THE HEALTH SITUATION OF RURAL HOUSEHOLDS: A CASE OF PERI-URBAN AND REMOTE FARMING SYSTEMS IN IMO STATE, NIGERIA

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ABSTRACT

Health and the sanitary situation of farm families play important roles in family care and household food supply, hence, food security. Poor health situation of a family is felt in terms of loss of work and productivity. This study examines the healthcare situation in the rural areas of some local governments in Imo State. A total of 120 farm families selected through a multistage random sampling technique were interviewed using a structured questionnaire. The data collected were analyzed using non-parametric techniques (Mann Whitney-Test) after the sample had been re-grouped into Peri-Urban and Remote Farming Systems through a hierarchical clustering method. The results showed that the average family size was approximately 6. The average number of years of exposure to formal education was 8 in the PUFS and 6 in the RFSbut both women and men had similar levels of education. It also showed that laborcapacity was not significantly different in the two systems. The health situation is relatively poor in that malaria and other illnesses were frequently reported among members of a household within a period of a month. The expenditure on health was at least 25 percent of total household monthly expenditure. The number of days lost to illness per year is higher in the Peri-Urban households and is about 11 days. A further break down of the Remote Farming Systems to male and female headed households showed that the health situation of male heads of households is relatively poor. The findings imply that rural households are still neglected in the supply of basic amenities and this will continue to hamper productivity, overall well-being and the effectiveness of government rural development intervention.

Keywords: Water Supply; Health Situation; Farm Families; Rural

Introduction

The current transformation agenda for the agricultural sector has the potential of increasing private sector participation in agriculture on a large scale as well as link rural farmers to markets. The transformation process is expected to increase resource use efficiency of actors along the agricultural value chain. Since small scale farmers who are typically in the rural areas form the bulk of producers and processors; it is expected that they will be major actors and key beneficiaries of the Nigeria Incentive-based Risk-sharing System for Agricultural Lending scheme. The concern however is that infrastructural facilities, particularly those related to health, which will enhance the living standard of the people have not been successfully put in place. The probability that this loophole will hamper the success of the project and once again leave out the rural people is high.

In Nigeria, where people live, work and play make a difference in terms of access and utilization of health service because there is a wide disparity between the infrastructure in the urban and rural areas. Also, the health status, health behavior, health services utilization are shaped by an aggregate of interacting factors encapsulated in specific geographic locations. Since most farmers live in rural areas, it is important to review the health status of the rural people because they are the most important actors in the agricultural value chain and have diverse social, geographical and economic characteristics. For example the dependency ratio is high due to a large proportion of elderly ones and children with relatively small population of people of working age.

Rural communities consist of people with poor education, poor income, and negative health behaviors. The situation underscores the need to reduce the health disparity between urban and rural populations by implementing policies and programs that are founded on relevant research. The idea of reducing the gap suggests that there should be an even distribution of services per head of population; however, equity in relation to need is more important. But what obtains is a situation where remote or rural areas are denied access because of the settlement patterns or distance from an urban center. Also, policies tend to assume that rural areas are homogenous while in reality, they are very heterogeneous and dynamic in nature. They are mainly composed of persons less than 14 and greater than 60 who are by no means socio-economically and culturally homogenous. They are hard workers in the agricultural sector and for the most part may not be able to afford health care and the appropriate services may not be available. The poor health care situation leads to reduced labor productivity and low life expectancy.

The health status of individuals is a function of a combination of elements such as income and social status–education and literacy, employment, social environment, physical environment (low water quality, crowding of households, inadequate waste disposal, insufficient waste water treatment, poor roads); the complex interactions of these factors differ across geographical locations and influence individual behaviors in the face of occupational hazards such as long hours of work, strain and harsh climates. The coping skills developed differ and range from the consumption of fruits and vegetables to health consultations at critical stages of an injury or illness. The rural poor are in greater need of health care but poorly served and have more difficulty in assessing health care services because the relative distance that they have to cover in order to reach a health service provider has a high transportation cost. The inability of government to sustain health care services in such locations makes the quality of care, specialization services, ambulatory care, and emergency treatment inadequate. In most cases they are purely rudimentary or non-existent. The distance, isolation, dispersed populations lead to problematic health care services because they make it difficult to recruit and retain skilled and qualified professionals in such areas.

This study examines the situation in the rural areas of Imo State with the following objectives:

- To characterize the farming systems based on socio-economic variables.

- To profile the environmental health situation in terms of housing facilities and waste disposal.

- To profile and examine the heath situation of the different farming systems.

- Make policy recommendations that will close the health supply gap.

