Sokoto Journal of Geographical Studies (SJGS)

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DETAILING THE SOCIAL CONTEXT OF INEQUALITY IN THE RURAL AREAS OF EDO AND DELTA STATES OF SOUTHERN NIGERIA

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Abstract *https://doi.org/10.65760/sjgs.v3.i1.4*

Inequality in societies is a broad-based theme, which is subject to various socio-demographic contextualisations apart from gender. This study considers social inequalities in the rural areas of Delta and Edo States of Southern Nigeria, in the context of four social markers, which are gender, age, marital status and educational qualification. The study was carried out using 3,188 questionnaire copies administered in six (6) Local Government Areas (LGAs) of both states. The results showed that although income did not vary significantly between males and females, F (1, 3186) = 0.915, p = 0.339, males had a higher mean income scale compared to females. This was observed despite women having significantly less input into decisions concerning farm and non-farm economic activities (p = 0.00). Women also reported higher working hours in the primary sector only (p = 0.00) and fewer sleep hours daily (p = 0.69). In terms of age, middle-aged adults (40 – 59 years) and the elderly (60 years and above) had higher monthly income scales (p = 0.00), higher levels of input into decisions on farming activities (p = 0.00) and spent more hours in unpaid productive work on a typical day (p = 0.11) compared to the younger age groups. However, the younger adults (20 - 39 years) spent the most hours working on a typical day (p = 0.00). In terms of marital status, married adults had the highest scale of monthly income (p = 0.00), perhaps due to support from their spouses. Widowed and separated/divorced adults had more input into decisions on household farming activities (p = 0.00). For inputs into decisions on non-farming economic activities and the use of income from non-farming activities, single adults had the highest scale (p = 0.00). Also, adults with no formal education and those with primary educational qualifications had a higher scale for monthly income and higher levels of input into decisions on farming economic activities (p = 0.00), compared with those with secondary and tertiary educational qualifications. However, those with secondary and tertiary educational qualifications had more input into decisions on non-farming economic activities. The study recommends the re-orientation of family and community values to support the vulnerable groups in society, such as women, youths, the elderly and the widowed. It also recommends that indigenous skills aimed at sustaining livelihood be acquired irrespective of the educational qualification attained.

Keywords: *Age, Economic Livelihood, Educational Qualification, Gender Inequality, Marital Status and Rural Areas.*

Introduction

Gender inequality has been a front-burner theme for quite some time now. According to UNICEF (2017), it refers to discrimination based on gender, which could impair the recognition and privileges of either a male or a female in a society. In other words, it inhibits their right or freedom to engage society in cultural, political, economic and civil dimensions. Gender inequality is not only evidenced by unequal access to and control over material resources and

wealth. It is also reinforced by societal gender norms and stereotypes, which create gendered identities which constrain the behaviour of women and men in ways that lead to inequality (UNDP, 2013). Gender inequality emanates from gender gaps. The International Monetary Fund (IMF, 2022) has defined gender gaps as observed differences between male and female persons in the context of various social and economic indicators. Gender inequality refers to the aspect of gender gaps that are driven by gender bias and unequal gender rights and opportunities (IMF, 2022). As such, all expressions of gender inequality stem from gender gaps, but not all gender gaps are expressions of gender inequality.

Nigeria has one of the highest overall gender gaps in sub-Saharan Africa, at 0.635 in 2020 (World Economic Forum, 2021). This implies a 63.5% reduction in the gender gap. This gender gap is underestimated because it does not capture the marked gender inequality in rural and impoverished communities. With Nigerian societies being particularly patriarchal in setting, this allows male dominance right from the family units, through community space, to the national space. This gives rise to various expressions of gender inequality in society, especially in rural areas. In rural households, gender inequality is particularly more explicit in expression (Dery *et al*., 2024). This is because women in rural areas, being the principal food producers and preparers for the rest of the family, source wood for fires and water for domestic use, which are usually fetched from a far distance. This suggests that they spend quite a significant portion of the day collecting fuel wood and water, preparing food and taking care of household members (Samtleben & Müller, 2022). Added is the burden of women being the major caregivers of sick family members (Christian, 2024).

The understanding of inequality in the context of this study is based on the Intersectionality concept, which is a critical framework that provides the mindset and language for examining interconnections and interdependencies between social categories in a system. The concept was first introduced by Kimberle Crenshaw as a means of explaining the unique experiences of discrimination faced by black women. Crenshaw explained, “If an accident happens in an intersection, it can be caused by cars travelling from any number of directions and, sometimes, from all of them. Similarly, if a Black woman is harmed because she is in the intersection, her injury could result from sex discrimination or race discrimination” (Crenshaw, 1989). Drawing on these unique experiences, Crenshaw further defined the term in the context of anti-discrimination laws, which she felt insufficiently addressed the experiences of black women who faced discrimination and exclusion in a variety of contexts. At the time, she argued, existing laws only accounted for gender and race, not the ways that the experiences of black women are compounded by sexism and racism. Instead, Crenshaw said, oppression should not be analysed separately but rather as interdependent, and "intersectionality" portrayed the idea that individuals experience oppression differently based on where they stand across various social markers. It highlights how discrimination and exclusion are not simple and cannot be solved by focusing on a single factor. Instead, it can help us understand how the experience of poverty is gendered and racialised, and how it differs within different social contexts. This approach is crucial in understanding the inequalities different groups face and, by extension, how to overcome them by considering the complexity of the identities and patterns of oppression that individuals face within a given society.

The study by Wijesiri & Hettiarachchi (2021) compared gender inequality between rural and urban areas, with results indicating that inequality in terms of access to drinking water is more pertinent in rural areas compared to urban areas. Khadam *et al*. (2024) also identified gender gaps in water governance, which puts women at a disadvantage. Dahal *et al*. (2022) have shown the inequitable relations between men and women leading to gender-based violence, domestic labour and limited access to health facilities, employment, social amenities and fundamental freedom to own assets and make decisions. It is against this background that this study attempts to detail the contexts of the various social markers which pose certain demands and constraints,

which could be particularly burdensome for women who are situated within the intersectionality of social classes in the rural areas of Southern Nigeria. Apart from gender, this study examined other social markers, which are age, marital status and educational level as intersectionality factors in accounting for the challenges faced by women in typical rural agrarian societies in Edo and Delta States of Southern Nigeria.

