

MULTIDIMENSIONAL WELLBEING OF WOMEN IN RURAL SOUTHERN REGION OF NIGERIA

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Abstract

Women are important segment of the human population and constitute critical links between the present generation and the future. Thus investing in their well-being is of great benefit to the society. Therefore this study examined the Multidimensional well-being of women in rural Southern Region, Nigeria. The Nigeria Demographic and Health Survey data was used, 4641 women data from Southern region. Data analysis was done using descriptive statistics and fuzzy analysis. The mean age of women was 34 with a standard deviation of 9. Women in this region have a mean household size of 6 and a standard deviation of 3. The well-being Index for ranges from 0.01 to 0.80 with a mean value of 0.33 and standard deviation of 0.14. Most of the women had their well-being index between 0.00-0.80 while none had very high between 0.81-1.00. In ascending order of contribution, the six dimensions considered are information access, employment, education, nutrition and health, autonomy, housing and sanitation. Women of the South East rank highest in four of the six dimensions considered. These dimensions are employment, health and nutrition, autonomy and information access. The condition of South-South women is best in two dimensions; housing and sanitation, education. The women of South-West zone are worse off than their counterparts in other zones in all the dimensions. South-East women were better off than their counterparts in other zones. Interventions in the area of information access, education, employment, is needed for women in Southern region.

Key words: Nigeria, Southern region, wellbeing, women

INTRODUCTION

[1] and [10] view well-being as human activities that signify a state of life condition one has attained and experienced; a concept that refers to any assessment in evaluating a person's life situation or 'being', hence, a description of individuals' life situation. Wellbeing is recognized to encompass more than income and consumption to include issues of health, education, security, freedom, social relations and others because of the plurality of human lives. It is a means to an end and an end in itself as well as a basic right of every human being. It is also a critical determinant factor which contributes to economic growth and productivity of every nation. Poverty is an unacceptable human condition and one of the biggest social problems in the twentieth century. It will remain a global problem of huge population - a problem of not having enough resources and abilities to meet human basic needs both as individual and social

beings due to its dynamic and multidimensional nature. At the same time, well-being, its' impact on quality of life and relationship with poverty have received substantial attention over the last decades. Both poverty and well-being are interconnected (Laily, 1995). With an increase in income, a great number of needs are satisfied and a higher standard of well-being is achieved. Therefore, it is commonly accepted, a poor person is one whose wellbeing is low [11]. Women play a very vital role in the development of communities and nations. Development is incomplete if it fails to comprehend the contributions of women [4]. They are always at the forefront of a nation's development, thus ensuring their welfare status is good for them, their families and the nation as a whole [6]. Wellbeing among women is determined not only by their health status but also by other social, cultural and economic factors. Although great strides have been made in improving the well-being of women in many

African countries, women still face higher rates of low wellbeing compared to their male counterparts [3].

Over the years, successive governments in Nigeria at various levels have put in place measures and interventions to address this problem.

Despite these interventions, the wellbeing of women in rural Nigeria is still low.

This paper provided answer to this research problem: what is the wellbeing of women in rural Southern region of Nigeria?

MATERIALS AND METHODS

The area of study for this research was Southern region of Nigeria. The southern part is made up of three regions; South-East(SE), South-South (SS) and South-West.

Secondary data from Nigeria Demographic Health Survey NDHS 2013 was used for this study. A total number of 4641 women in rural southern region were sampled and used for this study.

Analytical Procedure

Descriptive statistics and fuzzy set theory were used in this study. The descriptive statistics used include percentages, frequency distribution tables, and the mean.

Fuzzy set Analysis

This was used to estimate the wellbeing status of women. The fuzzy set substitutes the characteristic function of a crisp set that assigns a value of 1 or 0. Large values denote high degree of membership [7], [8].

