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FARMERS' PERCEPTION AND KNOWLEDGE OF HEALTH PROBLEMS AFFECTING THEIR AGRICULTURAL PRODUCTIVITY IN EDO STATE, NIGERIA

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ABSTRACT

This study examined farmers' perception and knowledge of health problems affecting their agricultural productivity in Edo State. Using interview schedule, a total of 120 randomly selected farmers were sampled. Findings show that there were more females (50.8%) and more married respondents (70.0%). Majority of the respondents (66.7%) belong to age bracket 30-50 years old. A majority, (73.4%) had only primary education and below. Many of the respondents are involved in crop production (62.8%) with a farm size ranging from 1 to 2.5 hectares (73.3%). Perceived major health problems are malaria, diarrhoea, and dysentery which were perceived to be as a result of poverty, inadequate information/education and poor sanitation. Respondents have good knowledge of some diseases apart from HIV/AIDS. The major sources of health information are community health centres, friends and radio. Respondents' knowledge of health issues was found to be significantly associated with their educational level and occupation. Inclusion of health related issues in extension activities with adequate public campaign and provision of adult education programme were recommended.

Key words: farmers' perception, knowledge, health problems, agricultural productivity

INTRODUCTION

The role of agriculture in a country's development cannot be overemphasized as highlighted by FAO (2000). According to Forastieri (1999), agriculture employs half of the world labour force and an estimated 1.3 billion workers are active in agricultural production world-wide with 60% concentrated in developing countries. In developing countries, a large number of people below the poverty line live in rural environment which may be in extremely primitive conditions, often isolated, without adequate food, water supply and sanitation systems with inadequate roads and difficult transportation (Forastieri, 1999). Agriculture is one of the most hazardous occupations worldwide and rural communities often lack education and information on the health hazards they face (Forastieri, 1999). Environmental pollution causes occupational health and public health hazards to agricultural workers, their families and the communities. Exposure to pesticides and other agrochemicals for example constitutes one of the major occupational risks, accounting in some countries, for as much as 14 % of all occupational injuries in the agricultural sector and 10 % of all fatal injuries (Forastieri, 1999). According to Joint United Nations programmes on HIV/AIDS (UNAIDS) (2002), farmers can only count on fewer methods to mitigate the infections suffered from occupational injuries. It has been estimated that 267 million people are infected with malaria in 103 countries and there was 107 million clinical cases a year, with a mortality rate of 1-2 million, and a further 2.1 million at risk (UNDP, 2002). Malaria is therefore a weakening and killer disease, which takes a heavy toll in illness and death among children (UNDP, 2002).

According to Obeng (1991), the damming of rivers and streams to create large reservoirs, irrigation ponds and the extension of irrigation canals and water distribution systems have contributed to ecological conditions that spread *schistosomiasis* disease. *Schistosomiasis* causes an estimated mortality of about 200,000 people a year in 76 countries.

The number of cases is believed to be 200 million, with 500 – 600 million more considered at risk. Essentially, *schistosomiasis* is a disease of poverty and ignorance but better management of human waste, reliable domestic water supply, and limited contact with transmission sites are basic control measures (Obeng, 1991). Also, Obeng (1991) indicated that diarrhoea and dysenteric diseases are poverty ailments resulting from lack of basic facilities and education.

The agricultural industry has been found to be the most affected by the HIV/AIDS epidemic with 28.5 million people mostly farmers living with HIV/AIDS epidemic (Squire, 2004). FAO (2000) has estimated that in the 27 most affected African countries, 7 million agricultural workers have died from AIDS since 1985, and 16 million deaths are likely to occur in the next two decades if nothing is done to fight the disease in the sub-region (UNAIDS, 2002) and this may further worsen the health complications confronting farmers. The disease has reduced life expectancy, food security and income in many countries (UNAIDS, 2002; and UNDP, 2002).