Study Area

The study area comprises Edo and Delta States, located in the southern part of Nigeria (Figure 1). Delta and Edo States emerged from the splitting of the defunct Bendel State in 1991 and comprise a wide variety of ethnicities, some of which are closely linked by shared ancestry. The geographical location of Delta State is Longitude: $5^0$00'E and $6^0$45'E and Latitude: $5^0$00'N and $6^0$30'N, and covers an area of 17,239.24 km^2, while that of Edo State is between Latitude $05^0$44'N and $07^0$34'N and Longitude $05^0$04'E and $06^0$45'E, covering an area of 19,819.28 km^2. The population figures for both Delta and Edo States stand at 4,112,445 and 3,233,366, respectively (National Population Commission (NPC, 2010). Delta State comprises mostly rain and mangrove forests and swamps, while the tropical rainforest covers most parts of Edo State. Both states assume a major economic advantage to Nigeria because they are both crude oil-producing states. Despite the number of populous urban centres in both states, the economies of some of which are enhanced by the activities of crude oil drilling, transportation and refining companies, there also exist numerous rural farming settlements actively engaged in peasant farming, fishing, palm oil refining, animal husbandry, artisanry, small-scale trading, etc. Rural women in such communities are actively involved in agriculture and contribute immensely to their local economies (Balogun & Odjugo, 2020).

Figure 1: Edo and Delta States in Southern Nigeria

Materials and Methods

The study involved the use of household questionnaire copies administered in six (6) LGAs in Edo and Delta States (Figure 1). The LGAs were Esan Central, Estako East and Ovia South-west in Edo State and Ethiope East, Ika South, Isoko South LGAs in Delta State. These LGAs were selected to represent the different ethnicities in both states. A sample size of 3,188 persons was derived from the projected population figures of Delta and Edo States which are 7,342,047 and 5,333,052 persons respectively. Respondents were selected using both stratified and random sampling techniques. The study area was stratified at three levels (LGAs, Political Wards and Housing Blocks of 10 housing units each). There are 270 and 193 Wards in Delta and Edo States respectively. Being that there are approximately 30,000 persons per Ward and about 5–6 persons per household, this would imply that there are approximately 5,000 households per Ward. Using 10 housing units/households per Housing Block, the total number of designated Housing Blocks per Ward for the study was 500. For each Housing Block, a random number function in Microsoft Excel was used to assign a random number to each housing unit, from which one household from each Block was randomly selected. In each randomly selected household, one adult male or female was interviewed.

The study involved 50.69% of respondents from Edo State and 49.31% of respondents from Delta State. A higher number females (76%) compared to male respondents (24%) comprised the sampling pool (Table 1), which was purposively done to elicit responses on priority needs for female respondents in line with the objectives of the study. The study involved the use of the one-way multivariate analysis of variance, which was appropriate in determining how the combination of multiple (in this case, ten social markers) dependent variables accounted for significant differences between groups of the independent variable. The independent variables which were 'gender, age, marital status and educational qualification', were analysed separately. The use of mean and standard deviation in cross-tabulations further provided descriptives of the outcomes of the MANOVA.

Table 1: Sample Size Distribution

States	Male		Female		Total	
	N	%	N	%	N	%
Delta State	381	24.2	1191	75.8	**1572**	**100**
Edo State	384	23.8	1232	76.2	**1616**	**100**
Total	**765**	**24.0**	**2423**	**76.0**	**3188**	**100**

Results and Discussion

The details of inequality are shown from the results of the MANOVA analyses in Tables 2 to 9, which highlight the intersectionality of four defined 'social markers': gender, age, marital status and educational qualification in defining various expressions of inequality. The One-way MANOVA in Table 2 conducted to determine whether there was a significant difference between males and females in terms of ten (10) selected expressions of inequality in social norms, indicated a significant difference on basis of the combined dependent variables F (10, 3177) = 28.68, p = 0.000; Wilk's lambda = 0.917, partial eta squared = 0.083.

Table 2: Significant Univariate Effects based on Gender (at p < 0.05 Level)

S/N	Dependent Variable	*df*	*df* error	F	*P Value*	*Partial Eta Squared*
1	Average monthly income	1	3186	0.915	0.339	0.000
2	The level of input in decision-making on crop farming	1	3186	163.34	0.000	0.049
3	The level of input in decision-making on income from crop farming	1	3186	157.50	0.000	0.047
4	The level of input in decision-making on non-farming activities	1	3186	8.29	0.004	0.003
5	The level of input in decision-making on income from non-farming activities	1	3186	19.46	0.000	0.006
6	Number of sleeping hours on a typical day	1	3186	0.16	0.687	0.000
7	Number of working hours on a typical day	1	3186	0.49	0.485	0.000
8	Number of hours spent on economically productive work in the primary sector on a typical day	1	3186	9.47	0.002	0.003
9	Number of hours spent on economically productive work in the secondary sector on a typical day	1	3186	0.59	0.442	0.000
10	Number of hours spent in unpaid productive work on a typical day	1	3186	78.68	0.000	0.024