The degree of wellbeing is shown by the placement of the individual on the 0 or 1 value or other values in-between. The model is considered as follows:

Table 1. Selected Dimensions and Method

| Indicator | Selected criteria | Deprivation |
|---|--|---------------------------|
| Housing and Sanitation | | |
| Source of drinking water | Pipe borne water and treated 1= improved,0= otherwise | 0=non deprived,1=deprived |
| Toilet facility | 1= improved,0= otherwise | 0=non deprived,1=deprived |
| Main floor material | 1= improved,0= otherwise | 0=non deprived,1=deprived |
| Main wall material | 1= use of finished material, 0= otherwise | 0=non deprived,1=deprived |
| Main roof material | 1= use of finished product, 0= otherwise | 0=non deprived,1=deprived |
| Autonomy | | |
| Final say on travel to market and outside village/community | Husbands take decisions alone=4 Women and husband take decision =3 Women take decisions with another person = 2 Women take decisions alone = 1 | 0=non deprived,1=deprived |
| Final say on own health | Same as above | 0=non deprived,1=deprived |
| Final say on visit to friends and relatives | Same as above | 0=non deprived,1=deprived |
| Final say on making large household purchases | Same as above | 0=non deprived,1=deprived |
| Final say on money spending. | Same as above | 0=non deprived,1=deprived |
| Final say on husband's earnings | Same as above | 0=non deprived,1=deprived |
| Health and Nutrition | | |
| Place of delivery | Deliver in health facility=1,0= otherwise | 0=non deprived,1=deprived |
| Antenatal care | Receive ante natal care from skilled attendant =1, 0 = otherwise | 0=non deprived,1=deprived |
| Skilled attendant during delivery | Attended to by skilled attendant during delivery =1, 0 = otherwise | 0=non deprived,1=deprived |
| Body Mass Index (BMI) | 18.5kg/m ² to 25.0kg/m ² = 1 <18.5kg/m ² and >25.0kg/m ² =0 | 0=non deprived,1=deprived |
| Education | | |
| level of educational attainment | woman with no formal education =4 woman with primary education =3 woman with secondary education =2 woman with tertiary education = 1 | 0=non deprived,1=deprived |
| Literacy | Women who can read part of a sentence or a whole sentence will be regarded as literate. A value of 1 will be assigned, 0= otherwise | 0=non deprived,1=deprived |
| Employment | | |
| Employment status | Currently employed=1, 0= otherwise | 0=non deprived,1=deprived |
| Employment type | Unemployed = 6 Unskilled manual employment =5 Skilled manual sector = 4 Agricultural and allied sector = 3 Service sector = 2 Professional/Managerial = 1 | |

Source: own calculation

Assume a population A of n individuals, $A = (a_1, a_2, a_3 \dots a_n)$. A fuzzy subset B includes all individuals with $a_i \in B$.

The degree of wellbeing of the ith individual ($i=1, \dots, n$) with respect to a particular attribute j given that ($j = 1, \dots, m$) is defined as presented in Table 1.

The variables that define indicators of welfare are either dichotomous or categorical in nature.

$$\mu_{\beta_j}(x_j(a_i)) = x_{ij}, 0 \leq x_{ij} \leq 1 \quad 1$$

where:

$x_{ij} = 1$; condition of full possession of wellbeing attribute

$x_{ij} = 0$; condition of total lack of wellbeing attribute

$0 \leq x_{ij} \leq 1$; conditions within the range of full possession and lack.

RESULTS AND DISCUSSIONS

Socio economic characteristics

In table 2, the mean age of women is 34 with a standard deviation of 9 in SR while in SE(35,8), SS(34,9), SW(34, 9). This implies that we have more middle aged women in rural southern region of Nigeria. This distribution reflects rural urban drift where majority of young people migrate to the urban areas in search of better opportunities.

Table 2. Distribution of women according to Geo-Political Zones in rural Southern Nigeria