Research Methodology

The farming and rural systems approach was employed in this study. This approach provides the philosophy, the concept and the strategy for developing and introducing solutions offered to families, communal and regional decision making bodies to solve problems at farm, household, family, village and regional levels (Doppler 2002). The research approach is based on the systems philosophy and is related to the development of farming as well as to rural development in general. It takes into consideration farmer's condition and development aspect. Rural and Farming Systems

Research deals with the philosophy, concepts and methodology development, testing and assessment, and lays emphasis on resource availability, their long term use and sustainability and strong movements into the wider field of health economics. It considers methodologies in the systems linkage and integrative potential; what are health strategies for farming and rural systems development? (How can local resources and local knowledge contribute to this?); What are the roles of institutions in defining and implementing health strategies?

Description of the Study Area

The research was carried out in Imo State, south-east Nigeria. Imo State is one of the five States that constitute the south eastern region of Nigeria. The east occupies a land area of approximately 7,861,200 hectares of land and has a population of 25,652,036 people. This translates to an average land area of 0.31ha/person (NWAJIUBA, 2002).Though the States are reasonably urbanized, the majority live in the rural areas. Imo State was chosen from the region based on previous study and pervious knowledge of the prevailing water situation.The total area of Imo is 12,689 square kilometers. The major cities are Owerri, Aba, Umuahia and Orlu. Rainfall has a significant impact on agricultural activities. Excess rain in the region leads to high runoff, soil erosion, nutrient losses through leaching and water logging. Too little rainfall limits agricultural activities to 2 or 3 months without supplementary irrigation. In the regions where the rainfall regime is marked by 2 peaks separated by a short August drought, there are 2 crops grown e.g. maize. The rainy season starts in March, peaks of rainfall occur in July and September, with a short slightly drier spell called the 'August Break' or 'little dry season'. The length of the dry season, defined as months with a mean rainfall of less than 65mm ranges from less than 3 months in the extreme south of the State to more than 4 months in the north. The average number of rainy days is 180 in the south (FMNR, 1982 Cited in Akinsanmi, 2005). The State boasts of State owned medical health facilities as well as private hospitals.

Data Sources and Sampling Technique

The farming and rural systems approach was used in the study. Imo State was purposively chosen. It is known to have 27 Local Government Areas (LGA) based on its former geographical structure. Four local government areas were randomly selected; after which two villages were randomly selected from each LGA. From the two villages selected, a total of 30 households were chosen. The total sample size was 120 households. The samples were drawn from the list of households obtained from the village leader or his representative. The survey was carried out with the use of a structured questionnaire though its administration process was participatory in approach. The questionnaire was designed to give information on different aspects of respondent's lives such as income generation activities, expenditure and health behavior.

Methods of Data Analysis

Apart from a multivariate cluster analysis, statistical methods concentrated on the detection and quantification of farming class means differences by non-parametric tests, particularly the Mann-Whitney-U test for two samples. The non-parametric tests are preferred in cases where a normal distribution of quantitative variables could not be assumed.The Hierarchical Cluster Analysis was carried out to get natural groupings or clusters among the sample units which are homogeneous within and heterogeneous to each other. The results led to two major farming systems upon which the descriptive and comparative analyses are based.

- **Peri-Urban Households:** These are located in villages which are close to urban areas and cities such as Owerri and Umuahia with more possibilities for off-farm income. There are also major access roads to these villages. The population density is low compared with the other regions.

- **Remote Households:** These are located in more remote areas and are densely populated.

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Results and Discussion

Socio-economic and Labor Characteristics

The major differences occur with respect to the exposure of spouses and household heads to formal education. The P-UFS households have an average of 8 years of exposure while the RFS have 6 but both the man and his spouse have similar number of years of exposure to education. In the past, it was often that the man was more educated than the woman. The dependency ratio is higher for P-UFS implying that they have more family members who are not economically active. The family size is approximately similar but the structure and composition have implications for labor resource of the households. The labor capacity in terms of man-days shows that the RFS have higher labor resource available for farm and off- farm activities. The availability of labor is important because of the need to generate income as such when family members have poor health conditions then productive days and income are lost. The P-UFS earn relatively higher farm and off- farm income hence have higher family income (Table 1).

Housing and Waste Disposal

As shown in table 2, basic facilities exist in the living spaces of the households but this does not imply that sanitary practices are healthy as shown by the information on waste disposal. In some cases, some of the facilities like pit latrines, bathrooms and kitchen are shared with other households; and importantly, the houses are not necessarily in very good conditions. Garbage is mainly dumped or burned in the area and this practice may not create a good sanitary environment

Health Care Expenses

The common illnesses identified in the study area are malaria and body ache which they treated either by the use of local herbs or the purchase of 'known' anti malaria drugs and pain relievers over the counter from a chemist. Recurrent or severe cases of malaria were taken to the hospital for treatment. The cost of self-medication and hospital charges represent the expenditure on health on a monthly basis. With the RFS, this is about 28 percent of monthly expenditure of frequently purchased household items implying that over a quarter of expenditure is on health issues. In the P-UFS 29 percent of frequently purchased household items is on health which is equally high for a monthly expense (Table 3).