When the results of the dependent variables were considered separately, the results indicated significant effect of gender grouping on the level of input in decision-making on crop farming {F (1, 3186) = 163.34, p = 0.000, partial eta squared = 0.049}, the level of input in decision-making on income from crop farming {F (1, 3186) = 157.50, p = 0.000, partial eta squared = 0.047}, the level of input in decision-making on non-farming activities {F (1, 3186) = 8.29, p = 0.004, partial eta squared = 0.003}, the level of input in decision-making on income from non-farming activities {F (1, 3186) = 19.46, p = 0.000, partial eta squared = 0.006}, the number of hours spent on economically productive work in the primary sector on a typical day {F(1, 3186) = 9.474, p = 0.002, partial eta squared = 0.003}, and the nnumber of hours spent in unpaid productive work on a typical day {F (1, 3186) = 78.68, p = 0.000, partial eta squared = 0.024}. However, there was no significant effect of gender on the average monthly income {F (1, 3186) = 0.915, p = 0.339, partial eta squared = 0.000}, the number of sleeping hours on a typical day {F (1, 3186) = 0.162, p = 0.687, partial eta squared = 0.000}, the number of working hours on a typical day {F (1, 3186) = 0.487, p = 0.485, partial eta squared = 0.000} and the number of hours spent on economically productive work in the secondary sector on a typical day {F (1, 3186) = 0.591, p = 0.442, partial eta squared = 0.000}.

An inspection of the mean values in Table 3 indicated that males reported higher range values of monthly income (M = 1.46, SD = 1.12) than females (M = 1.42, SD = 0.99). These mean values for both males and females fall between zero income and N30,000 monthly income. The mean values also indicated that males had higher levels of input into decisions on 'crop farming' (M = 3.80, SD = 1.17), 'income from crop farming' (M = 3.67, SD = 1.31), 'non-farm economic activities' (M = 3.44, SD = 1.10) and 'income from non-farm economic activities' (M = 3.73, SD = 1.27) than females (M = 3.20 , SD = 1.10), (M = 3.03, SD = 1.20), (M = 3.32, SD = 1.00), (M = 3.51, SD = 1.20) respectively. The range of values for hours spent on daily activities indicated that males had more daily hours of sleep (M = 2.18, SD = 1.02), less daily working hours (M = 2.06, SD = 0.51), less time in the primary productive sector (M = 2.76, SD = 1.69), more daily hours in the secondary economic sector (M = 0.38, SD = 0.82) and more daily hours in unpaid productive work (M = 2.88, SD = 1.73); than women (M = 2.16, SD = 1.02) (M = 2.08, SD = 0.55) (M = 2.98, SD = 1.70) (M = 0.36, SD = 0.81) (M = 2.33, SD = 1.39).

Table 3: Descriptive Statistics of the Dependent Variables based on Gender

Dependent Variable	Gender of respondents	Mean	Std. Deviation	Std. Error	95% Confidence Interval	
					Lower Bound	Upper Bound
Average monthly income from your main occupation	Male	1.46	1.115	.037	1.390	1.535
	Female	1.42	.991	.021	1.381	1.463
The level of input into decision-making on crop farming	Male	3.80	1.168	.040	3.717	3.875
	Female	3.20	1.103	.023	3.158	3.248
The level of input into decision-making on the use of income from food crop farming	Male	3.67	1.310	.044	3.582	3.756
	Female	3.03	1.197	.025	2.983	3.081
The level of input into decision-making on non-farm economic activities	Male	3.44	1.095	.037	3.372	3.517
	Female	3.32	1.003	.021	3.281	3.363
Level of Input into decision-making on the use of income from non-farm economic activities	Male	3.73	1.269	.044	3.648	3.821
	Female	3.51	1.202	.025	3.463	3.560
Number of sleeping hours on a typical day	Male	2.18	1.022	.037	2.103	2.248
	Female	2.16	1.024	.021	2.117	2.199
Number of working hours on a typical day	Male	2.06	.513	.020	2.024	2.101
	Female	2.08	.550	.011	2.057	2.100
Number of hours spent on economically productive work in the primary sector on a typical day	Male	2.76	1.685	.061	2.644	2.885
	Female	2.98	1.702	.034	2.914	3.049
Number of hours spent on economically productive work in the secondary sector on a typical day	Male	.38	.821	.029	.325	.441
	Female	.36	.814	.017	.325	.389
Number of hours spent in unpaid productive work on a typical day	Male	2.88	1.728	.054	2.771	2.981
	Female	2.33	1.393	.030	2.272	2.390

These values represent hourly ranges between 5 - 15 hours, except for hourly ranges in the secondary economic sector which were between 0 - 5 hours for both males and females. These findings suggest that women are at a disadvantage concerning their levels of participation in family decisions relating to their sources of livelihood (Balogun & Dudu, 2024, Khadam *et al*., 2024). Saleemi & Kofol (2022) observe that the participation of women in critical decision-making on family income often translates to bridging the gender gaps in households. Other findings support the fact that women have fewer sleeping hours (Chao et al., 2023) and more hours of work in the primary sector, which is mostly agriculture (Balogun & Odjugo, 2020).

The One-way MANOVA in Table 4 conducted to determine whether there were significant differences among the various age groups (teenagers, young adults, middle-aged adults and the elderly) based on selected ten (10) selected expressions of inequality in social norms indicated a significant difference on basis of the combined dependent variables F (30, 9320) = 11.09, p = 0.000; Wilk's lambda = 0.902, partial eta squared = 0.034.

