

Gender Differentials in Household Poverty Reduction Activities of Rural Children

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ABSTRACT In developing countries such as Nigeria, impact of religion and culture which make parents/guardians have full control over their children/wards, and poor economic conditions encourage the use of children as a source of either household income generation or household expenditure/cash outflow reduction to alleviate poverty. This study examines and compares the contributions to family welfare of male and female children aged between 5 and 14 years and living in the rural area of Iwo Local Government Area of Osun State of Nigeria. Data were collected on the various types; the degree of involvement; and the attitudes of male and female children towards their participation in Household Poverty Reduction Activities (HPRA); and were analysed using descriptive and inferential statistics, regression technique and attitudinal measures. Children contribute to household poverty alleviation with their labour. The amount of hours per week, involvement in domestic activities, and the proportion contributing to family welfare are significantly higher for girls than boys. Boys rather than girls put in significant extra hours per week in family farm labour and hired labour; significant less hours in household food preparation, and in caring for infants; and almost equal amount in street trading and other household chores. Ranking revealed family farm labour and household food preparation as the most important for boys and girls respectively. High proportion of children has unfavourable attitudes towards their involvement in household poverty alleviation, which is significantly higher for boys than girls, because participation affects their leisure and time for study. Since children have negative attitudes and HPRA differ between boys and girls, gender-specific policies are needed to free children for their future capacity building.

INTRODUCTION

The concept of poverty is controversial in several respects most especially in its definition, measurement, establishment of poverty line and in the identification and targeting of the poor. Another area of controversy is whether poverty is a social or economic or political problem or a combination of any of the three (Onimode, 1995). Regardless of the level of controversy associated with the concept of poverty and poor, one thing is very clear, there is poverty in Nigeria and its level is very high (Ogwumike and Ekpenyong, 1995; Okunmadewa, 2001). The Human Development Index (HDI) of UNDP placed Nigeria 142nd among 174 countries in 1997 and she dropped to 146th position in 1998 putting her among the forty poorest countries. Some other poverty indicators such as infant mortality, under 5 mortality, life expectancy, adult literacy which are high/adverse in Nigeria supported the high poverty level. Characteristics of poverty reveal that in Nigeria, poverty is higher in the rural communities, among the illiterates, in agriculture and in the female-headed households.

Nigerian governments at all levels, International Agencies and Non-Governmental Agencies have evolved activities in the areas of provision of social and economic infrastructure, employment generation programmes and health facilities to alleviate poverty (Okunmadewa, 2001). Members of the household, children inclusive, are not left behind in the effort to reduce poverty. Children defined in this paper as persons aged 5-14 years make up 28.5% of Nigeria's population about half of which live in the rural area (Annual Abstract of Statistics, 1999). Children are involved in various domestic and non-domestic activities using their labour to generate income or reduce expenses/cash outflows of household to alleviate poverty. Ojo (1999) and Olawoye (2001) indicated the importance of child labour in agriculture. Children are generally regarded as economic assets given their potential roles and productive contribution in the generation of incomes in rural communities (Torimiro and Lawal, 2001). In developing countries, religion and culture tend to give parents and guardians full right and control over their children/wards. The holy

(religious) books adored by most people in developing countries, support this by commanding children to honour (respect, obey) their father and mother in all things. Obikeze (1995) noted that the work assigned to the child becomes part of the child's socialization process as child rearing customs in Nigeria necessitate that the child be given some domestic work commensurate with age, sex and physical structure. Parents in low-income households because of poverty cannot afford to produce the education, nourishment and health related inputs for members of the household and are compelled to involve children in the contributions to family welfare. What are the Household Poverty Reduction Activities (HPRAs) of rural children? According to Mbanefoh (2002) the mode of socialization of girls is different from that of boys. Girls are often not expected to challenge or be an independent motivator, and this traditional value is still held on to more tenaciously in the rural system than the urban areas. Does difference in the socialization of male and female children bring about gender difference in HPRAs? Put in another form; are girls and boys different in the types of HPRAs? The participation of children in household poverty reduction activities could be perceived as exploitative as it may affect their future capacity building. Bouis et al., (1998) noted that the opportunity cost of the contribution of adolescents in a rural area of Philippines to family welfare is the restriction in the range of options for pursuing a better education and the time available for study at homes. Amin (1994) described the children's involvement in household food security activities as an exploitative contribution having high possibility of exposing them to hazardous situation. What is the attitude of children towards their household poverty reduction activities?