The importance of agricultural extension service as a channel for educating and solving farmers' problems cannot be overemphasized. According to Crowder, et al, (1999), experience has shown that agricultural training institutions and extension service can play a vital role in bringing about changes in peoples attitudes and practices by promoting active learning methods and team work among them. The improvement in farmers' knowledge, efficiency and productivity are positively correlated to the training level and quality of the agricultural extension staff (Qamar, 1998).

Diseases and health hazards affecting agricultural practitioners such as typhoid, cholera, poliomyelitis, diarrhoea diseases, dysenteries, infectious hepatitis, river blindness, HIV/AIDS and so on can be limited to a great extent by the application of agricultural extension and education programs (FAO, 1997). This is because according to Qamar (2002), agricultural extension has gone beyond messages on technical recommendations on crop production only in many parts of the world.

According to Squire (2004), HIV/AIDS epidemic is becoming the most single most important obstacle to reducing poverty and therefore extension programs must take a central stage in the fight to prevent the spread of the disease and as Obeng (1991) indicated that "without healthy agricultural communities, it will be difficult to assure sustainable agriculture." Therefore, regular determination of farmers' perception and knowledge on health problems affecting them would go a long way in finding solution to the spread of major diseases in farming communities. This study therefore aimed to examine farmers' perception and knowledge of their health problems affecting their agricultural productivity. The specific objectives were to: determine the socio-economic characteristics of the respondents; determine respondents' perceived prevalence of health problems and reasons for the prevalence in the study area; determine respondents' knowledge and perception of health problems affecting their productivity; and identify farmers' sources of health information.

A null hypothesis that there was no significant relationship between respondents' socio-economic characteristics and their knowledge of health issues was tested.

METHODOLOGY

This study was carried out in Orhionmwon and Uhunmwonde Local Government areas of Edo State. The two local government areas lie in the Southern Zone of the State and were purposely selected for the study being the area noted for the production of major arable and cash crops in the state. A two-stage sampling technique was used for selection of respondents for this study. The first stage was the random selection of three communities from the Edo State Agricultural Development Programme (ADP)'s list of registered communities in each of the two local government areas to make a total of 6 communities, namely, Urhokhuosa,

Ugoneki, Ugomoso (Uhunmwonde), Owa, Oza and Uvbe (Orhionmwon). The second stage was the random selection of farmers from each community. From the list of registered farmers provided by the ADP, 20 registered farmers were randomly selected in each community, making a total of 120 respondents used for the study.

An interview schedule was used to collect relevant information from the respondents. The interview schedule was constructed to have open and close–ended questions. The instrument was also designed to contain Likert-type 5 point scale. The validity of the instrument was determined by seeking experts' opinions. The reliability of the instrument was determined using the test–retest method by administering it to 25 farmers from communities that were not included in the final sample. A reliability coefficient of 0.87 was obtained.

Data were analyzed using descriptive statistics such as frequency, percentages and the mean rank while Chi-square analysis was used to test the hypothesis.

RESULTS AND DISCUSSION

Table 1 shows the socio-economic characteristics of the respondents. The result shows that there were more female farmers (50.8%) which indicate that female farmers may probably dominate the agricultural workforce in Edo State especially in the rural sector as in the study area. This result agrees with the view of Verma (2001) that women account for 70-80 percent of house-hold food production in sub-Saharan Africa. The result also shows that majority of the respondents belong to age bracket 30-50 years old (66.7%) which means that a majority belong to the active age. Table 1 also shows that a high proportion of the respondents (70.0%) were married. The result also indicates a low level of respondents' educational qualifications as majority of the respondents (73.4%) had only primary education and below with only 1.6% having tertiary education. All the respondents are farmers with majority involving in crop production (62.8%). The majority of the respondents (73.3%) have farm size ranging from 1 to 2.5 hectares which implies that majority of the respondents are small-scale farmers. This result agrees with the view Omohan (1996) that the small farming holdings constitute more than 70% of all farming activities in Nigeria.