Table 4: Significant Univariate Effects based on Age Group (at p < 0.05 level)

S/N	Dependent Variable	Df	df error	F	P Value	Partial Eta Squared
1	Average monthly income	3	3184	13.38	0.000	0.012
2	The level of input in decision-making on crop farming	3	3184	65.09	0.000	0.058
3	The level of input in decision-making on income from crop farming	3	3184	70.29	0.000	0.062
4	The level of input in decision-making on non-farming activities	3	3184	7.81	0.000	0.007
5	The level of input in decision-making on income from non-farming activities	3	3184	4.90	0.002	0.005
6	Number of sleeping hours on a typical day	3	3184	1.08	0.356	0.001
7	Number of working hours on a typical day	3	3184	14.33	0.000	0.013
8	Number of hours spent on economically productive work in the primary sector on a typical day	3	3184	2.02	0.109	0.002
9	Number of hours spent on economically productive work in the secondary sector on a typical day	3	3184	6.56	0.000	0.006
10	Number of hours spent in unpaid productive work on a typical day	3	3184	1.74	0.157	0.002

When the results of the dependent variables were considered separately, the results indicated significant effect of age groupings on the average monthly income from their main occupation {F (3, 3184) = 13.379, p = 0.000, partial eta squared = 0.012}, the level of input in decision-making on crop farming {F (3, 3184) = 65.092, p = 0.000, partial eta squared = 0.058}, the level of input in decision-making on income from crop farming {F (3, 3184) = 70.29, p = 0.000, partial eta squared = 0.062}, the level of input in decision-making on non-farming activities {F (3, 3184) = 7.813, p = 0.000, partial eta squared = 0.007}, the level of input in decision-making on income from non-farming activities {F (3, 3184) = 4.90, p = 0.002, partial eta squared = 0.005}, the number of working hours on a typical day {F (3, 3184) = 14.33, p = 0.000, partial eta squared = 0.013}, and the number of hours spent on economically productive work in the secondary sector on a typical day {F (3, 3184) = 6.563, p = 0.000, partial eta squared = 0.006}. However, there was no significant effect of age groupings on the number of sleeping hours on a typical day {F (3, 3184) = 1.081, p = 0.356, partial eta squared = 0.001}, the number of hours spent on economically productive work in the primary sector on a typical day {F (3, 3184) = 2.021, p = 0.109, partial eta squared = 0.002} and the number of hours spent in unpaid productive work on a typical day {F (3, 3184) = 1.739, p = 0.157, partial eta squared = 0.002}.

The mean values in Table 5 indicated that the middle-aged adults (40 – 59 years) and the elderly (60 years and above) earned higher monthly incomes (M = 1.54, SD = 1.03), (M = 1.39, SD = 1.09); had higher levels of input into household decisions on crop farming (M = 3.44, SD = 1.12), (M = 3.74, SD = 1.17); had higher levels of input into decision-making on the use of income from food crop farming (M = 3.31, SD = 1.23), (M = 3.61, SD = 1.29); and spent more hours in unpaid productive work on a typical day (M = 2.45, SD = 1.52), (M = 2.57, SD = 1.56) compared to the younger age groups.

Table 5: Descriptive Statistics of the Dependent Variables based on Age Grouping

Dependent Variable	Age distribution of respondents	Mean	Std. Deviation	Std. Error	95% Confidence Interval	
					Lower Bound	Upper Bound
Average monthly income from your main occupation	Less than 20 years	0.800	1.043	0.161	.485	1.115
	20-39 years	1.342	0.949	0.031	1.282	1.402
	40 -59 years	1.536	1.031	0.027	1.484	1.589
	60 years and above	1.391	1.091	0.041	1.312	1.471
The level of input into decision-making on crop farming	Less than 20 years	2.800	0.966	0.176	2.455	3.145
	20-39 years	3.016	1.071	0.034	2.950	3.083
	40 -59 years	3.436	1.123	0.029	3.378	3.493
	60 years and above	3.746	1.174	0.044	3.659	3.833
The level of input into decision-making on the use of income from food crop farming	Less than 20 years	2.475	1.037	0.192	2.098	2.852
	20-39 years	2.806	1.159	0.037	2.734	2.878
	40 -59 years	3.307	1.227	0.032	3.244	3.370
	60 years and above	3.609	1.292	0.048	3.514	3.704
The level of input into decision-making on non-farm economic activities	Less than 20 years	3.075	1.141	0.162	2.758	3.392
	20-39 years	3.445	1.053	0.031	3.384	3.505
	40 -59 years	3.349	1.019	0.027	3.296	3.402
	60 years and above	3.213	0.974	0.041	3.133	3.293
Level of Input into decision-making on the use of income from non-farm economic activities	Less than 20 years	3.600	1.429	0.193	3.222	3.978
	20-39 years	3.632	1.247	0.037	3.560	3.705
	40 -59 years	3.584	1.190	0.032	3.521	3.647
	60 years and above	3.404	1.224	0.049	3.308	3.499
Number of sleeping hours on a typical day	Less than 20 years	2.100	.982	0.162	1.783	2.417
	20-39 years	2.156	1.013	0.031	2.095	2.217
	40 -59 years	2.141	1.013	0.027	2.088	2.194
	60 years and above	2.226	1.068	0.041	2.146	2.306
Number of working hours on a typical day	Less than 20 years	2.000	.453	0.085	1.833	2.167
	20-39 years	2.138	.555	0.016	2.106	2.170
	40 -59 years	2.077	.521	0.014	2.049	2.105
	60 years and above	1.963	.550	0.021	1.921	2.005
Number of hours spent on economically productive work in the primary sector on a typical day	Less than 20 years	2.925	1.607	0.269	2.398	3.452
	20-39 years	3.020	1.721	0.051	2.919	3.121
	40 -59 years	2.853	1.677	0.045	2.765	2.941
	60 years and above	2.946	1.716	0.068	2.813	3.079
Number of hours spent on economically productive work in the secondary sector on a typical day	Less than 20 years	.300	.758	0.129	0.048	0.552
	20-39 years	.423	.885	0.025	0.375	0.472
	40 -59 years	.371	.811	0.022	0.329	0.413
	60 years and above	.245	.680	0.032	0.181	0.308
Number of hours spent in unpaid productive work on a typical day	Less than 20 years	2.200	1.305	0.237	1.736	2.664
	20-39 years	2.421	1.442	0.045	2.332	2.510
	40 -59 years	2.454	1.515	0.040	2.377	2.532
	60 years and above	2.568	1.560	0.060	2.451	2.685