This study determines and compares along gender line the contributions of children towards household poverty alleviation. The specific objectives of the study are to determine the poverty alleviation activities of rural children, the level of involvement of each gender in each activity, and the attitudes of the children towards their participation in HPRAs.

The argument of the study is that if a child is not in school he or she is either at home or work place working to alleviate household poverty or at home playing. Another assumption is that the opportunity cost of the time expended by children

in HPRAs is not zero, as the time could be used for study at home or for other personal development.

The hypotheses to be tested are:

- i) There is no difference in the male and female children's contribution in the individual and aggregate HPRAs.
- ii) The proportion of female children having favourable attitudes towards their participation in HPRA is not different from that of male.

A gender-differentiated analysis of contribution of children to family welfare has policy relevance, as there is a large body of evidence now from many parts of the world that boys are more favoured than girls by families in the provision of education and allocation of other resources, an imbalance that is critical to redress for human right reasons. Rosenzweig and Schultz (1982) gave evidence that parents allocate more to boys than girls in an effort to maximise their own future income. Ayanwale (2002) noted that in Osun State of Nigeria, investigation of family investment in education showed that more money was invested in education of boys than girls, and boys are educated than girls even beyond the basic primary school level. Cultural bias and local customs are responsible for more education and greater resources being allocated to boys than girls (Bouis et al., 1988). If HPRAs of children were found to be deleterious to children and gender differences in HPRAs exist, policy formulation and implementation to effect corrections for male and female children would differ. The result of the study will reveal the rationale and the gender implications of children's contribution in HPRA and the policy decisions to prevent child exploitation.

RESEARCH METHODOLOGY

Study Area and Sampling Procedures

The study was conducted in Iwo Local Government Area (LGA) of Osun State of Nigeria. Multi-stage sampling technique was used in selecting respondents (children aged 5-14). The first stage of the sampling procedure is the purposive sampling of selecting rural communities, and using Ekong (1988) criteria for differentiating typical Nigerian rural areas from urban, only Iwo town qualifies as an urban community in the LGA. The second stage involves the use of simple random sampling in

selecting 10% of the rural communities. The third and last stage is the selection of 10% of the households in each of the rural communities using simple random sampling and taking all the children aged 5-14 in the selected household as the target sample.

Data Requirements and Analytical Techniques

Pre-tested structured questionnaire was used to collect data. The questions include the types of HPRAs engaged in, time spent on each activity, and the attitudes of respondents towards participation.

Each respondent was asked to recall time spent on his/her activities outside school for two consecutive days in a week and every other week for seven weeks, ensuring that each respondent produced information about each day of the week twice.

The relative involvement of children and thus the importance of HPRAs for either boys or girls were based on the absolute mean values and the significant difference between the mean times (hours per week) spent on each of the activities. A particular HPRA 'k' is considered more important than activity 'r' if the mean time spent on activity 'k' is significantly higher than activity 'r'.

Descriptive statistics was used to summarize the data of characteristics of interest and comparison between genders (male and female children) made using t-test of difference between proportions, and means. (inferential statistics) at 5% level (Daniel and Terrell, 1979).

The attitude of children towards involvement in HPRAs was identified by asking respondents to react to a set of ten pre-tested and validated attitudinal statements against a 5-point Likert attitudinal scale, viz: strongly disagree (1), disagree (2), undecided (3), agree (4), and strongly agree (5). This was analysed using attitudinal measures.

Descriptive and Inferential Statistics:

Descriptive statistics involves the use of proportion and arithmetic mean. Inferential statistics' t-test of difference between two proportions, and means were used for indicating statistical significant difference in the characteristics of interest in male and female children. The test statistic for difference between two population proportions is expressed as:

$$t_c = \frac{(\bar{P}_1 - \bar{P}_2) - (P_1 - P_2)}{\sqrt{\frac{\bar{P}_1(1 - \bar{P}_1)}{n_1} + \frac{\bar{P}_2(1 - \bar{P}_2)}{n_2}}}$$

In testing the null hypothesis

Ho : $P_1 - P_2 = 0$, against the alternative hypothesis

H₁ : $P_1 - P_2 \neq 0$, where:

P_1 = sample proportion of male children possessing the characteristics of interest