Health Situation

The health situation of the family was assessed in terms of the number of sick persons, the amount spent on the illness, the duration of the illness and the state of health of the household head. The impact of the health status of an individual is usually felt in terms of loss in productivity as a result of the number of days lost to the illness. As discussed in earlier paragraphs, maintaining good health is usually difficult in environments where the health facilities are not very good or are expensive; the findings are summarized in table 4. Most of the households in the two systems reported frequent experiences of one illness or the other within a period of a month; in some cases, malaria and some other ailments may afflict an individual within a period of a month. Medical treatment of malaria and other ailments were started about 6 days or more into the illness leading to an average loss of 6 days (among the RFS) and 4 days (among the PUFS) to the illness. The medical assistance sought was usually within the community; the Chemist was the first port of call and then the doctor. The PUFS however often made medical consultations at the hospital but more frequently at the care provider's place. In relation to the PUFS, the distance to the place of health care is shorter in the RFS. From personal discussions during the survey, it was gathered that sometimes the family members have had to work even while seriously ill; a situation particularly common among the household heads in both systems. The average number of days lost to illness by the Household heads was 12 days in the PUFS and 11 days in the RFS; households reported the loss of at least a child to sickness in both systems

A Gender Perspective: Health Situation of Male and Female Headed Households

The Remote Farming Systems was further subdivided into Male Headed Households

(MHH) and Female Headed Households (FHH) for a closer understanding of their vulnerable status.

The socio-economic and labor capacity analysis shows that female heads are on the average older than the men. Educational levels differed significantly showing that the older women hardly completed primary school education, while the men had at least the primary school certificate. The low level of education has implications for opportunities for off-farm income, higher wages and health behavior. Increasing educational levels of both men and women can increase agricultural output significantly but also improve the status of women. The Male Headed Households have a higher level of labor resource (both male and female) for farm and off-farm activities compared to the absence of male labor which may force women to make production changes that will not yield maximum economic returns. The absence of male labor in the female headed household may mean delayed farm production, having to opt for crops that will not require intensive labor or reduction in farm size. Both systems of families have adult dependents, but in the male headed households, they are mainly male; and mainly female in the female headed households. The family income earned by Female Headed Households is lower compared with the MHH but it is not significantly different.

The health situation is relatively poor in the male headed household judging by number of days lost to illness by other members of the family and by the household head. The expenses are equally higher among the MHH, perhaps because consultation have to be made on the average 3 times for an illness that requires the doctor's attention. It could be that the FHH hardly fall ill or choose to carry out self-medication when an illness occurs. The situation for both farming systems is poor and should be improved upon.

Conclusion

The study shows that labor productivity is hampered by frequent illness and days lost to it. The delayed request for treatment could contribute to the poor health status of farm families by increasing the number of days lost to illness. The distance to the place of consultation is not necessarily far but consultations are not often made as at when due. Farm families on the average are exposed to unhealthy environments because of the nature of waste disposal and the fact that basic amenities have to be shared beyond the household level. The average expense on health is at least 25 percent of monthly expenditure on frequently purchased items which is quite high. A comparison of male and female headed households shows that Male Headed Households had frequent cases of illness, lost more days to illness and the household head had lost more days to ill health. The supply of health infrastructure in the rural areas should be increased but more importantly, the need to take advantage of such facilities that are available must form a part of awareness and advocacy programs for improvement among the rural poor, especially poor male headed households.

Table 1: Rural Household Socio-Economic and Labor Characteristics in Imo State

Items	Remote Households (n=57)	Peri-Urban Households (n=54)
Family Size	5.74	5.61
Mean number of		
Male	2.704	3.059
Female	3.037	2.549
14-60 years old Male	2.17	2.157
14-60 years old Female	2.481	1.882
<14,>60 years old Male	0.537	0.901
<14,>60 years old Female	0.556	0.667
Dependency Ratio[1]	0.215	0.388
Age. Household Head	58.67	61.75
Spouse	44.50	46.59
Education level, Household Head	6.69** 6.03**	8.61**
Spouse		(8.09)**

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Table 1 Contd.