The results align with the study by Ndossi *et al*., (2022) which reported that older women were more empowered to make decisions owing to their wealth of experience. However, the young adults (20 – 39 years) and middle-aged adults (40 – 59 years) had higher levels of input into household decision-making on non-farm economic activities (M = 3.45, SD = 1.05), (M = 3.35, SD = 1.02); while the teenagers and young adults had higher levels of input into household decisions on the use of income from non-farm economic activities (M = 3.60, SD = 1.43), (M = 3.63, SD = 1.25). While teenagers had the least number of sleeping hours (M = 2.10, SD = 0.98), the elderly had the greatest number of sleeping hours (M = 2.23, SD = 1.07). This finding differs from that of Tao *et al*. (2023), which had reported that older adults in China had fewer hours of sleep compared to younger ones. This disparity may reflect the economic situation in the study area, requiring young adults to assist in economically augmenting their family income. The young adults spent more hours than other age groups working on a typical day, (M = 2.14, SD = 0.56); engaging in productive work in the primary sector (M = 3.02, SD = 1.72) and engaging in productive work in the secondary sector (M = 0.42, SD = 0.89). However, the elderly spent more time in unpaid productive work (M = 2.57, SD = 1.56) compared with other age groups.

The One-way MANOVA in Table 6 conducted to determine whether there were significant differences among the various groups of respondents of different marital statuses (single, married, widowed and divorced/separated) based on ten (10) selected expressions of inequality in social norms indicated a significant difference on basis of the combined dependent variables F (30, 9320) = 8.24, p = 0.000; Wilk's lambda = 0.93, partial eta squared = 0.025.

Table 6: Significant Univariate Effects based on Marital Status

S/N	Dependent Variable	*df*	*df* error	F	*P Value*	*Partial Eta Squared*
1	Average monthly income	3	3184	6.25	0.000	0.006
2	The level of input in decision-making on crop farming	3	3184	51.47	0.000	0.046
3	The level of input in decision-making on income from crop farming	3	3184	53.81	0.000	0.048
4	The level of input in decision-making on non-farming activities	3	3184	4.27	0.005	0.004
5	The level of input in decision-making on income from non-farming activities	3	3184	5.89	0.001	0.006
6	Number of sleeping hours on a typical day	3	3184	0.449	0.718	0.000
7	Number of working hours on a typical day	3	3184	10.06	0.000	0.009
8	Number of hours spent on economically productive work in the primary sector on a typical day	3	3184	3.09	0.026	0.003
9	Number of hours spent on economically productive work in the secondary sector on a typical day	3	3184	5.35	0.001	0.005
10	Number of hours spent in unpaid productive work on a typical day	3	3184	1.26	0.285	0.001

When the results of the dependent variables were considered separately, the results indicated significant effect of marital status on the average monthly income from their main occupation F (3, 3184) = 6.25, p = 0.000, partial eta squared = 0.006, the level of input in decision-making on crop farming F (3, 3184) = 51.47, p = 0.000, partial eta squared = 0.046, the level of input in decision-making on income from crop farming F (3, 3184) = 53.81, p = 0.000, partial eta squared = 0.048, the level of input in decision-making on non-farming activities F (3, 3184) = 4.27, p = 0.005, partial eta squared = 0.004, the level of input in decision-making on income from non-

farming activities F (3, 3184) = 5.89, p = 0.001, partial eta squared = 0.006, the number of working hours on a typical day F (3, 3184) = 10.06, p = 0.000, partial eta squared = 0.009, the number of hours spent on economically productive work in the primary sector on a typical day F (3, 3184) = 3.09, p = 0.026, partial eta squared = 0.003 and the number of hours spent on economically productive work in the secondary sector on a typical day F (3, 3184) = 5.35, p = 0.001, partial eta squared = 0.005. However, there was no significant effect of the marital status of the respondents on the number of sleeping hours on a typical day {F (3, 3184) = 0.45, p = 0.718, partial eta squared = 0.000} and the number of hours spent in unpaid productive work on a typical day {F (3, 3184) = 1.26, p = 0.285, partial eta squared = 0.001}.

The descriptive statistics in Table 7 indicate that married adults had the highest monthly income scale (mean = 1.47, SD = 1.01), possibly due to support from their spouses. This finding is supported by Dunga (2025), who noted that married individuals tend to have higher incomes compared with singles. Following them were widowed adults (mean = 1.40, SD = 1.06), who are likely supported by relatives and the legacies of their late spouses. Separated or divorced adults had a lower income scale (mean = 1.37, SD = 1.06), while single adults had the lowest (mean = 1.14, SD = 1.03). Regarding input into decision-making, widowed and separated/divorced adults had greater input into decisions about crop farming (mean = 3.78 & 3.42, SD = 1.25 & 1.37 respectively) and on the use of income from crop farming (mean = 3.65 & 3.20, SD = 1.37 & 1.51 respectively). Conversely, in decisions related to non-farming economic activities and the use of income from such activities, single adults scored highest (mean = 3.59 & 3.92, SD = 1.28 & 1.40 respectively). This aligns with the findings of Jan & Akhtar (2008), which reported that unmarried women are more capable of independent decision-making compared with married women.

Separated/divorced adults spent the least number of hours sleeping (mean = 2.07, SD = 0.96), while single adults spent the most hours working on a typical day (mean = 2.12, SD = 0.50). Single and separated/divorced adults spent the most hours in economically productive work in the primary sector, which is mostly farming and animal husbandry (mean = 3.30 & 3.02, SD = 1.66 & 1.66 respectively), as well as for economically productive work in the secondary sector, which include trading, artisanry and rendering of service (mean = 0.49 & 0.41, SD = 0.90 & 0.89 respectively). Married and widowed adults spent the most hours in a typical day on unpaid productive work (mean = 2.49 & 2.45, SD = 1.51 & 1.50, respectively). Studies by Celik; (2017); Nzechi & Umokoro (2021) and Kislev (2023) show that adults who have never been married, widowed or divorced/separated are usually exempted from benefits, opportunities or social status, which are bequeathed with decision-making privileges. The social system ostracises single individuals, because they are seen as deviating from societal expectations, which idealise a complete family system comprising a husband, wife or wives and children.

