The impact of inaccessible health care services on agricultural production by rural farmers in Umuahia North Local Government Area, Abia state, Nigeria

Chidozie O. Anyiro

Department of Agricultural Economics and Extension,
Abia State University, Umuahia Campus, Umuahia, Abia State.
Corresponding author: C. O. Anyiro, chidoo4real2003@yahoo.com

Abstract. Millions of people in the rural area suffer greatly because medical care is not readily available and is poor in quality. This study determined the households' inaccessibility to health care services and agricultural production in Umuahia North Local Government Area of Abia state. The specific objectives of the study were to identify the health care services available to the farmers in the study area, to examine accessibility of health care services and incidence of illness among rural farmers, to determine the relationship between inaccessible health care and level of farm output. Purposive and multi-stage random sampling techniques were used to select eighty (80) respondents in the study area. A well-structured and pre-tested questionnaire was used in data collection. Analytical tools utilized were frequency counts, mean, percentages and Correlation analysis. Findings revealed that different types of health care facilities available to the rural communities include; the modern health care services (general hospital, health centers, pharmacy/chemist store, private hospital and maternity home) and traditional health care facilities (bone setters, traditional birth attendant, services of herbalists and spiritual healers). Out of the 80 respondents studied, 77.25% of the respondents dominantly used the modern health care facilities while 23.75% of the respondents used traditional health care services. Malaria was identified as the dominant (83.75%) illness among the rural farmers. Majority (75.0%) of the respondents had no access to health care services. Correlation analysis showed that there was a negative correlation (-0.37) between inaccessible health care services and the level of farm output which was statistically significant at 5% level. It was recommended that the government should ensure that health care facilities are evenly distributed among the urban and rural people.
Key Words: impact, inaccessible, health care services agricultural production.

Introduction. Good health and productive agriculture are both essential in the fight against poverty (Hawkes & Ruel 2006). Among development professionists, there is an growing recognition that agriculture influences health and health influences agriculture, and that both in turn have a profound implications for poverty reduction (Dare 2001). This recognition suggests that opportunities exist for agriculture to contribute to better health and for health to contribute to agricultural productivity.

Increased productivity by individuals in all sectors of the economy depends on the health condition of the labor force, while improved health and quality of life depend to a great extent on the availability of, and accessibility to health care faclities at affordable costs (Ajala et al 2005). The process of agricultural production and the output it generates can be contributed to both good and poor health among producers as well as the wider population. Agriculture is fundamental and good health is necessary for the production of the world's food, fiber, materials for shelter and medical plants (Ainsworth 1993).

The term inaccessibility relates to the quantity of not being easily able to reach a facility by an agent (World Health Organization 2008). Accessibility has come to be popular especially in the distribution of services and amenities among a given populations.

The problems of inadequate and inaccessible health care facilities particularly in the rural communities in Nigeria had arisen from the skewed distribution of health facilities between the rural and urban areas (Inyang 1994).

Inaccessibility to health care services has a detrimental impact on rural household agricultural productivity capacity. It affects the most active and productive segment of the rural society, thereby threatening agricultural productivity and food security. Family members spend time which could otherwise be invested in agriculture to care for the sick. Families and their incomes are disrupted and reduced by it, work and education are interrupted, and quality of life degraded which also affect human capital development and productivity growth. Trained people, equipment and medicines needed to provide the most basic medical care are in grave shortage. Health care personnel and facilities are not evenly distributed among the world's population. These have led to declining productivity and investment (Barnett & Haslwimmer 1995).

Banachi & Yasui (1999) have identified that there is a positive correlation between deprivation of health care and mortality rate.

Objectives of the Study

The specific objectives are to:

i.   identify the health care services available to the farmers in Umuahia North Local Government Area (LGA);

ii.   examine accessibility of health care services and incidence of illnesses among rural farmers in the study area;

iii.   examine the relationship between inaccessible health care services and level of farm output in the study area.

Methodology. The study was conducted in Umuahia North Local Government of Abia state. Umuahia North LGA consists of two blocks: Ibeku and Ohuhu and 12 circles. This LGA was purposively selected because of the high population of both urban and rural dwellers. The total population of Umuahia North stood at 223,134 people, made up of 112,595 males and 110,539 females.

The LGA which was created on the 27th August 1991 is located between latitude 5^0 $30'$ and 5^0 $40'$ North of the equator and longitude 7^0 $25'$ and 7^0 $32'$ East of the Greenwich meridian (ASEPA 1996). Umuahia North LGA has one federal medical centre and few private hospitals located at Umuahia Urban.