Respondents' perceived prevalent health problems and reasons for the prevalence

Table 2 shows that malaria is the most perceived prevalent health problem in the study area. This result agrees with the assertion of UNDP (2002) that in developing countries, there could be up to 107 million clinical cases of malaria in a year. Malaria was followed by diarrhoea and dysentery. It is interesting to note that respondents were uncertain about the prevalence of HIV/AIDS in the study area. Poverty was rated as one of the first reasons for the prevalence of health problems which may be due to the level of agricultural production of the respondents as the majority of them are small-scale farmers.

Socio-economic characteristics of respondents

Table 1: Socio – economic Characteristics of Respondents (N = 120)

Variable	Frequency	Percentage
Sex:		
Male	59	49.2
Female	61	50.8
Marital status		
Married	84	70.0
Single	31	25.8
Divorce	2	1.7
Widow/widowed	3	2.5

Age:		
Less than 30 years	28	23.3
30 –40 years	36	30.0
41 – 50 years	44	36.7
Above 50 years	12	10.0
Education:		
No formal education	47	39.2
Primary education	41	34.2
Secondary education	30	25.0
Tertiary education	2	1.6
Farm size:		
Less than 1.0 hectare	29	24.2
1.0 – 1.5 hectares	26	21.6
1.6 – 2.0 hectares	42	35.0
2.1 – 2.5 hectares	20	16.7
Above 2.5 hectares	3	2.5
Primary occupation		
Crop production	73	62.8
Animal husbandry	38	31.7
Processing/marketing	3	2.5

Low income farmers may not have enough resources to take care of their health. Inadequate information/education was also rated high after poverty. This agrees with the view of Forastieri (1999) that rural communities often lack education and information on the health hazards they face.

Table 2: Respondents' perceived prevalent health problems and reasons for the prevalence

Perceived prevalent health problems	Mean	SD
Malaria	4.95	0.50
Diarrhoea	4.43	0.63
Dysentery	4.20	0.72
Typhoid fever	3.84	0.59
Gonorrhoea	3.62	0.92
HIV/AIDS	2.50	0.90
Tuberculosis	1.40	0.59
Measles	1.28	0.60
Reasons for prevalence of health problems		
Poverty	4.84	0.97
Inadequate information/education	4.82	0.88
Poor sanitation by people	4.78	0.92
Illiteracy	4.72	0.89
Lack of water supply	4.64	0.93
Inadequate health facilities(hospital/health centre)	3.24	0.84

(1) Likert-scale = 1 = Not very serious, 2 = Not serious, 3 = Uncertain, 4 = Serious, 5 = Very Serious. (2) Likert-scale: 1= strongly disagree, 2= disagree, 3 = uncertain, 4 = agree and 5 = strongly agree

Respondents' knowledge and perception of health problems

The results in Table 3 show that respondents have good knowledge and perception of malaria as they strongly agreed (M = 4.86 – 4.96) on all the statements about malaria. Respondents' knowledge on malaria may be due to its prevalence in the study area because the higher the frequency of occurrence of the disease, the more they are likely to know about it. Respondents also have good knowledge of diseases like gonorrhoea, diarrhoea and dysentery as they either strongly agreed or agreed with all the statements provided on the diseases. It is clear from the result that respondents have inadequate knowledge of HIV/AIDS as they were either not certain or disagreed with some of the statements provided on HIV/AIDS. They were however in agreement that AIDS can kill and it can be transmitted by having many sexual partners.