| Variable | South East | | South South | | South West | |
|-------------------------------|------------|------------|-------------|------------|-------------|------------|
| | Freq. | % | Freq. | % | Freq. | % |
| Age | | | | | | |
| 15-24 | 111 | 11.70 | 397 | 15.69 | 173 | 14.90 |
| 25-34 | 318 | 33.51 | 947 | 37.42 | 434 | 37.38 |
| 35-49 | 520 | 54.79 | 1187 | 46.90 | 554 | 47.72 |
| Mean | 35 | | 34 | | 34 | |
| Standard Deviation | 8 | | 9 | | 9 | |
| Educational attainment | | | | | | |
| No education | 51 | 5.37 | 261 | 10.31 | 312 | 26.87 |
| Incomplete primary | 71 | 7.48 | 261 | 10.31 | 74 | 6.37 |
| Complete secondary | 297 | 31.30 | 544 | 21.49 | 221 | 19.04 |
| Higher | 110 | 11.59 | 178 | 7.03 | 76 | 6.55 |
| Household size | | | | | | |
| 1-5 | 559 | 58.90 | 1387 | 54.80 | 679 | 58.48 |
| 6-10 | 367 | 38.67 | 1027 | 40.58 | 420 | 36.18 |
| >10 | 23 | 2.42 | 117 | 4.62 | 62 | 5.34 |
| Mean | 5 | | 6 | | 6 | |
| Standard deviation | 2 | | 3 | | 3 | |
| Marital status | | | | | | |
| Single | 118 | 12.43 | 300 | 11.85 | 79 | 6.80 |
| Married | 831 | 87.57 | 2231 | 88.15 | 1082 | 93.20 |
| Employment | | | | | | |
| Unemployed | 168 | 17.70 | 406 | 16.04 | 97 | 8.35 |
| Skilled and Unskilled | 57 | 6.01 | 120 | 4.74 | 106 | 9.13 |
| Agriculture and allied | 257 | 27.08 | 764 | 30.19 | 291 | 25.06 |
| Services | 467 | 49.21 | 1241 | 49.03 | 667 | 57.45 |
| Total | 949 | 100 | 2531 | 100 | 1161 | 100 |

Source: own calculation

Women that had complete primary education was 26.4% followed by those that had complete secondary education (22.9%). According to the universal basic education that recommends that a girl child should have a minimum of nine years of education, based on this 51.4% of women in the SR are educated. SE zone have the highest percentage of women with tertiary education (11.6%). This is in line with the report of [1] that the highest percentage of women with higher education is found in the SE zone. Women in this region have a mean household size of 6 and a standard deviation of 3. This might be because women in this region are educated. SS and SW region have a mean household size of 6 while SE has a mean of 5. Most of the women are married (89.3%). Women that are employed in the service sector constitute 51.2% followed by those employed in the agriculture and allied sector (28.3%) although some women are still unemployed (14.5%). SS region has the highest percentage of women that are in the agriculture and allied sector (30.2%) and SW has the highest percentage of women employed in the service sector (57.5%).

Multidimensional Well-being of women

Table 3 shows the distribution of rural women based on their Wellbeing Index(WI). The WI for rural women ranges from 0.01 to 0.79 with a mean value of 0.33 and standard deviation of 0.14. Most of the women had their WI between 0.00-0.80 while none had very high between 0.80-1.00. On the average, women in rural Nigeria have low wellbeing index, this is in line with studies using uni-dimensional and multidimensional approach carried out in Nigeria [2] where women are believed to have low wellbeing. Using a multidimensional approach, the result is more pronounced with a larger number of women found to be worse off [1]. The decompositions across geopolitical zones (GPZs) as shown in Table 4 reveal the distribution across zones. In the SE, the highest percentage of rural women falls within 0.20-0.30, in the SS zone, the highest percentage of rural women falls within 0.21-0.30 and in the SW highest percentage of rural women falls within 0.21-0.30.

Table 3. Distribution of rural women by their wellbeing index

| Deprivation Index | Frequency | % |
|-------------------|-----------|-------|
| 0.0000-0.1000 | 125 | 2.69 |
| 0.1001-0.2000 | 703 | 15.15 |
| 0.2001-0.3000 | 1195 | 25.75 |
| 0.3001-0.4000 | 1161 | 25.02 |
| 0.4001-0.5000 | 873 | 18.81 |
| 0.5001-0.6000 | 421 | 9.07 |
| 0.6001-0.7000 | 143 | 3.08 |
| 0.7001-0.8000 | 20 | 0.43 |
| Total | 4641 | 100 |

Source: own calculation

Table 4. Decomposition of Deprivation Index (DI) across Geopolitical Zones

| Category | South East | | South South | | South West | |
|---------------|------------|-------|-------------|-------|------------|-------|
| | Freq. | % | Freq. | % | Freq. | % |
| 0.000-0.1000 | 6 | 0.63 | 68 | 2.69 | 62 | 5.34 |
| 0.1001-0.2000 | 117 | 12.33 | 406 | 16.04 | 271 | 23.34 |
| 0.2001-0.3000 | 332 | 34.98 | 679 | 26.83 | 275 | 23.69 |
| 0.3001-0.4000 | 276 | 29.08 | 632 | 24.97 | 233 | 20.07 |
| 0.4001-0.5000 | 151 | 15.91 | 423 | 16.71 | 181 | 15.59 |
| 0.5001-0.6000 | 52 | 5.48 | 210 | 8.30 | 111 | 9.56 |
| 0.6001-0.7000 | 13 | 1.37 | 96 | 3.79 | 28 | 2.41 |
| 0.7001-0.8000 | 2 | 0.21 | 16 | 0.63 | 0 | 0.00 |
| 0.8001-0.9000 | 0 | 0.00 | 1 | 0.04 | 0 | 0.00 |
| 0.9001-1.0000 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| Total | 949 | 100 | 2531 | 100 | 1161 | 100 |

