditions for coconut cultivation. Other crops like vegetable like tomatoes, peppers, and leafy greens, cassava and rice are chiefly cultivated by the farmer**s (**Ogungbeni, Ogungbo & Adeleke, 2013). The major sources of water in most communities in the Local Government Area are wells and boreholes while sanitary practices were poor, as indiscriminate defecation and urination were common in most communities (Otubanjo et al., 2016). In 2003, Badagry Local Government was subdivided into three Local Council Development Areas (LCDAs) namely; Olorunda, Badagry Central, and Badagry West.

A multistage sampling procedure was used to select the respondents for this study. The first stage was the purposive selection of an agrarian community from each of the four LCDAs in Badagry LGA. The second stage was the random selection of 30 respondents who were involved in agricultural activities in each of the selected communities. Respondents were stratified into male and female strata. A total of 120 respondents (60 male-headed and female-headed households, respectively) were sampled using a simple random sampling technique. Primary data was collected using a structured questionnaire. The sampling unit was the households of the respondents. Literate respondents filled the questionnaires themselves while the non-literate ones were assisted by enumerators in the interpretation and filling of responses in the questionnaire.

The multidimensional poverty index (MPI) of the respondents was assessed using Alkire and Foster (2010) methodology by assigning the deprivation scores as a binary variable, 0 (zero) for non-multidimensional poor household and 1 (one) for multidimensional poor households. Table 1 summarized the four dimensions of poverty, their indicators and weights, as surveyed in this study.

Dimension	Indicator (i)	Deprivation score (*i*)	Weight (w*i*)
Education	School attainment: All adult household members have completed at least six years of schooling (primary 6)	No = 1 Yes = 0	1/8 or 12.5 %
Health	Health care services Access to health care service within a distance walk of 30 minutes to and fro.	No = 1 Yes = 0	1/8 1or 12.5 %
	Infant mortality/wife death during birth: A household had not suffered infant mortality due to lack of money for treatment, improper feeding or death of wife during delivery because of lack of proper treatment.	No = 1 Yes = 0	1/8 or 2.5 %
Standard of living	Electricity: Access to electricity from national grid	No = 1 Yes = 0	1/24 or 4.17%
	Drinking water: Access to clean drinking water from any of the following sources; piped water, public tap, borehole or pump, protected well, protected spring or rainwater; within a distance of 30 minutes' walk (roundtrip):	No = 1 Yes = 0	1/24 or 4.17%
	Sanitation: Access to improved sanitation type like flush toilet, latrine, ventilated improved pit or composting toilet, provided that they were not shared	No = 1 Yes = 0	1/24 or 4.17%
	Cooking fuel: Non-usage of dung, charcoal or wood as cooking fuel	No = 1 Yes = 0	1/24 or 4.17%
	Asset: Ownership of assets like houses, non-communal land, plantations, vehicles, radios or televisions.	No = 1 Yes = 0	1/24 or 4.17%
	Type of housing: Not living in outdated housing type (made of mud or wood or tarpaulin) or houses in bad condition.	No = 1 Yes = 0	1/24 or 4.17%
Financial security	Reliability of income: The major source of income is constant and reliable.	No = 1 Yes = 0	1/16 or 6.25%
	Savings: Ability to save some money from their revenue.	No = 1 Yes = 0	1/16 or 6.25%
	Credit facility: Access to credit to improve their business.	No = 1 Yes = 0	1/16 or 6.25%
	Cooperative society membership: Membership of a cooperative society and/or savings and credit society	No = 1 Yes = 0	1/16 or 6.25%

Table 1: Dimensions, Indicators and weights of multidimensional poverty assessment

Source: Adapted from Alkire and Foster (2010)

The poverty cut-off (k) which was the share of (weighted) deprivations a household must have to be considered poor, was given as 25 % of all the deprivation indicators. It was calculated for each indicator using the Equation:

$$k = w_1 i_1 + w_2 i_2 + w_3 i_3 \ldots\ldots\ldots \text{ equation 1}$$

Where i_i= 1, if the household was deprived in indicator *i*; or i_i= 0 if the household was non-deprived in indicator
w_i was the weight of each indicator *i*
The censored deprivation score c_i (k) was given as
Ci≥ k, then = C_i (k) =1(the score of the non-deprived households) …… equation 2, but if
Ci< then C_i (k) = 0. C_i (k) (the deprivation score of the deprived households). …… equation 3

The MPI of the households is the product of the multidimensional headcount or incidence of poverty (H) and the intensity of poverty (I).

MPI = H x A …… equation 4

The values of the MPI scores range from 0 to 1, with 0 reflecting zero poverty and 1 poverty and deprivation.

