

Occupational Health Hazards of Women Farmers in Ankpa Local Government Area of Kogi State- Nigeria

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Abstract: *This study was carried out to determine the occupational health hazards that women farmers face in Nigeria with a particular focus on Ankpa Local government area of Kogi State – Nigeria. The study has shown that women are very important and active participants in the agricultural sector in Nigeria. The study has however, opined that in spite of the crucial role women play in agricultural production, policies in Nigeria have not been formulated to address the hazards they face in performing their agricultural activities. Due to this neglect, women have continued to face different levels of hazards with significant effect on their lives and consequently on agricultural productivity.*

Key words: Occupation; Health hazards; Women; farmers; Ankpa LGA

Introduction

Agriculture ranks among the most hazardous occupations in the world (National Institute for Occupational Health, 2013). The physical demand of the farm work often exposes the agricultural worker to very high risks. In spite of the risks, in agrarian economies, the agricultural sector plays very important roles. It is the engine overall economic growth. In Nigeria, it is the major employer of labour and contributes to households' income generation and food security. As one of the oldest occupations in the world, agriculture serves as one of the major occupations of rural dwellers especially women.

In Nigeria, like many other African countries, women play very important roles as producers and providers of food. Most of the women are rural dwellers and play multi-faceted roles in the rural sector as small scale farmers, income earners, and family care takers. They are involved in the cultivation of food and cash crops. In fact, much of the agricultural activities are carried out by women. Women are therefore prominent economic actors in land related activities with a major stake in crop and livestock husbandry, crop preservation, processing and marketing, and food preparation for both domestic consumption and sale. Indeed, women are a critical link in achieving household food security. These crucial tasks often expose

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women to health problems. In fact, the farming environment and the conditions under which women operate render women vulnerable to occupational health hazards (WHO, 2015).

In spite of the obvious risks women farmers (and indeed farmers generally) in Nigeria are exposed to and the crucial role they play in agriculture, most of the policies are not formulated to tackle these risks. For example, policies such as Gender Policy in Nigeria (2016) and the Agriculture Promotion Policy (2016-2020) do not have any provision concerning the health of farmers. This study therefore seeks to analyze the occupational health hazards of women farmers in Ankpa local government area of Kogi state –Nigeria.

Conceptual clarification

All farmers, regardless of sex, are exposed to occupational hazards. Occupational hazard refers to any source of potential damage, harm or adverse health effects on something or someone under certain conditions at work. The International Labour Organization, (ILO, 2000) regards occupational hazard as any working condition that can lead to illness or death. The organization further affirms that health status in rural areas is lower than in urban centres in both developed and developing countries. Asuzu (1994) viewed occupational health as the sum total of all activities and programmes engaged upon for attaining and maintaining the highest level of health and safety for all people in whatever work they are engaging.. According to Cole (2006), Park (2011), and Idio and Adejare (2013), occupational hazard in agricultural sector could be classified into seven: (i) climate: dehydration, heat cramps, heat exhaustion, heat stroke, and skin cancer; (ii) Snakes and insects: injurious bites and stings; (iii) Tools and farm equipment: Injuries, cuts, and hearing impairment; (iv) Physical labour: musculoskeletal disorders, e.g. pain and fatigue; (v) Pesticides: poisonings, neurotoxicity, reproductive effects, and cancer; (vi) Dusts, fumes, gases, particulates: Irritation, respiratory tract, allergic reactions, respiratory diseases such as asthma, chronic obstructive pulmonary disease, and hypersensitivity pneumonitis, and (vii) Biological agents and vectors of disease: Skin diseases, fungal infections, allergic reactions, malaria, schistosomiasis, sleeping sickness, leishmaniasis, ascariasis, and hookworm.

A plethora of literature have revealed the linkages between farmers' health and their efficiency. For example, Egbetokun, Ajjola, Omonona, and Omidele, (2012) found that one percent improvement in the health condition of the farmers will increase efficiency by 21 percent. According to Hawkes and Ruel (2006), poor health of farmers reduces their income, efficiency, and productivity.