Source: own calculation

The wellbeing status of women is low in the SR. This is supported by the mean (WI) presented in Table 14; while the three zones in southern Nigeria have their wellbeing index (WI) between 0.31-0.33. In addition, in SE, SS and SW the least woman has a WI of 0.08, 0.01 and 0.02 respectively. This agrees with the work of [1]. This implies, there are opportunities to improve on the wellbeing of women in all the zones.

Multidimensional Wellbeing Decomposition across Dimensions and Indicators

The contribution of each welfare dimension and indicator to women’s wellbeing is presented in Table 5.

Table 5. Multidimensional Wellbeing Decomposition across Dimensions and Indicators

| Dimension | Indicators | Weights | Absolute Contribution | Relative Contribution | |
|------------------------|---|---------|-----------------------|-----------------------|---------------|
| Housing and Sanitation | Source of drinking water | μ_1 | 0.2857 | 0.0185 | 5.5237 |
| | Type of toilet facility | μ_2 | 0.4523 | 0.0199 | 5.9588 |
| | Main floor | μ_3 | 0.1666 | 0.0142 | 4.2383 |
| | Main wall material | μ_4 | 0.1798 | 0.0148 | 4.4357 |
| | Main roof material | μ_5 | 0.0770 | 0.0080 | 2.4072 |
| | Type of cooking fuel | μ_6 | 0.6546 | 0.0181 | 5.4126 |
| | Electricity | μ_7 | 0.2815 | 0.0184 | 5.4959 |
| | | | 0.1118 | 33.4722 | |
| Education | Education in single years | μ_2 | 0.3452 | 0.0194 | 5.8198 |
| | Educational attainment | μ_2 | 0.2936 | 0.0186 | 5.5745 |
| | Literacy | μ_2 | 0.1835 | 0.0149 | 4.4885 |
| | | | 0.0531 | 15.8828 | |
| Employment | Women currently working | μ_3 | 0.0722 | 0.0076 | 2.2828 |
| | Women's occupation(type) | μ_3 | 0.1423 | 0.0128 | 3.8285 |
| | | | 0.0204 | 6.1113 | |
| Nutrition and Health | Body mass | μ_4 | 0.2354 | 0.0171 | 5.1103 |
| | Place of delivery | μ_4 | 0.4999 | 0.0197 | 5.9023 |
| | Ante natal care | μ_4 | 0.8484 | 0.0150 | 4.4899 |
| | Assistance during delivery | μ_4 | 1.7689 | 0.0038 | 1.1240 |
| | | | 0.0555 | 16.6266 | |
| Autonomy | Person who usually decides how to spend respondent's earnings | μ_5 | 0.3418 | 0.0194 | 5.8076 |
| | Person who usually decides on respondent's health care | μ_5 | 0.2384 | 0.0172 | 5.1397 |
| | Person who usually decides on large household purchases | μ_5 | 0.2699 | 0.0181 | 5.4123 |
| | Person who usually decides on visits to family or relatives | μ_5 | 0.3049 | 0.0188 | 5.6403 |
| | | | 0.0735 | 21.999 | |
| Information Access | Frequency of listening to radio | μ_6 | 0.3770 | 0.0197 | 5.9072 |
| | | | | 0.0197 | 5.9072 |

Source: own calculation

Among the six dimensions considered, housing and sanitation had the highest absolute and relative contributions of 0.11 and 33.5% and thus contribute more to wellbeing. This is

followed by autonomy with 0.07 and 21.9%. This means that rural women are better off in these dimensions than others. The high relative contribution of housing is expected since most of them live in the same house with their spouses. These houses are provided by the joint effort of the household. It is also worthy of note that autonomy has a high relative contribution. The high relative contribution of autonomy underscores the point that power relations within the household is crucial and ability to participate in decision making particularly with respect to self is important for women’s wellbeing.