Table 7: Descriptive Statistics of the Dependent Variables based on Marital Status

Dependent Variable	Marital status of respondents	Mean	Std. Deviation	Std. Error	95% Confidence Interval	
					Lower Bound	Upper Bound
Average monthly income from your main occupation	Single	1.136	1.030	.077	.985	1.286
	Married	1.466	1.007	.021	1.425	1.507
	Widowed	1.395	1.062	.045	1.308	1.483
	Separated/Divorced	1.370	1.061	.087	1.199	1.540
The level of input into decision-making on crop farming	Single	2.633	1.042	.084	2.468	2.798
	Married	3.298	1.080	.023	3.253	3.344
	Widowed	3.779	1.248	.049	3.683	3.876
	Separated/Divorced	3.420	1.366	.095	3.233	3.607
The level of input into decision-making on the use of income from food crop farming	Single	2.345	1.077	.092	2.164	2.525
	Married	3.144	1.181	.025	3.094	3.193
	Widowed	3.651	1.373	.054	3.545	3.756
	Separated/Divorced	3.203	1.505	.104	2.999	3.407
The level of input into decision-making on non-farm economic activities	Single	3.593	1.276	.077	3.442	3.744
	Married	3.327	.989	.021	3.286	3.369
	Widowed	3.347	1.045	.045	3.259	3.436
	Separated/Divorced	3.464	1.197	.087	3.293	3.635
Level of Input into decision-making on the use of income from non-farm economic activities	Single	3.915	1.393	.092	3.736	4.095
	Married	3.543	1.190	.025	3.493	3.592
	Widowed	3.516	1.240	.053	3.412	3.621
	Separated/Divorced	3.688	1.382	.104	3.485	3.892
Number of sleeping hours on a typical day	Single	2.141	.922	.077	1.990	2.292
	Married	2.165	1.031	.021	2.123	2.206
	Widowed	2.182	1.039	.045	2.094	2.270
	Separated/Divorced	2.072	.956	.087	1.902	2.243
Number of working hours on a typical day	Single	2.124	.496	.041	2.045	2.204
	Married	2.099	.543	.011	2.077	2.121
	Widowed	1.964	.530	.024	1.917	2.010
	Separated/Divorced	2.014	.553	.046	1.925	2.104
Number of hours spent on economically productive work in the primary sector on a typical day	Single	3.294	1.663	.128	3.043	3.544
	Married	2.903	1.702	.035	2.834	2.972
	Widowed	2.900	1.702	.074	2.754	3.046
	Separated/Divorced	3.022	1.663	.145	2.738	3.305
Number of hours spent on economically productive work in the secondary sector on a typical day	Single	.492	.899	.061	.372	.611
	Married	.376	.833	.017	.343	.409
	Widowed	.248	.664	.036	.178	.318
	Separated/Divorced	.413	.886	.069	.277	.549
Number of hours spent in unpaid productive work on a typical day	Single	2.356	1.516	.113	2.135	2.577
	Married	2.485	1.506	.031	2.424	2.545
	Widowed	2.447	1.494	.066	2.319	2.576
	Separated/Divorced	2.268	1.337	.127	2.018	2.518

The One-way MANOVA in Table 8 conducted to determine whether there were significant differences among the various groups of respondents with different levels of educational qualifications (no formal education, primary, secondary and tertiary educational qualifications) based on the ten (10) selected expressions of inequality in social norms indicated a significant difference on basis of the combined dependent variables F (30, 9320) = 8.24, p = 0.000; Wilk's lambda = 0.93, partial eta squared = 0.025.

Table 8: Significant Univariate Effects based on Educational Qualification

S/N	Dependent Variable	*df*	*df* error	F	*P Value*	*Partial Eta Squared*
1	Average monthly income	3	3184	6.28	0.000	0.006
2	The level of input in decision-making on crop farming	3	3184	25.45	0.000	0.023
3	The level of input in decision-making on income from crop farming	3	3184	36.30	0.000	0.033
4	The level of input in decision-making on non-farming activities	3	3184	22.37	0.000	0.021
5	The level of input in decision-making on income from non-farming activities	3	3184	10.90	0.000	0.010
6	Number of sleeping hours on a typical day	3	3184	4.96	0.002	0.005
7	Number of working hours on a typical day	3	3184	4.53	0.004	0.004
8	Number of hours spent on economically productive work in the primary sector on a typical day	3	3184	1.54	0.202	0.001
9	Number of hours spent on economically productive work in the secondary sector on a typical day	3	3184	9.20	0.000	0.009
10	Number of hours spent in unpaid productive work on a typical day	3	3184	5.20	0.001	0.005

When the results of the dependent variables were considered separately, the results indicated significant effect of educational qualification on the average monthly income from their main occupation F (3, 3184) = 6.28, p = 0.000, partial eta squared = 0.006, the level of input in decision-making on crop farming F (3, 3184) = 25.45, p = 0.000, partial eta squared = 0.023, the level of input into decision-making on the use of income from crop farming F (3, 3184) = 36.30, p = 0.000, partial eta squared = 0.033, the level of input in decision-making on non-farming activities F (3, 3184) = 22.37, p = 0.000, partial eta squared = 0.021, the level of input in decision-making on the use of income from non-farming activities F (3, 3184) = 10.90, p = 0.000, partial eta squared = 0.010, the number of sleeping hours on a typical day F (3, 3184) = 4.96, p = 0.002, partial eta squared = 0.005, the number of working hours on a typical day F (3, 3184) = 4.53, p = 0.004, partial eta squared = 0.004, the number of hours spent on economically productive work in the secondary sector on a typical day F (3, 3184) = 9.20, p = 0.000, partial eta squared = 0.009, and the number of hours spent in unpaid productive work on a typical day F (3, 3184) = 5.20, p = 0.001, partial eta squared = 0.005. This is similar to the findings by Acharya et al. (2010), suggesting that women who were more schooled were more capable of independent decision-making. However, there was no significant effect of educational qualification on the number of hours spent on economically productive work in the primary sector on a typical day, F (3, 3184) = 1.54, p = 0.202, partial eta squared = 0.001. This implied that, irrespective of qualification, most rural dwellers were actively engaged in the primary economic sector, which centred mostly around farming and animal husbandry. Raz et al. (2025) affirm that women's decision-making could also be motivated by economic participation rather than formal education.