Adedeji, Olapade-Ogunwole, Farayola, and Adejumo . (2011), Olowogbon (2011) and Idio and Adejare (2013) reported that rural farmers in Nigeria are exposed to occupational hazards of various types. For instance, study carried out by Egharebva and Iweze, (2004) on women farmers in Edo state, Nigeria, revealed the health problems experienced by the women as muscular fatigues, fever, dermatitis, migraines, respiratory diseases, impaired vision and hearing as a result of exposure to extreme temperature, use of chemicals, fertilizers, dusts and insect bites.

Study area

Ankpa local government area is one of the 21 local government areas that make up Kogi state. Its headquarters is at Ankpa on the A233highway in the west of the area at 7°22'14"N 7°37'31"E. The local government area has an area of 1,200km² and a population of 267,353 (NPC 2006) and a 2016 projected population of 359,300 (kogi state- Population Statistics, charts, map and location 2018). It shares boundary with Omala local government of Kogi state in the North, Olamaboro local government area of Kogi state in the south, Dekina local government area of Kogi state in the east and Apa and Otukpo local government areas of Benue state in the west.

The major ethnic group in the local government area is Igala though there are other ethnic groups like Idoma and Igbo. Like the entire Igala race, the people are ethnically uniform, have a fairly uniform farming system with fairly uniform land tenure arrangements. The people are predominantly farmers and have a fairly extensive arable land with a suitable climate for the production of various crops. The people typically engage in the production of cash crops such as rice, beans, groundnuts, maize as well as subsistence crops like yams, cassava, and guinea-corn. Bush fallow and mixed cropping are the dominant systems. The local government area has the advantage of an all-round capacity to produce virtually all the major food crops. All crop farmers raise either or a combination of sheep, goats, and poultry to supplement income from crop farming. The system of animal husbandry by farmers is mostly free range though some practice semi-intensive method. Although farming is the major occupation of the people, a good percentage of the people engage in trading, teaching or civil service work

Methodology

Ankpa local government area is one of the 21 local government areas that make up Kogi state. Its headquarters is at Ankpa on the A233highway in the west of the area at 7°22'14"N 7°37'31"E. The local government area has an area of 1,200km² and a population of 267,353 (NPC 2006) and a 2016 projected population of 359,300 (kogi state- Population Statistics, charts, map and location 2018).

The local government area is comprised of ten districts namely; Ankpa, Enjema, Ojoku, Udama, and Adamawo. Others include Emekutu, Okaba, Ikah, Adowo and Awo. Six of these council wards- Ojoku, Emekutu, Awo, Enjema, Udama and Adamawo – were purposively selected for study. The rationale for the selection of these districts was informed by their geographical spread.

In each of the districts selected, two villages were randomly selected and surveyed. From each of the randomly selected villages, 10 respondents were randomly selected and interviewed. Hence, a total of 120 respondents were interviewed.

Data were collected through self-administered structured questionnaire and focus group discussion sessions. The structured questionnaire provided the opportunity to collect information on the age, level of

education, type of family techniques used for farming. To complement information obtained through questionnaire, focus group discussion sessions were held with the women farmers of the selected districts across generation. Two focus group discussion sessions were held with women who were still giving birth and those that had stopped giving birth each. The information gathered through the focus group discussion sessions provided the opportunity to understand the occupational hazards women farmers face especially the parts of the body that are most affected.

Results and discussion

The demographic s of the respondents is presented in table 1.