The incidence or multidimensional headcount (H) is the proportion of the population who are multidimensional poor. It is sometimes called the poverty rate, calculated thus:

H = q/n……equation 5

Where q = the number multidimensional poor households
n= the sample size

The intensity (or breadth) of poverty (A), is the average percentage of weighted indicators or the average deprivation score of the multidimensional poor households expressed as:

$$A = \frac{\sum_{i=1}^{n} c_i(k)}{q} \quad \ldots\ldots\ldots\ldots\ldots \text{ equation 6}$$

Where C_i (k) was the censored deprivation score of individual i and q is the number of people who are multidimensional poor.

RESULTS AND DISCUSSION

Socioeconomic characteristics of Respondents

This study adopted the definition of household according to NBS (2008), as consisting of a person or a group of persons living together under the same roof or in the same building/compound and who as well, eat from the same pot and recognize themselves as a unit. The socioeconomic characteristics of the respondents displayed in Table 2, showed that the mean household size of the male headed household was 5 people, while that of the female headed households was 3 people. Larger household sizes of male-headed household can lead to higher dependency ratios and increased financial strain. The mean age of the male headed household was 46 years, with a majority (78%) ranging from 41 to 50 years, unlike the female headed household where the mean age was 34 years with half of the respondents aged from 31 to 40 years. This indicates that the different life stages and responsibilities will impact on their economic activities and income levels. About 68% of the male respondents were in monogamous marriages while 22% of the female respondents were single (never married), 20% were either separated or divorced and 19% were widows., Omotayo et al. (2021) explained that marital status is an important factor that explains the **v**ulnerability of individuals to poverty because marital status affects economic stability and social support. Married individuals, particularly in male-headed households, may have more stable incomes and better access to resources white Female- may face greater social and economic challenges, leading to higher vulnerability to poverty.

A higher percentage of male-headed households (89%) engaged in off-farm income-earning activities compared to female-headed households (69%). Diversifying income sources can help reduce poverty and improve financial stability. Adeoye et al. (2019) and Omotayo et al. (2021) concurred that diversifying income sources to off-farm activities, can significantly reduce poverty and improve living standards, food security and financial stability. The male headed households earned on average a monthly income of ₦ 101,750.87 ($61.7), while the female headed households earned ₦ 84,693.77 ($51.3). Male-headed households have a higher mean monthly income compared to female-headed households. Income disparities can contribute to differences in living standards and access to essential services.

Table 2: Socioeconomic Characteristics of Respondents

Socioeconomic characteristics		Male headed	Female headed	Both sexes
Size of Household (people)	< 1	2%	6%	4.0%
	2 – 3	24%	67%	45.5%
	4 – 5	73%	22%	47.5%
	≥ 6	2%	6%	4.0%
Mean		5	3	4
Age (years)	21-30	5%	0%	2.5%
	31-40	10%	50%	30.0%
	41-50	78%	33%	55.5%
	>50	7%	17%	12.0%
Mean		46	34	40
Marital status	Single	14%	22%	18.0%
	Married monogamy	68%	10%	39.0%
	Married polygamous	17%	2%	9.5%
	Separated/divorced	1%	20%	10.5%
	Widow/widower	1%	19%	10.0%
Off-farm income-earning activity	Yes	84%	69%	76.5%
	No	16%	31%	23.5%
Monthly income (₦) (1 $=₦1650.00 as at March 12th, 2024)	≤ 50,000	30%	43%	36.5%
	50,000-99,000	31%	25%	28.0%
	150,000-199,000	29%	21%	25.0%
	200,000-249,000	6%	8%	7.0%
	≥250,000	4%	3%	3.5%
Mean		₦ 101,750.87	₦ 84,693.77	₦ 93,222.32

Multidimensional Poverty Index of Respondents

In the study area, as displayed in Table 3, about 52.43% of the headcount of female headed households in the study area were multidimensional poor while 44.40% of the male headed households were likewise. This means that about 52.43% and 44.0% of female and male headed households respectively, are deprived in more than one out of the four dimensions, or at least 26% of weighted indicators. This shows that the poverty rate was higher among the female headed households than the male headed households. Comparing this percentage with the most recent NBS (2022) report on Nigeria's Multidimensional Poverty Index 2022, which put the percentage of multidimensional poor Nigerians at sixty-three per cent of 133 million people in Nigeria, the headcount of the respondents showed that the smallholder agrarian community members may have contributed a significant percentage to the national headcount.