P_2 = sample proportion of female

$\bar{P}_1$ = population proportion of male

$\bar{P}_2$ = population proportion of female

n_1 = sample size for male children

n_2 = sample size for female children

The test statistic for difference between two population means is:

$$t_c = \frac{(\bar{X}_1 - \bar{X}_2) - (\mu_1 - \mu_2)}{\sqrt{\frac{S_1^2}{n_1} + \frac{S_2^2}{n_2}}}$$

The null hypothesis

H₀: $m_1 - m_2 = 0$

H₁: $n_1 - n_2 \neq 0$

Where S_1^2 , $\bar{X}_1$, m_1 and n_1 are the sample variance, sample mean, population means and sample size of male children respectively; and, $\bar{X}_2$, S_2^2 , m_2 , and n_2 are the sample mean, sample variance, population mean and sample size of female children, respectively.

Regression Technique: The two variables of the regression analysis are hours spent per week on HPRAs (dependent variable) and gender (sex) – a binary independent variable. The regression model is stated thus:

$$Y_i = a_0 + a_1 D_i + m_i \dots\dots\dots(1)$$

where Y = hours spent per week on HPRAs

$D_i = 1$ if female child (girl); 0 otherwise (i.e male child-boy)

Model (1) is an analysis of variance regression model since the only independent variable (sex) is binary (Gujarati, 1988). This model will enable knowing, if holding all other factors constant, girls contribute more in HPRAs than boys. Assuming that the disturbances satisfy the usual assumptions of the classical linear regression model, the Mean weekly hours on HPRAs for boys = $E(Y_i / D_i = 0) = a_0$

Mean weekly hours on HPRAs for girls = $E(Y_i / D_i = 1) = a_0 + a_1$

a_0 gives the mean weekly hours on HPRA of boys, a_1 states by how much the mean weekly hours on HPRA of girls exceeds that of boys. ($a_0 + a_1$) show the mean weekly hours on HPRAs of girls.

A test of null hypothesis

H₀: $a_1 = 0$, there is no sex discrimination; against the alternative hypothesis

H₁: $\alpha \neq 0$, there is sex discrimination

If a_1 is positive and statistically significant then the mean weekly hours spent on HPRAs by girls is significantly higher than that of boys.

Attitudinal Measure: Given that matrix in Table 1 is the score of each child on each of the validated attitudinal statements, then

$$n(F) = n(Y_{i.} > \bar{Y}_{i.} + S_{Y_{i.}})$$

$$n(N) = n(\bar{Y}_{i.} - S_{Y_{i.}} \leq Y_{i.} \leq \bar{Y}_{i.} + S_{Y_{i.}})$$

$$n(U) = n(Y_{i.} < \bar{Y}_{i.} - S_{Y_{i.}})$$

$$\sum_{j=1}^k Y_{ij} = Y_{i.}, \sum_{j=1}^k Y_{2j} = Y_{2.}, \text{ etc}$$

$$\bar{Y}_{i.} = \text{mean } Y_{i.} = \frac{\sum_{j=1}^m Y_{i.}}{m} = \frac{\sum_{j=1}^m \sum_{i=1}^k Y_{ij}}{m}$$

$$S_{Y_{i.}} = \text{Standard deviation of } Y_{i.} = \left[\frac{\sum_{j=1}^m Y_{i.}^2 - \frac{\left(\sum_{j=1}^m Y_{i.} \right)^2}{m}}{m-1} \right]^{\frac{1}{2}}$$

Table 1: Score of Children on Likert Attitudinal Scale
Score on Declarative Statements

	1	2	.	.	.	.	k	Total
1	Y_{11}	Y_{12}	.	.	.	.	Y_{1k}	$Y_{1.}$
2	Y_{21}	Y_{22}	.	.	.	.	Y_{2k}	$Y_{2.}$
.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.
m	Y_{m1}	Y_{m2}	.	.	.	.	Y_{mk}	$Y_{m.}$

Where:

$n(F)$ = number of children(male or female) showing favourable attitude towards HPRAs

$n(N)$ = number of children(male or female) exhibiting neutral attitude towards HPRAs

$n(U)$ = number of children(male or female) indicating unfavorable attitude towards HPRAs

$Y_{i.}$ = the total attitudinal scores of each child.