Table 3: Respondents' knowledge and perception of health problems

Statements used to test knowledge and perception of respondents	**Mean**	**SD**
Mosquito causes malaria	4.96	0.92
Stagnant water around houses can increase occurrence of malaria	4.93	0.89
Malaria can be prevented by spraying insecticides	4.91	0.93
Malaria can be prevented by clearing bushes around houses	4.90	0.88
Malaria can kill	4.86	0.99
Gonorrhoea is a sexually transmitted disease	4.84	0.92
Taking antibiotics can cure gonorrhoea	4.78	0.81
Health problems reduces agricultural productivity	4.68	0.88
Extension service can play a role in reducing health problems	4.54	0.89
Unsafe drinking water causes diarrhoea and dysentery	4.26	0.99
Use of condom can prevent gonorrhoea	4.14	0.86
AIDS is real	3.68	0.88
Having many sexual partners increases risk of AIDS	3.60	0.92
AIDS Can be transmitted through blood transfusion	3.48	0.89
AIDS is caused by a virus	3.26	0.93
AIDS can be contacted through kisses and mosquito bite	3.19	0.99
A healthy looking person can have AIDS	2.88	0.84

Likert-scale type: 1= strongly disagree, 2= disagree, 3 = uncertain, 4 = agree and 5 = strongly agree. SD = Standard Deviation.

Respondents' sources of health information

Table 4 shows that majority of the respondents (71.7%) get health information from the community health care centre, while a high proportion (55.0%) also gets health information from friends. It is clear from the result that extension agents have not been effective in disseminating health information as only about 12 percent of the respondents indicated getting information from extension agents.

Table 4: Respondents' Perceived Health Information Sources

Sources of Health Information	Frequency	Percentage
Community Health Centre/workers	86	71.7
Friends	66	55.0
Radio	62	51.7
Television	48	40.0
NGOs	42	35.0
Newspaper	26	21.7
Extension Agents	14	11.7

N is greater than 120 due to multiple responses.

Test of hypothesis

The chi-square analysis in Table 4 shows that education ($X^2 = 19.47$, $p < 0.05$) is significantly associated with respondents' knowledge and perception of health issues. This implies that the higher the education level the more the respondents knowledge of health issues, which suggests that education has influence on respondents perception of health issues as also reflected in Table 2 when illiteracy was rated high as one of the factors affecting prevalence of health problems in the study area. This result is expected as education is likely to increases knowledge and creates awareness. The occupation of the respondents was also significantly associated with their knowledge and perception of health issues. Most of the respondents are farmers and therefore the type of injuries sustained during farming could influence their knowledge and perception of health issues.

The non significant difference found between sex and perception suggest that there is no gender dimension to farmers' perception and knowledge of health problems. The same applies to age, marital status and farm size.

Table 5: Relationship between respondents' socio-economic characteristics and their knowledge and perception of health issues

Variables	X^2	Df	P-values	Relationship
Age	3.40	3	0.148	Not significant
Education	19.47	3	0.001	Significant
Sex	2.32	1	0.162	Not significant
Marital status	1.29	1	0.580	Not significant
Occupation	19.90	3	0.000	Significant
Farm size	1.84	1	0.426	Not significant

CONCLUSIONS AND IMPLICATIONS

The study has shown that the respondents have a high perception that health problems affect agricultural productivity and their most prevalent health problems in the study are malaria, diarrhoea and dysentery and as a result, respondents have good knowledge and perception of these diseases that affect their agricultural productivities. The prevalence of these diseases was due to poverty, inadequate information/education, poor sanitation and illiteracy. Extension service was rated very low as a means of information on health issues. This study therefore offers valuable implications for extension service. There is a need for a reform in extension service by including health issues in addition to their agricultural programs in developing countries. This is because according to McCormick (1994), through agricultural education and extension, people can learn new ways of farming and also interact with their

environments in sustainable ways. There is also a need for Stake-holders in health sector and agriculture to embark on more mass enlightenment programmes on health, in order to educate and enlighten t farmers in the rural areas on the dangers of health hazards especially HIV/AIDS which FAO (2002) predicted may kill 16 million agricultural workers in Africa if something drastic is not done to fight the disease. In addition, there is a need for adult education program for rural people and provision of drinkable water to prevent diseases and epidemic outbreak resulting from poor living conditions.

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