The breadth or intensity of deprivation (A) among the poor respondents, indicated that the average poor male headed household was deprived in 42.11 % of weighted indicators while an average poor female headed household was deprived in 45.47% of the same weighted indicators.

The MPI score of the male headed households in the study area was 0.187, showing that 18.7% of poor male headed households in the study area experience just over one-quarter of all possible deprivations. The MPI score of 0.238 among the female headed households, showed that 23.8% of poor female headed households in the study area experience just over one-quarter of all possible deprivations. Using the demographic data by the Lagos State Ministry of Science and Technology (2018), of the male population in Badagry LGA (2018), about 35,048.85 of the males and 45,932.33 females in the study area experience over one-quarter of all possible deprivations. The gap in the multidimensional poor between the gender-headed households in the study area can be attributed to social exclusion. Social exclusion theory argues that some people in a society are often kept from achieving the benefits of economic and social impact, and are denied access to the resources that are available to others in society (Akinyetun et al. 2021). People in society who often fall into the social exclusion category include women, girls, and people from the lower echelons of

society (Silver, 1994). Social exclusion therefore explains the deprivation concerning health, education, and living standards and in the indicators identified in the study: healthcare, education, electricity, water, and housing.

The number of multidimensional poor in the study area shows that the NBS (2022) data that in 2018, about 46.4% of Nigerians i.e. 90.9 million people, were multidimensional poor, while an additional 19.2% were classified as vulnerable to multidimensional poverty (37.6 million people), may not hold in 2024. This may be because of the stagflation currently hitting the country, as well as the large number of Nigerians deprived of the most basic amenities, such as electricity, clean water, good housing facilities, healthcare, and education (Ogionwo, 2016).

Table 3: Multidimensional poverty across gender in the study area

Multidimensional Indices	Male headed households	Female headed households
Incidence (H, %)	44.40%	52.43%
Intensity of poverty (A, %)	42.11%	45.47%
Multidimensional Poverty Index, MPI	0.187	0.238

Analysis of contributions of the four dimensions to deprivation, displayed in Table 4, showed that the living standard and financial standard of the female respondents contributed most to the deprivation, about 60.04 % and 57.59 % respectively. While amongst the male headed households living standard and financial standard contributed 44.4% and 45.72% respectively. This disparity confirmed the findings of Akande, Oniru and Ajayi (2018) that household head gender has an impact on housing conditions, because male headed households have better economic and political stability unlike the women household heads who earn very low compared to their male counterparts, and spend most of their earnings on feeding. This disparity can also be explained as both a cause and an effect of inequality resulting from the social exclusion of women (Akinyetun, et al., 2021).

Table 4: Dimensions of multidimensional poverty across gender in the study area

Dimensions	Male-headed households (%)	Female-headed households (%)
Education	11.29	2.86
Health	3.88	1.98
Living standard	44.44	60.04
Financial standard	45.72	57.59

The independent sample t-test to show if the statistical significance of the means of the MPI dimensions shows that there were no significant differences between the two categories of respondents on the dimensions of living standard ($t(119) = 1.7$, $p = .097$) and financial standard ($t(119) = 2.1$, $p = .163$). However, there were significant differences in the dimensions of education and health ($t(119) = 0.7$, $p = .043$) and education ($t(119) = 0.94$, $p = .001$).

CONCLUSION AND RECOMMENDATION

This study on multidimensional poverty in gender-headed farming households in Badagry LGA, Lagos State, Nigeria, reveals that although multidimensional poverty was not limited to a particular gender-headed household, significant disparities still existed between the genders. The Multidimensional Poverty Index (MPI) scores were 0.187 for male-headed households and 0.238 for female-headed households, indicating that 18.7% and 23.8% of these households, respectively, experience over one-quarter of all possible deprivations. Living standards and financial conditions contributed most to the deprivations in female-headed households, while education and health were the primary contributors in male-headed households. These findings underscore the need for targeted interventions to address the unique challenges faced by both gender-headed households. Addressing these disparities is crucial for reducing multidimensional poverty and promoting equitable development in the country.

The study therefore recommends;

i. there is a need for a policy focused on providing more primary health care services, increasing employment opportunities and strengthening social inclusion and protection of female-headed households;
ii. male households heads should be encouraged to prioritize their children's basic education (Senior Secondary School Certificate) and utilize the free basic education offered by the Lagos State Government. Parents should also monitor their children's activities to reduce truancy and out-of-school rates.
iii. international and national non-governmental organisations (NGOs) should assist in providing health and education and improving the living standards of the peri-urban and rural communities in Nigeria.

CONFLICT OF INTEREST

The Authors declare that there is no conflict of interest.

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