m = total number of children (male or female)

k = total number of attitudinal statements

RESULTS AND DISCUSSION

Characteristics of Children's Household Poverty Reduction Activities

Out of the 343 households selected by the sampling technique, only 312 households had children (persons aged 5-14 years). The total number of children in all the households was 1413 consisting of 698 male children and 715 female children. Only 96% (672) of male children (boys) and 98% (701) of female children (girls) were involved in HPRAs. The difference in the proportions of male and female children

contributing to family welfare is significant ($t_c = 2.17$) and higher proportion for girls, indicating that relatively girls are more involved than boys (Table 2). The HPRAs that children were involved in, could be grouped into six categories, viz: household food preparation; other household chores that include washing, sweeping, fetching of firewood and water for cooking, etc; caring of infants; family farm labour; street trading; and hired labour. At the individual HPRAs level, the proportions of girls involved in household food preparation, other household chores, and caring for infants are significantly higher than boys. The reverse is the case for family farm labour, street trading and hired labour where the proportions for boys are higher than that of girls (Table 3). The proportions of girls involved in household food preparation and caring for infants are almost triple and quadruple that of boys respectively, while the proportions of boys engaged in family labour is more than double the girls.

The mean numbers of hours spent per week on household food preparation, other household chores, caring for infants, family farm labour, street trading; and hired labour are 3.62, 4.72, 4.63, 14.53, 3.04 and 5.23 respectively for boys, and 15.32, 4.83, 6.98, 7.37, 3.15 and 2.64 respectively for girls. On the average, girls committed significant higher number of hours per week than boys in household food preparation, and caring for infants (additional 11.7 and 2.85 hours respectively) while boys are higher in family farm labour and hire labour (additional 10.16 and 3.29 hours respectively). The mean hours spent per week by boys and girls in street trading, and other household chores are not significantly different. The order of importance of HPRAs for boys in term of mean hours of labour input per week is family farm labour, hired labour, other household chores, caring for infants, household food preparation and street trading (Table 4a); and for girls is household food preparation, other household chores caring for infants, family farm labour, street trading and hired labour (Table 4b).

In relative term, the periods spent by girls on caring for infants, other household chores, family farm labour, street trading and hired labour are 45.56, 31.53, 28.52, 20.56 and 17.23% of household food preparation respectively. Boys committed 40.81; 32.69, 28.42, 24.91 and 8.67% of the time spent on family farm labour, to hired labour, other household chores, caring for infants, household food preparation and street trading respectively.

The results of analyses show that (in term of proportion and labour input) girls are more

involved in domestic and less strenuous activities than boys, that are involved in non-domestic and more strenuous activities.

Regression Results of Hours of HPRAs on Gender

The empirical results corresponding to

Table 2: Gender distribution of children

	Male	Female	Total
Number of children interviewed	698	715	1413
Number of children involved in HPRAs	672	701	1373
Proportion involved in HPRAs	0.96	0.98	0.97
t_c	2.17		

Table 3: Proportion of respondents and hours spent per week by types of activity and gender

Types of activity	Proportion of participants			Hours spent per week				t_c
	Male	Female	t_c	Male $\bar{X}_1$	S_{x1}	Female $\bar{X}_2$	S_{x2}	
Household food preparation	0.32	0.95	31.8*	3.62	2.15	15.32	2.31	68.11*
Other household chores	0.75	0.85	4.7*	4.75	1.11	4.83	1.27	1.11
Caring for infants	0.22	0.83	28.5*	4.13	1.67	6.98	1.45	19.02*
Family farm labour	0.95	0.41	26.5*	14.53	2.33	4.37	3.05	50.22*
Street trading	0.55	0.42	4.8*	3.04	1.13	3.15	1.68	0.96
Hired labour	0.67	0.45	8.4*	5.93	1.26	2.64	1.50	31.85*

Note: n_1 is the total number of boys involved in at least one HPRA= 672

n_2 is the total number of girls involved in at least one HPRA= 701

$\bar{X}_1$ is mean of boys

$\bar{X}_2$ is mean of girls

* Significant at 5% level

Table 4: T-computed values of difference between means of hours spent per week on HPRAs according to gender

(a) Boys

	1	2	3	4	5	6
1. Family farm labour (638 14.53, 2.33)						
2. Hired labour (450 5.93,1.26)		78.39				
3. Other household chores (504, 4.75,1.11)	93.44	15.27				
4. Caring for infants (148, 4.13, 1.67)	62.88	12.03	4.25			
5. Household food preparation (215,3.62,2.15)	62.98	14.60	7.30	2.54		
6. Street trading (370 3.04, 1.26)	101.56	32.68	17.08	11.00	3.08	