Table 1: socio-demographic characteristic of respondents

| Age | Frequency | Percentage. |
|---------------------------|-----------|-------------|
| 18-34 | 47 | 39.17 |
| 35-54 | 52 | 43.33 |
| Total | 120 | 100 |
| Marital status | | |
| Married | 73 | 60.83 |
| Single | 11 | 9.17 |
| Widow | 23 | 19.17 |
| Separated | 13 | 10.83 |
| Total | 120 | 100 |
| Level of education | | |
| No formal education | 73 | 60.83 |
| Primary | 30 | 25.00 |
| Secondary | 11 | 9.17 |
| Tertiary | 6 | 5.00 |
| Total | 120 | 100 |
| Type of family | | |
| Nuclear | 27 | 22.50 |
| Polygamy | 91 | 75.83 |
| Single parenting | 2 | 1.67 |
| Total | 120 | 100 |
| Family size | | |
| 1-3 | 21 | 17.50 |
| 4-6 | 51 | 42.50 |

| | | |
|-------------------------------|-----------|------------|
| 7-9 | 27 | 22.50 |
| 10 and above | 21 | 17.50 |
| Total | 120 | 100 |
| Farm size (in ha) | | |
| 1-3 | 67 | 55.83 |
| 4-6 | 31 | 25.83 |
| 7-9 | 22 | 18.33 |
| Total | 120 | 100 |
| Farming experience (in years) | Frequency | Percentage |
| 1-5 | 7 | 5.83 |
| 6-10 | 17 | 14.17 |
| 11-15 | 29 | 24.17 |
| 16 and above | 67 | 55.83 |
| Total | 120 | 100 |

Source: Field survey 2019

Table 1 presents the demographics of respondents. A careful examination of the table shows that a good percentage of the respondents were within the active age range. For example, 47 (39.17%) were within the age bracket of 18-34; 52 (43.33%) were within the age bracket of 35-54. Only 21 (17.50%) of the respondents were within 55-70 years bracket. The mean age stands at 40 years. This mean age shows that most of the farmers were adults and therefore old enough to appreciate hazards associated with farming tasks.

With regards to marital status, 73 (60.83%) of the respondents were married while 23 (19.17%) were widows. Only 11 (9.17%) were single. The active involvement of both the married, single and widows in agricultural production in the study area underscores the importance of agriculture as a source of income. Moreover, all the married and widowed have family responsibilities. These responsibilities require the willingness of the people to engage in productive activities so as to meet family demands.

In terms of level of education, the majority of the respondents (73 or 60.83%) had no formal education while 30 (25.00%) had primary school education. Only 17 (24.17%) had secondary education and above. On the whole, more than three quarters of the respondents were illiterate or semi-illiterate. This level of illiteracy calls for special attention to be paid to their health needs so as to enhance their productivity.

With regards to family type, majority of the respondents (91 or 75.83%) were from polygamous families while 27 (22.50) were from nuclear families. Only 2 (1.67%) were single parents. This disparity is due to the fact that the local government is predominantly a Muslim community and there is liberal understanding about marriage.

In terms of household size, 51(42.50%) had up to 4-6 household members, 21 (17.50%) had 1-3 members, 27 (22.50%) had between 7-9 members while 21 (17.50%) had from 10 and above members. This composition clearly shows that members of the study area have large family sizes. The active involvement of the people into agricultural production could therefore be the need to cater for the food and financial needs of the large number of persons per household. It should also be noted that with this large household size, many of the farmers may be unable to feed their families properly and at the same time save so as to expand their farms sizes. However, the largeness of families suggests availability of family labour on the farms.

With regards to farm size, the table shows that most of the farmers were small scale producers as they cultivated less than 10 hectares. For example, 31 (25.83%) operated 4-6 ha; 67 (55.83%) operated 1-3 ha while 22 (18.33%) operated 7-9 ha. All these figures fall far short of the 10ha regarded by the UN and FAO for commercial farming. It was observed that almost all the farms were based on mixed cropping.