The descriptive statistics in Table 9 show that respondents with no formal education and with primary educational qualification had a higher scale for monthly income (mean = 1.49 & 1.49, SD = 1.03 & 0.95), compared with those with secondary (mean = 1.42, SD = 1.02) and tertiary (mean = 1.24, SD = 1.21) educational qualifications. This might suggest that respondents with little or no education are equipped with indigenous knowledge and skills which make them capable of enhancing their sources of socioeconomic livelihood compared to those with formal education (Balogun & Dudu, 2024). In the same vein, respondents with no formal education and those with primary educational qualification had higher scales in terms of their input into

decision-making on crop farming (mean = 3.51 & 3.52, SD = 1.20 & 1.12 respectively), and their input into decisions on the use of income from crop farming (mean = 3.42 & 3.40, SD = 1.16 & 1.21). However, those with secondary and tertiary educational qualifications had higher scales in terms of their input into decisions on non-farming economic activities (mean = 3.42 & 3.68, SD = 1.04 & 1.11), as well as their input into decisions on the use of income from non-farming economic activities (mean = 3.61 & 3.85, SD = 1.23 & 1.28).

Table 9: Descriptive Statistics of the Dependent Variables based on Highest Educational Qualification

Dependent Variable	Educational qualification of respondents	Mean	Std. Deviation	Std. Error	95% Confidence Interval	
					Lower Bound	Upper Bound
Average monthly income from your main occupation	No formal education	1.490	1.025	.045	1.402	1.578
	Primary education	1.491	0.945	.031	1.429	1.553
	Secondary education	1.415	1.018	.029	1.359	1.472
	Tertiary education	1.238	1.206	.053	1.134	1.343
The level of input into decision-making on crop farming	No formal education	3.512	1.098	.050	3.414	3.610
	Primary education	3.524	1.124	.035	3.456	3.593
	Secondary education	3.202	1.143	.032	3.140	3.265
	Tertiary education	3.087	1.181	.059	2.971	3.202
The level of input into decision-making on the use of income from food crop farming	No formal education	3.421	1.164	.054	3.314	3.527
	Primary education	3.404	1.206	.038	3.329	3.478
	Secondary education	3.010	1.269	.035	2.942	3.079
	Tertiary education	2.821	1.288	.064	2.695	2.947
The level of input into decision-making on non-farm economic activities	No formal education	3.219	0.908	.045	3.131	3.307
	Primary education	3.226	1.004	.031	3.165	3.287
	Secondary education	3.416	1.041	.029	3.360	3.472
	Tertiary education	3.675	1.112	.053	3.571	3.779
Level of Input into decision-making on the use of income from non-farm economic activities	No formal education	3.426	1.081	.054	3.321	3.531
	Primary education	3.485	1.242	.037	3.412	3.559
	Secondary education	3.606	1.227	.034	3.539	3.674
	Tertiary education	3.848	1.281	.063	3.724	3.972
Number of sleeping hours on a typical day	No formal education	2.014	1.021	.045	1.925	2.102
	Primary education	2.173	1.075	.031	2.111	2.235
	Secondary education	2.218	1.007	.029	2.162	2.275
	Tertiary education	2.149	0.910	.053	2.045	2.253
Number of working hours on a typical day	No formal education	2.089	0.617	.024	2.042	2.136
	Primary education	2.029	0.527	.017	1.997	2.062
	Secondary education	2.088	0.522	.015	2.058	2.118
	Tertiary education	2.138	0.526	.028	2.083	2.193
Number of hours spent on economically productive work in the primary sector on a typical day	No formal education	2.870	1.712	.075	2.723	3.017
	Primary education	2.875	1.695	.052	2.772	2.977
	Secondary education	2.958	1.690	.048	2.864	3.053
	Tertiary education	3.070	1.727	.088	2.897	3.244
Number of hours spent on economically productive work in the secondary sector on a typical day	No formal education	.316	.739	.036	.246	.386
	Primary education	.295	.748	.025	.246	.344
	Secondary education	.388	.848	.023	.343	.433
	Tertiary education	.539	.949	.042	.456	.622
Number of hours spent in unpaid productive work on a typical day	No formal education	2.281	1.378	.066	2.152	2.410
	Primary education	2.540	1.548	.046	2.450	2.631
	Secondary education	2.514	1.516	.042	2.431	2.597
	Tertiary education	2.314	1.421	.078	2.162	2.467

Respondents with secondary and tertiary educational qualifications spent the most hours on economically productive work in the primary sector (mean = 2.96 & 3.07, SD = 1.69 & 1.73) and in the secondary sector (mean = 0.39 & 0.54, SD = 0.84 & 0.95). Respondents with primary and secondary educational qualifications spent the most time with unpaid productive work (mean = 2.54 & 2.51, SD = 1.55 & 1.52), while those with no formal education spent the least amount of time with the same (mean = 2.28, SD = 1.38). The fact that respondents with little or no formal education spent less time with economically productive activities, yet still less time with unpaid productive work (which includes household chores) suggest the influence of the extended family care system, whereby members of the extended family are involved in the daily affairs of the nuclear family, thereby easing the burden of nuclear family members through collective burden sharing (Castiglia, 1999; Sherman, 1999). This is a norm typical to African rural areas, operating within the traditional compound housing setting (Rabe & Kumswa, 2022). However, people with little or no formal education can improve their productivity in the economic sector through the mastery of indigenous skills and knowledge (Balogun & Dudu, 2024).