(b) Girls

	1	2	3	4	5	6
1. Household food preparation (666 15.32, 2.31)						
2. Caring for infants (582 6.98 1.45)		77.35				
3. Other household chores (596 4.83 1.27)	101.32	27.05				
4. Family farm labour (287 4.37 3.05)	54.46	13.37	2.45			
5. Street trading (294 3.15 1.68)	91.70	33.32	15.14	5.95		
6. Hired labour(315 2.64 1.50)	103.00	41.85	22.07	8.70	3.94	

Figures in bracket are sample size, mean and standard deviation respectively; Significant if $t_c > 1.96$

regression model (1) are as follows:

$$Y = 28.16* + 2.93*D_i \dots\dots\dots(2)$$

$$(4.23) \quad (0.51)$$

$$R^2 = 0.5233$$

*Significant at 5% level.

The R^2 indicates that 52.33% of the variation in hours spent per week on HPRAs is as a result of gender difference.

Since a_1 is positive and statistically significant, the result indicates that the mean hours spent per week on HPRAs by the two categories (male and female children) are different and that of girls is significantly higher. The mean hours spent per week by boys is 28.16 while that of girls is 31.09. Thus, on the average, girls put in extra 2.93 hours per week than boys on HPRAs.

Attitudes of Rural Children Towards Their Involvement in HPRAs

Less than twenty percent of the children (19.30%) have favourable attitudes towards their participation in HPRAs. They perceive their participation as a way of assisting their parents, receiving training and skill for future use, and being obedient to their parents. About twenty two percent of the children exhibited neutral attitude while about three-fifths have unfavourable attitude (Table 5). Those having unfavourable attitude claimed their participation prevents them from enjoying their leisure, exposes them to hazards and limits drastically the period available for study at home. About two-thirds of the boys (65%) and half of the girls (53%) have unfavourable attitudes. The proportion of boys belonging to this category is significantly higher than the proportion of girls, and this is largely because the girls perceive their involvement in the domestic aspect of HPRAs as preparing them for married life in which they should not be found deficient in domestic activities.

Table 5: Distribution of children by attitudinal responses and gender.

Attitudes	Male	Female	t_c
Favourable	101 (0.15)	164 (0.23)	3.56
Neutral	131 (0.20)	166 (0.24)	1.79
Unfavourable	440 (0.65)	371 (0.53)	4.56

The figures in brackets are the proportions of male and female children belonging to each attitudinal category

SUMMARY AND CONCLUSION

The combined effects of poverty, religion and culture make the contributions of children to family welfare to alleviate household poverty imperative. The gender inequality in almost all the social life in developing countries calls for investigation into the situation in the children's Household Poverty Reduction Activities (HPRAs) in order to proffer policies that will not endanger the life of both sexes. This study collects data, examines and compares between male and female children the various types, the degree of involvement and the feelings of children towards their poverty reduction activities. Data collected were analysed using descriptive and inferential statistics, regression technique and attitudinal measure.

Results indicated that children contribute to household welfare through their labour.

Significant higher proportion of female (girls) engaged in HPRAs than male children (boys). Higher proportions of girls were into household food preparation, other household chores, and caring for infants than boys, while boys were higher in family farm labour, hired labour and street trading. On duration spent on each of the HPRAs, girls were significantly higher in household food preparation and caring for infants, lower in family farm labour and hired labour and not significantly different in street trading and other household chores. Ranking of HPRAs put family farm labour as the most important for boys and household food preparation for girls. Regression analysis indicated that on the average girls put in significant additional 2.93 hours per week than boys in HPRAs. High proportions of boys, and girls (and higher for boys) indicated negative attitude towards their participation in HPRAs. Since children exhibit unfavourable attitudes towards HPRAs and their involvement consumes time and exposes them to dangers (particularly street trading), where children's involvement could not be outlawed, policies that would reduce time and dangers associated with HPRAs should be formulated and implemented with due considerations for gender differences. Street trading by children should be banned because of the attending social vices. Child day care centres and nursery schools should be provided to reduce direct dependence of infants on siblings. Appropriate and affordable labour-saving technology for domestic chores and farming activities should be introduced to reduce time spent on these activities for future capacity building of the children.

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