In terms of farming experience, 29 (24.17%) had farming experience of between 11-15 years; 67 (55.83%) had farming experience of over 16 years. Only 7 (5.83%) had farming experience of 5 years and below. This shows that most of the farmers had long experience of farming. It therefore means that with their long years of experience, they could make good assessment on hazards associated with farming. It should be noted that none of the farmers indicated that they belonged to any cooperative society. This suggests the lack of knowledge about the benefits of cooperative societies. However, many of the farmers engaged in weekly or monthly contributions so as to enhance their savings.

Techniques used for performing farm activities

It should be borne in mind that like most farmers in Nigeria, the respondents practice rain-fed agriculture and engage in mixed cropping. They plant several crops- both cash and subsistence- at the same time. A survey of the study area revealed that no farmer had any sole-crop field.

In terms of farm activities, all the respondents reported that they perform farm activities such as land preparation, seed treatment, sowing, fertilizer application, and weeding. Other activities include harvesting, threshing, processing and marketing of the agricultural produce. The study observed that all these activities are performed manually using hoes, cutlasses and knives. The use of hoe, cutlass and knives by the women farmers working in stooping positions exposes them to body aches such as back and waist pains. This position is in line with that taken by Amodu and colleagues (2017) in their study of female farmers in North Eastern Nigeria. The study also observed that all the farmers operated small-sized farms. In one of the focus group discussion sessions, a 46 year old woman and a mother of 6 children had this to say;

Our primary purpose of production is to feed our families. We do not even own large parcels of land nor do we have enough money to invest in the use of machines like tractors, threshers, combined harvesters, etc.

With regards to the problems they face, all the women farmers had different though similar lamentations to make. For example, a heavily pregnant 26 year old woman had this to say;

During land preparation, fertilizer application and weeding, we sweat profusely; our feet, faces and hair are soiled. We also experience different forms of bites such as snake, scorpion and insects. During threshing, dust stick to our bodies and eyes thus making us to experience eye and skin irritation/itching.

Another 32 year old farmer lamented thus;

In the process of carrying out our farm activities, we are exposed to several problems. For instance, in processing gari, we are exposed to heat, smoke and burns. The prolonged exposure to smoke makes our eyes to be swollen. Also, during application of fertilizers, herbicides and pesticides, we experience chemical hazards either through inhalation, ingestion or dermal absorption and this has often had adverse effect on our pregnant members.

Respondents were in agreement that carrying heavy agricultural products to-and-from the farm exposes them to serious back and chest pains. Also, they experience long hours of exposure to air pollution and job overload.

Assessment of occupational health hazards based on age

This was assessed at three levels namely; low, moderate and high.

Table 2: Assessment of occupational health hazards based on age

| Level | 18-34 | 35 -54 | 55-70 | Total |
|----------|-------------|-------------|-------------|-------------|
| Low | 7 (14.89%) | 12 (23.08%) | = | 19 (15.83%) |
| Moderate | 11 (23.40%) | 17 (32.69%) | 9 (42.86%) | 37 (30.33%) |
| High | 29 (61.70%) | 23 (44.23%) | 12 (57.14%) | 64 (53.33%) |
| Total | 47 | 52 | 21 | 100 |

Source: Field survey 2019

Table 2 shows that 29 (61.70%) of the 47 respondents between 18-34 years reported high incidence of hazards while 23 (44.23%) of the 52 respondents between 35-54 years reported high incidence of hazards. Thirty seven (30.33%) of the respondents reported moderate pains while 19 (15.83%) reported low pains. Within the age bracket of 55-70 no respondent reported low level of pains. This could be because all the respondents within the age category are already advanced in age and therefore highly vulnerable to any form of stressful activity. On the whole, majority of the respondents (64 or 53.33%) reported high incidence of hazards.

With regards to the part(s) of the body most affected, table 3 gives a graphic explanation.