The lowest absolute and relative contributions of 0.02 and 5.9% respectively are recorded in information access and 0.02 and 6.11 in employment these dimensions contributes less to well-being. It implies that rural women’s access to information and employment is poor presently and improving this dimension will improve their wellbeing. In ascending order of contribution, the six dimensions considered are arranged as follows: information access, employment, education, nutrition and health, autonomy, housing and sanitation. In view of the low well-being index of women in general, these dimensions need to be improved on particularly information access, employment, education whose contributions to wellbeing are very low. The Levene’s test shows that the variances of multidimensional well-being indices across dimensions are significantly different ($p= 0.0000$).

Decomposition Across Dimensions Housing and Sanitation

In table 6 the SS zone had the highest well-being index of 0.11. With respect to main source of drinking water, it has an index of 0.0189 which is the highest while the lowest is recorded in the SW with 0.0165. On the type of toilet facility, SS has the highest index of 0.0196 while the lowest is recorded in the SW with an index of 0.0167. It shows that the condition of women in the SW is worse off for main source of water and sanitation respectively; when compared to women in other zones. With respect to electricity connection, main floor, wall and roof materials, condition of women in the SW reported the highest index. In all, with regards

to housing and sanitation, women in the SS are better off in this dimension than women in other zones in the SR of the country.

Education

The SS women emerged with the highest index in this dimension. The zones arranged from the descending order with respect to educational attainment are SS, SW and SE.

Employment

The South East women had the highest level of well-being in this dimension and have the highest WI of 0.0101 in women currently working and a 0.0148 value for employment type. This result is not unexpected as people from this zone are widely known for their business prowess. However, SW women were worse off in this dimension of well-being.

Health and Nutrition

Health and nutrition was assessed considering the antenatal care, skilled assistance during delivery, place of delivery and body mass index of respondents. The result shows that women in the SE had the highest wellbeing index while women from the SW were worse off.

Autonomy

Women in SE enjoyed the highest level of autonomy. On the contrary, the results reveal that women in SW are worse off in this dimension. These results indicate that conditions of SW women are worse off with regards to how to spend money, final say on large household purchases.

The implication of this is that women in the SW are likely to depend on their husband's decision or take decisions jointly with them or other relatives because they possess the lowest WI in relation to two of the indicators examined to determine their level of autonomy. SS also has the least index with respect to autonomy on their health and visit to friends and family members.

This indicates that these women seek the approval of their husbands or other people on decisions pertaining to their health and before they embark on visit to friends and family members.

Table 6. Multidimensional Welfare Deprivation Decomposition across Geopolitical Zones