Purposive and multi-stage random sampling techniques were used in the selections of samples. First, the two blocks (Ibeku and Ohuhu) that make up the local government area were purposively selected. Second, from each block, 2 circles were randomly selected, making a total of 4 circles. The sample frame of the farmers was obtained from the Agricultural Extension agents in charge of the circles. Finally, 20 farmers were randomly chosen from the circles giving a total sample size of 80 farmers. Instrument of data collection was a well structured questionnaire. Objectives i and ii were analyzed with the use of descriptive statistics such as frequency distribution tables, percentage and mean while objective iii was analyzed and inferences drawn with the use of Pearson Product Moment correlation Analysis.

Theoretical Framework. Different methods have been used by different scholars to access services centers. One is the use of distance to the location of the service in item of real and time and money cost, others have used the number of services available to the people within a specificied area (Adejuyigbe 1973; Agun 1999). In this study the later was adopted. In the correlation analysis, inaccessible health care service was determined by identifying seven health care services thus: general hospital, private hospital, medical health centers, orthopedic specialist, maternity home, dispensaries (pharmacy/chemist

store), and herbal/traditional health center. For anyone a respondent identified, he had a score of one.

The total score per respondent for the number of health care services identified were expressed as a percentage of the overall score for the six health care services thus:

$$Z = \frac{X}{Y} * 100 \ \ldots\ldots\ldots\ldots (1)$$

(Fakoya 2000)

Where:
Z = level of health care services
X = participatory scores of the respondent on the availability of health care services
Y = the overall score of the availability of health care.

Based on the respondents "Z value" health care services were grouped into three distinct groups as follows:

a. Accessible health care (> 60%)

b. Irregular health care (40-59%)

c. Inaccessible health care (< 39%).

$$\text{Simple correlation co-efficient (r)} = \frac{n\left(\Sigma XY\right) - \left(\Sigma X\right)\left(\Sigma Y\right)}{\sqrt{\left[n\left(\Sigma X^2\right) - \left(\Sigma X\right)^2\right]\left[n\left(\Sigma Y^2\right) - \left(\Sigma Y\right)^2\right]}}$$

(Onuh & Igwemma 2000)

Y = dependent variable (farm output/kg)
X = independent variable (inaccessible heath care).

Results and Discussion. The mean socio-economic characteristics of the rural farmers are presented in Table 1. The table shows that the mean age of the farmers was 45 years. The prevalence of the middle aged farmers in the study area is in agreement with Egbule (2004), who opined that there is dwindling interest and participation of teenagers and adolescents in agricultural activities. It also agrees with (Ajala et al 2005) who stated that ill-health is one of the major reasons why young people leave rural areas depriving farm activities of needed innovators. The result showed that the farmers had 5.2 years of education. The low level of education attained by farmers in this area agrees with Barnett & Haslwimmer (1995) who pointed out that work and education are interrupted, and quality of life degraded by inadequate health care services.

The mean income level of the farmers was ₦30000. Families and their incomes are disrupted and reduced by incidence of illness Barnett & Haslwimmer (1995). The mean farm size of the farmers was 2 hectares. This is a clear indication that the farmers in this area are mostly subsistence and resource poor farmers. This result merely confirmed the observation of Barlow & Grobar (1996), who estimated that families with disease only cleared 40% of land for crop and animal production.

The result further revealed that the mean farming experience of the farmers was 9.5 years. Experience in farming is a key factor affecting production (Nwaogu 2006). The mean household size of the farmers was 5 persons.

This has implication on the provision of labour in the farm.

Table 1

Mean socio-economic characteristics of the rural farmers in
Umuahia North Local Government Area, Abia state, Nigeria

Socio-economic variable	Mean value
Age of farmers	45 years
Educational level	5.2 years
Farming experience	9.5 years
Income level	₦30000
Farm size	2 hectares
Household size	5 persons

Source: field survey data, 2010.

Health Care Services available to Farmers in the Study Area. The distribution of the respondents according to the type of health care services available in the study area is shown in Table 2. The table revealed that a good proportion of the farmers identified more than one health care service. However, majority (80%) of the farmers had access to health centers, 10 percent of them had access to general hospital, while 28.75% of them had access to herbal/traditional health center. The presence of the traditional/herbal health center was obvious since the study area was in a rural setting. In summary, the different types of health care services available to the rural farmers were categorized under modern and traditional health care services. Modern health care services were dominantly (71.25%) used by the rural farmers while 28.75% of the respondents used traditional health care services.