Family Labor Capacity		
Male mean /year	1.67	1.62
	(±0.19)	(±0.20)
Man days/ family/ year	501	486
Female mean/year	1.45	1.13
	(±0.12)	(±0.21)
Man days /year/family	435	339
Farm Income	22,990.23**	36,801.88**
	(±37222.41)	(±76439.1)
Total Off farm	301 908.30	472,761.15
	(±764500.69)	(±870204.69)
Family Income	339 501.45*	581412.05*
	(±815181.96)	(±887142.17)

Notes *Significant at 90% confidence interval   **Significant at both 95% and 90% confidence interval. Values in parenthesis are standard deviation.

Table 2: Housing Facilities and Waste Disposal of Rural Households in Imo State

Item	Remote Households (n=57)	Peri-Urban Households (n=54)
Household facilities	%	%
	Yes	Yes
Bedroom	100	100
Living room	94	94
Kitchen	42	58
Bathroom	100	100
Pit latrine	55	45
Flush toilet	12	22
Waste Disposal		
Collected by a truck	9	2
Dumped	69	66
Burnt	20	30
Buried	0	1
Others	2	1

Table 3: Health Care Expenditure in Relation To Frequently Purchased Household Items

Item	Remote Farming Systems (n=57)		Peri-Urban Farming Systems (n=54)	
	Value ₦	Percentage	Value ₦	Percentage
Hospital Charges	2,500.00	8	7,000.00	12
Medication Expenses	6,000.00	20	10,000.00	17.4
Transportation and Communication	8,000.00	25	10,000.00	17.4
Clothing	12,000.00	38	22,000.00	38.2
Foot Wear	2,000.00	6	2,500.00	4
Entertainment	0.00	0	5,000.00	9
Water	1,000.00	3	1,000.00	2
Total	31,500.00	100	57,500.00	100

Table 4: Comparative Health Status of Rural Households

Item	Remote Farming Systems (n=57)	Peri-Urban Farming Systems (n=54)
Time to get to place of consultation	22.88** ($\pm$54.731)	35.56** ($\pm$29.62)
Number of consultation	1.06** ($\pm$1.53)	2.46** ($\pm$2.42)
Amount paid/ consultation	2297.25** ($\pm$8417.09)	3766.67** ($\pm$13960.57)
Number of children plus dead ones	3.86** ($\pm$3.98)	5.59** ($\pm$2.77)
Days lost to illness by family members	5.48 ($\pm$8.724)	13.91 ($\pm$26.48)
Days lost to illness by head of household	11.14** ($\pm$51.27)	12.89** ($\pm$39.27)
Amount spent on illness last year	4366.67** ($\pm$10584.51)	2744.07** ($\pm$8154.90)

Notes *Significant at 90% confidence interval **Significant at both 95% and 90% confidence interval. Values in parenthesis are standard deviation.

Table 5: Socio-economic and Labor Characterization of Male and Female Headed Households

Item	Male headed households (N=37)	Female headed households (N=20)
Family size	5.95	4.85
Mean Number		
14-60 Male	0.35	0.15
14-60 Female	0.59**	0.10**
>60 Male	2.2	1.85
>60 Female	2.43	2.30
Age	59.03* ($\pm$12.551)	61.30* ($\pm$10.682)
Education...(number of years)	7.89** ($\pm$4.345)	3.60** ($\pm$3.872)
Farm Income	22611.68 ($\pm$41830.193)	21261.75 ($\pm$35853.60)
Total Off farm	335625.41 ($\pm$902224.681)	191870.00 ($\pm$235419.94)
Family Income	376437.08 ($\pm$964588.35)	223806.75 ($\pm$233645.94)

Notes: *Significant at 90% confidence interval **Significant at both 95% and 90% confidence interval. Values in parenthesis are standard deviation. All tests are Mann-Whitney test.

Table 6: Health Status of male and Female Headed Households in Rural Areas of Imo State

Item	Male Headed Households (n=37)	Female Headed Households (n=20)
Time to get to place of consultation	39.59 ($\pm$31.74)	31.75 ($\pm$29.48)
Number of Consultation.	2.76 ($\pm$2.63)	1.80 ($\pm$1.64)
Amount paid/ Consultation	4522.97 ($\pm$16671.24)	2002.50 ($\pm$3696.39)
Number of Children plus dead ones	5.65 ($\pm$2.76)	4.65 ($\pm$3.31)
Days Lost To Illness	15.78** ($\pm$30.23)	8.50** ($\pm$14.60)
Days lost to illness by HHH	16.05 ($\pm$47.19)	5.10 ($\pm$5.14)
Amount spent on Illness last Year	3512.16* ($\pm$5249.89)	911.50* ($\pm$1214.16)

Notes: *Significant at 90% confidence interval **Significant at both 95% and 90% confidence interval. Values in parenthesis are standard deviation. All tests are Mann-Whitney test.

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