Ascertaining Priority Needs in Rural Communities

The study gives insight into the perceived priority needs of rural dwellers based on the social markers and the location of the respondents. The values shown represent the percentage of respondents who affirmed the various possible interventions as their priority needs, as against those who disaffirmed the same as their priority needs. From the results in Table 10, the most identified priority need of all categories of respondents was employment/income. The economic downturn following the post–COVID–19 era and the increasing inflationary trend in various countries of the world, has given rise to the quest for sources of better income to improve living standards (Hickel & Sullivan, 2024). The least priority need was sanitation/ personal hygiene.

Table 10: Priority Needs of Rural Community Residents Based on Social Markers

Characterisation of respondents by social markers and Location		Priority needs ascertained by respondents (%)							
		Health care	Food	Water	Sanitation/ personal hygiene	Shelter/ Household items	Education	Employment/ Income	Safety and security
Gender	Male	47.06	52.68	36.86	3.14	25.62	32.81	54.38	24.84
	Female	45.44	62.32	31.86	4.09	29.01	30.33	66.82	14.69
Age	Less than 20 years	37.5	62.5	25.0	7.5	30.0	40.0	72.5	2.5
	20-39 years	41.34	59.49	27.41	3.94	27.96	34.37	69.11	16.32
	40 -59 years	45.52	59.38	33.05	4.20	27.87	31.51	63.45	17.30
	60 years and above	54.85	62.16	43.40	2.70	29.25	23.05	55.01	19.07
Marital Status	Single	33.90	55.93	19.21	3.95	23.73	28.25	68.36	10.17
	Married	44.69	58.25	32.48	3.87	28.27	33.63	64.71	17.18
	Widowed	54.89	67.18	39.92	3.26	28.02	22.65	58.54	18.04
	Separated/Divorced	46.38	68.12	34.78	5.80	33.33	19.57	63.04	21.74
Educational Qualification	No formal education	50.78	65.12	42.25	3.68	28.29	30.62	54.84	13.76
	Primary education	44.54	59.07	35.90	3.99	30.10	30.48	64.29	17.95
	Secondary education	43.76	61.52	27.52	3.36	27.76	31.12	68.00	17.44
	Tertiary education	49.59	50.41	30.89	5.42	24.12	32.52	60.98	18.43
Location	Delta State	50.45	66.60	17.88	3.88	25.00	25.45	71.44	18.51
	Edo State	41.34	53.59	47.83	3.84	31.31	36.26	56.44	15.78

Based on gender, a greater percentage of the female respondents identified food (62.32%), sanitation/ personal hygiene (4.09%), shelter (29.02%) and employment/income (66.82%) as their priority needs compared to male respondents. The fact that a smaller percentage of women than men identified health needs as a priority suggests the focus of health care facilities on women and maternal healthcare. This may be the outcome of the government and private health initiatives in improving the utilisation of maternal health care facilities as reported by Kana et al, (2015) and Adejoorin et al., (2024). In terms of age, the elderly expressed greater vulnerability compared to other age groups in terms of their majority need for healthcare (54.85%), food (62.16%), water (43.40%), shelter (29.25%) and security (19.07%). These have been similarly identified by Tanyi *et al*., (2019) and Mobolaji, (2024).

The category of widowed and separated/divorcees were the most vulnerable in their expression of priority need for healthcare (54.89%, 46.38%), food (67.18%, 68.12%), water (39.92%, 34.78%), shelter (28.02%, 33.33%) and safety (18.04%, 21.74%) respectively compared with the 'single' and 'married' groups. These need gaps have been similarly identified by Nzechi & Umokoro (2021) and Kislev (2023). Those with no formal education expressed a higher priority need for healthcare (50.58%), food (65.12%) and water (42.25%), but at the same time expressed the least percentage priority need for income/employment (54.84%) and safety/security (13.76%). Individuals without formal education have been observed to rely on the mastery of their environments and the adoption of indigenous skills through informal education, which enables them to adjust to changing socioeconomic conditions and thus sustain their economic livelihoods (Malapane *et al*., 2024).

In a spatial context, the results in Table 10 indicate a similarity as well as some dissimilarities in the priority needs between Delta and Edo States. For instance, both states indicate a similar priority need for hygiene and sanitary conditions (3.88 and 3.84%). However, respondents from Delta State indicated higher priority needs for health (50.45%), food (66.60%), income/employment (71.44%) and safety/security (18.51%), compared with the respondents from Edo State. However, the respondents from Edo State indicated higher priority needs for water (47.83%), shelter (31.31%) and education (36.26%). The differences in the population density and distribution, government administration pattern and ecology of both states reflect on the nature of their pressing needs. A higher priority need for water in Edo State results from the fact that the State is located further inland from the coast, and thus has a lower underground water table. Delta State was created out of the defunct Bendel State in 1991 and given a new administrative capital city, Asaba. While Edo State retained the previous administrative capital city, Benin. The administrative system in Delta State, being more recent than Edo State, could account for higher levels of priority needs in the areas of health and employment. Generally, these findings should guide the government in administering intervention programmes based on the priority needs for each state.

Conclusion and Recommendation

The study has shown that inequality cuts across a number of demographics, which should not be ignored. The various expressions of inequality are show in the disparities in opportunities and privileges which are discriminatory based on gender, age, marital status and educational qualification. The study recommends bridging the income disparity between men and women by enhancing women's decision-making capabilities in the primary production sector (agriculture), through modifying customary laws which support women owning agricultural lands and property. The family and community value system in rural areas should be encouraged to support the elderly, widowed and divorced women in attaining self-sustenance, based on their priority needs. The outcome of the priority needs as observed in this study, show that some strides have been taken towards improving maternal healthcare. This should also be replicated in healthcare for men. There is a need for further studies on other expressions of inequality concerning access

to education, healthcare, credit facilities, political office holding etc. Further studies on paternal healthcare needs and provisioning in developing countries are also recommended.

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