Table 2

Distribution of respondents according to types of health care
services available

Type of health care Services available	Frequency*	Percentage (%)*
General hospital**	8	10.00
Health centers**	64	80.00
Private hospital**	20	25.00
Pharmacy/chemist**	48	60.00
Maternity home**	12	15.00
Herbal/traditional health center	23	28.75

Source: field survey data, 2010.
*   Multiple responses recorded.
**   These are considered as modern health care services.

Incidence of Illnesses. The distribution of the farmers according to incidence of illnesses is shown in Table 3. The table showed that majority (83.75%) of the respondents identified malaria as the most common illness they suffered, 17.5% of them complained of typhoid fever while 30% of them mentioned body pains and other kinds of illness(es) like high blood pressure, arthritis, rheumatism, headache, toothache and bad sight.

Table 3

Distribution of respondents by incidence of illness(es)
among the farmers in the study area

Illness(es)	Frequency*	Percentage (%)*
Malaria	67	83.75
Typhoid fever	22	17.5
Body pains	24	30
Others	31	38.75

Source: field survey data, 2010.
* Multiple responses recorded.

Level of Access to Health Care Services. The level of access to health care services by the respondents is presented in Table 4. The table revealed that 27.50% of the rural farmers had regular access to health care services, 36.25% of them had irregular access to health care to health care services while 38.75% of the respondents had no access to health care services. In summary, a greater proportion (75%) of the respondents does not have regular access to health care services. This is in agreement with (Ajala et al 2005) who pointed out that health care services are less accessible, more expensive, less affordable, rather erratic and of extremely poor quality in Nigeria.

Table 4

Distribution of respondents by the level of access to health
care services

Regularity of access to health care	Frequency	Percentage %
Regular access	22	27.50
Irregular access	27	33.75
Inaccessible health care	31	38.75
Total	80	100

Source: field survey data, 2010.

Pearson Correlation Analysis on Inaccessible Health Care Services on Farm Output. Simple correlation analysis result on inaccessible health care services and agricultural production is shown in Table 5. The result showed that the correlation between inaccessible health care services and output of the farmers were negatively correlated ($r = -0.37$) at 5% level of significance. This shows that as inaccessible health care services persists increasingly, the level of farm output of the rural farmers will decline. Therefore it is obvious that inaccessible health care services affect production capacity of the farmers in the area. This is in agreement with Hammer (1997) who pointed out that inaccessible health care disrupts human capacity development and productivity.

Table 5

Pearson Product Moment Correlation Analysis on inaccessible
health care and farm output

	Output	Inaccessible
Output	1	-0.37**
Inaccessible health care	-0.37**	1
Sum of square and cross product	-8440672.246	6261.108
Covariance	-106843.952	79.255

Source: field survey data, 2010
** Significant at 5.0 alpha level

Conclusions and Recommendations. Findings from the study showed the different types of health care facilities available to the rural communities were categorized under modern and traditional health care services. Result revealed that modern health care services were dominantly (71.25%) used by the rural farmers while 28.75 percent of the respondents used traditional health care services. However, despite the availability of modern health care facilities at the rural communities, most rural dwellers still acknowledge and use traditional health care facilities.

Malaria was identified as the dominant illness among the rural farmers. 72.20% of respondents described health care services in the area as inaccessible while 27.5% described it as regular or accessible.

The result of the correlation analysis showed that inaccessible health care services and farm output were negatively correlated (-0.37) but was significant at 5% level. As inaccessible health care services increases, the output of the farmers reduces.

Based on the findings of this study, the following recommendations will suffice in improving the health status and farm output of the rural farmers:

1. Government should ensure that health care centers should be sited close to the rural population.
2. Drugs and other medical facilities should be available and evenly distributed in the rural area.
3. Government and non-Governmental organization should from time to time provide free medical health care services to the rural population in view of the low income status nature.
4. Strict measures should be employed by the government ensure that drugs are sold or dispensed to the farmers at approved prize or at subsidized rate as the case may be.

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Authors:
Chidozie O. Anyiro, Department of Agricultural Economics and Extension, Abia State University, Umuahia Campus, Umuahia, Abia State. E-mail: chidoo4real2003@yahoo.com Phone: +2348039304453.