| Attribute | South East | South South | South West | All zones |
|--|----------------------------------|----------------------------------|-----------------------------------|---------------------------------|
| Housing and Sanitation | 0.0975 30.4349 | 0.1125 34.8815 | 0.1063 34.6148 | 0.1118 33.4722 |
| Main source of drinking water source | 0.0179 (5.5844) | 0.0189 (5.6833) | 0.0165 (5.3677) | 0.0185 (5.5237) |
| Type of toilet facility | 0.0194 (6.0664) | 0.0196 (5.9189) | 0.0167 (5.4363) | 0.0199 (5.9588) |
| Main floor material | 0.0124 (3.8638) | 0.0139 (4.2099) | 0.0146 (4.7503) | 0.0142 (4.2383) |
| Main wall material | 0.0103 (3.2032) | 0.0149 (4.4876) | 0.0159 (5.1869) | 0.0148 (4.4357) |
| Main roof material | 0.0059 (1.8278) | 0.0075 (2.2691) | 0.0099 (3.2111) | 0.0080 (2.4072) |
| Type of Cooking fuel | 0.0154 (4.8338) | 0.0189 (5.6938) | 0.0157 (5.1082) | 0.0181 (5.4126) |
| Has Electricity connection | 0.0162 (5.0554) | 0.0125 (4.1206) | 0.0170 (5.5542) | 0.0184 (5.4126) |
| Education | 0.0444 13.8392 | 0.0531 16.0220 | 0.0521 16.9777 | 0.0531 15.8828 |
| Education in single years | 0.0175 (5.4604) | 0.0195 (5.8708) | 0.0181 (5.8863) | 0.0194 (5.8198) |
| Women educational attainment | 0.0177 (5.5260) | 0.0184 (5.5412) | 0.0179 (5.8194) | 0.0186 (5.5745) |
| Literacy | 0.0091 (2.8528) | 0.0153 (4.6099) | 0.0162 (5.2721) | 0.0149 (4.4885) |
| Employment | 0.0249 7.7668 | 0.0213 6.4118 | 0.0141 4.5776 | 0.0204 6.1113 |
| Women currently working | 0.0101 (3.1432) | 0.0082 (2.4586) | 0.0042 (1.3802) | 0.0076 (2.2828) |
| Women's occupation(type) | 0.0148 (4.6236) | 0.0131 (3.9531) | 0.0098 (3.1975) | 0.0128 (3.8285) |
| Health | 0.0572 17.8536 | 0.0543 16.3886 | 0.0496 (16.1732) | 0.0555 16.6266 |
| Body mass | 0.0184 (5.7467) | 0.0172 (5.1767) | 0.0148 (4.8281) | 0.0171 (5.1103) |
| Place of delivery | 0.0207 (6.4825) | 0.0179 (5.4035) | 0.0180 (5.8676) | 0.0197 (5.9023) |
| Ante natal care | 0.0157 (4.8926) | 0.0147 (4.4473) | 0.0141 (4.5780) | 0.0150 (4.4899) |
| Assistance during delivery | 0.0023 (0.7319) | 0.0045 (1.3611) | 0.0028 (0.8995) | 0.0038 (1.1240) |
| Autonomy | 0.0762 23.7795 | 0.0707 21.3218 | 0.0681 22.1912 | 0.0735 21.999 |
| Final say on women's earning | 0.0183 (5.7028) | 0.0186 (5.6051) | 0.0171 (5.5865) | 0.0194 (5.8076) |
| Final say on women's health | 0.0195 (6.0700) | 0.0161 (4.8572) | 0.0164 (5.3419) | 0.0172 (5.1397) |
| Final say on large household purchases | 0.0184 (5.7336) | 0.0181 (5.4635) | 0.0166 (5.3955) | 0.0181 (5.4123) |
| Final say on visit to family and friends | 0.0201 (6.2730) | 0.0179 (5.3959) | 0.0180 (5.8673) | 0.0188 (5.6403) |
| Information access | 0.0203 (6.3259) | 0.0197 (5.9289) | 0.0168 5.4655 | 0.0197 5.9072 |
| Frequency of listening to radio | 0.0203 (6.3259) | 0.0197 (5.9289) | 0.0168 (5.4655) | 0.0197 (5.9072) |
| Total | 0.3205 | 0.3315 | 0.3069 | 0.3341 |

Source: own calculation

Information Access

There is one indicator under this dimension, frequency of listening to radio. With regards to frequency of listening to radio, women in the SE have the highest WI of 0.0203. On the contrary, women in the SW have the least. The absolute and relative contributions of this dimension to wellbeing reveals that the women in SE have the highest contribution while those in the SW zone have the least

In all, women of the SE rank highest in four of the six dimensions considered. These dimensions are employment, health and nutrition, autonomy and information access. The condition of SS women is best in two

dimensions; housing and sanitation, education. The women of SW zone are worse off than their counterparts in other zones in all the dimensions. Finally, considering all the six dimensions, condition of women in the South East is best. The Levene's test shows that the variances of multidimensional wellbeing indices across GPZs in Nigeria are significantly different ($= 0.0000$).

Decomposition across socio-economic groups

In figures 1-4, the decomposition of WI across socio-economic characteristics of rural women is presented. These characteristics are age, household size, gender of household head, and educational attainment. The decomposition by age group presented in figure 1 shows that middle aged women within the age group of 25 to 34 years have higher WI compared to other age groups.