Table 3: Body discomfort according to age

| Parts of body | 18-34 | 35-54 | 55-70 | Total |
|---------------|-------|-------|-------|-------------|
| Neck | 7 | 2 | 1 | 10 (8.33%) |
| Shoulders | 3 | 3 | 2 | 8 (6.67%) |
| Arms | 4 | 2 | 1 | 7 (5.83) |
| Back | 1 | 5 | 2 | 8 (6.67%) |
| Waist | 19 | 27 | 7 | 53 (44.17%) |
| Thighs | 11 | 4 | 5 | 20 (16.67%) |
| Legs | 2 | 9 | 3 | 14 (11.66) |
| Total | 47 | 52 | 21 | 120 |

Source: Field survey 2019

Table 3 shows that of the 47 respondents, who were between 18-34 years, 19 and 11 reported much pains in the waist and thighs respectively while 27 and 9 who were between 35-54 reported much pains in the waist and legs respectively. On the whole, all the age groups reported much pains in the waist, thighs and legs. This could be attributed to the long hours of sitting and bending due to the nature of the farming activities. This position is in agreement with the position taken by Jeyenatnam (1992) over two decades ago in his study of Kampala in Uganda

Treatment options

A careful look at table 3 shows that 87 of the respondents representing 72.50% identified pains in the waist, thighs and legs as constituting the majority of pains they experienced while 33 respondents representing 27.5% identified pains in the neck, shoulders, arms and back as less serious pains. Regardless of which part of the body is most affected, all the women farmers were in a common agreement that treatment options of any given ailment is contingent on the type of ailment, availability of money and the severity of the sickness. For example, 93 of the women farmers representing 77.50% reported that they usually rely on traditional medications by visiting herbal homes or traditional healers because of cultural beliefs. Thus, the reason for this is that the people believe that many illnesses are caused by witches and wizards and that the victim must first be taken to fortune tellers for consultation and healing process. The victim must visit a powerful shrine where the case is pleaded with the gods through a powerful diviner. It is then that the causal person could be identified and treatment instituted. But it should be noted that this shrine consultation often delays appropriate treatment thus resulting to serious consequences (Kakwagh, 2018).

Nineteen of the women farmers representing 15.83% said they go for self-medications through the use of herbs and patent medicine dealers because of poverty. But it should be understood that the dealers of patent medicine stores are not properly trained in the art of drug administration. Moreover, the drugs peddled by these patent medicine vendors are often fake and adulterated therefore, patronizing them could have disastrous implications (Kakwagh)

Only 8 or 6.67% said they visit orthodox health care facilities for treatment. This group of women farmers are those who have had secondary and tertiary levels of education. Even at that, this group of women farmers who visit orthodox medical establishments, though relatively educated, said their behaviour is always influenced by certain factors such as affordability of the cost, quality of service and the attitude of staff of the medical institutions. This clearly implies that patronage of orthodox medical care is contingent on a combination of these factors.

Conclusion and recommendations

The study has shown that women are very active participants in the agricultural sector in Nigeria. The study has however, observed that in spite of their crucial role, policies in Nigeria have not been formulated to address the hazards they face in performing their agricultural activities. Due to this neglect, women have continued to face different levels of hazards with significant effect on their lives and consequently on agricultural productivity. Since women are very important actors in agricultural production in Nigeria, and their poor health impacts negatively on agricultural productivity, there should be improvement in rural social services. This is to reduce the negative effect of poor health on rural productivity. The health of rural women should be integrated into a rural development policy especially the primary health care structure. Emphasis should be particularly placed on environmental protective measures, health promotion and wellbeing measures and agricultural safety. To this regard, there should be collaboration between the Federal Ministry of Agriculture, Federal Ministry of Health and other relevant agencies of government

Also, researches should be conducted so as to design simple and affordable hand tools such as planters, threshers, for farmers so as to reduce the drudgery of farm work. Farmers should be educated through enlightenment campaigns with active participation by agricultural extension workers on how to avoid the dangers of the chemicals especially herbicides and pesticides they apply to their crops. Women (and farmers generally) on their part should always endeavour to wear protective clothing.

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