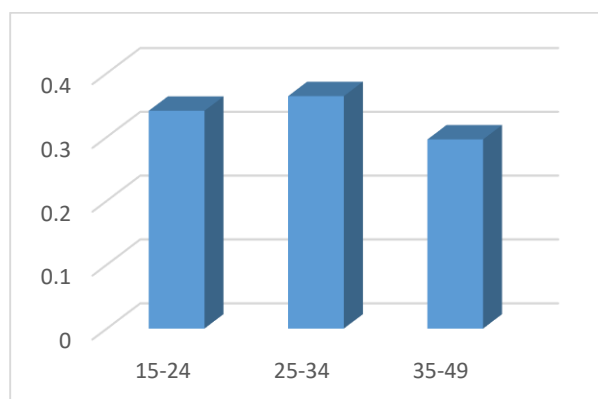


Fig. 1. Multidimensional welfare deprivation decomposition across age groups
Source: own calculation

With respect to household size (figure 2), the subgroup belonging to small household size (1 to 5) has higher WI than other groups. This subgroup has 0.34 WI, followed by those with 6 to 10 household size with 0.33 WI. The results reveal a negative relationship between wellbeing and household size, indicating that it increases as size of the household decreases. This is understandable since smaller households reduce the number of people to be cared for and enable members to have a better share of the household resources. This buttresses the fact that small household size reduces dependency ratio, hence enhancing wellbeing.

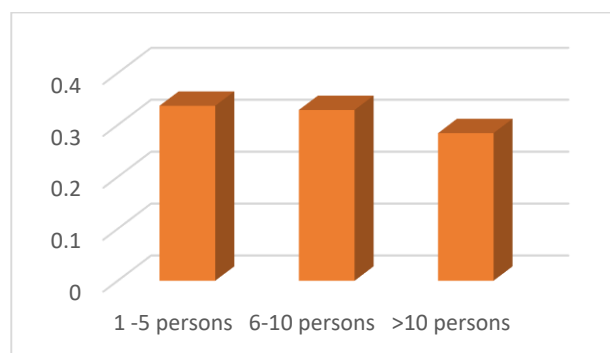


Fig. 2. Multidimensional welfare deprivation decomposition across household size
Source: own calculation

In figure 3, the wellbeing indices of women in male and female headed households are 0.33 and 0.32 respectively. Women in male headed household have a higher WI than those in female headed households. This is in line with [9] who find out that the WI for male headed household is 1.48% greater than that of female headed household.

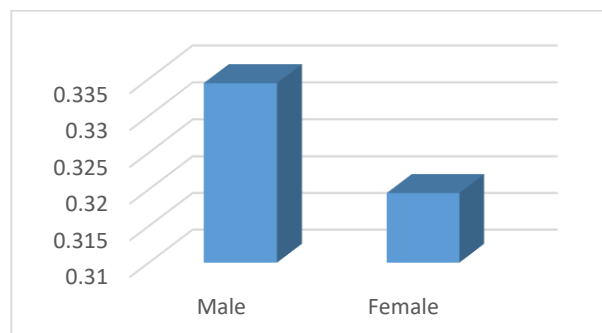


Fig. 3. Multidimensional welfare deprivation decomposition by gender of household head
Source: own calculation

The wellbeing indices across educational groups increase from no education to complete primary and decreases across other educational groups. (figure 4). The peak is attained by the group with complete primary while the least is recorded in the group with no education. The completion of primary school education is the minimum required to have a wellbeing index above 0.40.

In summary, middle aged women with primary education from a small sized male headed household have higher wellbeing indices than other groups.

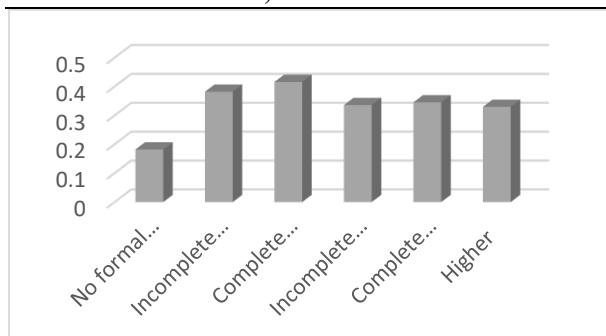


Fig. 4. Multidimensional Welfare Deprivation Decomposition by Educational Attainment
Source: own calculation

The Levene's test show that the variances of multidimensional wellbeing indices across socio-economic characteristics of rural people are significantly different ($= 0.0000$).

CONCLUSIONS

This study provides empirical evidence of the well-being of women in the Southern region. Women in the South East were better off than their counterparts in other zones. Interventions in the area of information access, education, employment, is needed for women in SR especially women in the South West. Governments and Non-Governmental organizations should put in place interventions in these dimensions so that the Sustainable Development Goals put in place by the United Nations can be achieved by 2030.

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