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PARTICIPATION OF PHYSICALLY CHALLENGED PEOPLE IN AGRICULTURAL VALUE CHAIN: IMPLICATION ON FOOD SUSTAINABILITY IN NIGERIA

SUMMARY

This study focuses on assessing participation of physically challenged people (PCP) in agricultural value chain as a means of food sustainability in Nigeria. Specifically, it describes the socio-economic characteristics of the physically challenged people, analyzes PCP perception of agricultural value-chain as a means of income generating activities; determined their training needs as well as identified the major constraints to participation in agriculture. One hundred and five respondents that belong to physically challenged associations were interviewed through the use of structured interview schedule. Data analyses were carried out using frequency counts, percentages, mean, standard deviation and correlation. Results of the study showed that more males were found in this category compared to females, and they were of productive age. Majority was illiterate and relevant pieces of information were sourced from relatives and friends. There was a low level of participation in agricultural value chain due to negative perception to agricultural production, inadequate access to appropriate education and information, inadequate training in the area of agricultural value chain where PCP can be engaged, inappropriate technology, inadequate credit facilities and negative attitude of people to the plight of the PCP. Positive and significant correlation exists between the level of participation of PCP in agricultural value chain at $p \leq 0.05$ and level of education; source of information; trainings attended and perception towards agricultural production. In conclusion, there is the need to create enabling environment that will encourage the PCP to participate in agricultural production to enhance food security and poverty alleviation.

Keywords: Attitude, participation, perception, value-chain, physically challenged people

INTRODUCTION

Physically challenged persons can be described as those certified by a specialist in any field of therapy as having one or more disabilities which might be blindness, partial blindness, emotional disorder, deafness, partial hearing,

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physical handicap, speech defects, learning disability, social maladjustment, exceptional giftedness and mental retardation (Deloitte Access Economics, 2011). Persons with disabilities in rural areas represent the poorest of the poor; they lack access to the most basic social services, including education, health services, access to production resources and opportunities for income generation, and employment. The statistics suggest that unemployment for working age disabled people in developing and industrialised countries is between 80-90% and 50-70%, respectively (Naami et al. 2012). They are often excluded from active participation within their community. This general neglect causes these people to be often not included and their specific needs ignored in agricultural development programmes and policies.

The UN convention on the rights of persons with disabilities that came into force in 2008 marks a paradigm shift in how disability is viewed from people with disabilities as objects of charity or medical intervention, to people with rights and control over their own lives, decisions and futures.

Agricultural sector has been the mainstream of national development in which PCP can also be involved in large scale, if given the opportunities. The United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) (United Nation 2006) provides vast opportunities to increase awareness of disability around the world. The World Food Summit organized by FAO in 1996 acknowledged the fundamental contribution to food security by disabled farmers, noting that a large proportion of the disabled people were farmers with responsibility for the food security of their households (FAO, 2006). Efforts are been made by international organizations and developed countries especially European Union to include physically challenged people in agricultural development programme. The European Union recently adopted disability as a cross cutting issue, giving opportunities to include people with disabilities in regular food security programmes. Numerous successful projects have shown that people with disabilities are able to participate in meaningful agricultural activities. Some go as far as suggesting that people with disabilities are the world's untapped resource and that their inclusion is of paramount importance for global food security (Global Forum on Food Security and Nutrition, 2010). In Nigeria, adequate attention has not been paid to the fact that physically challenged people are the world's untapped resource and that their inclusion is of paramount importance for global food security. Therefore the study assessed the participation of physically challenged people in agricultural value chain for food security and poverty eradication. The specific objectives of the study include describing the socio-economic characteristics of the physically challenged people; exploring areas of interest in agricultural value chains where PCP can be involved in the study area; analyze their perception of agricultural value chains as a means of income generating activities; and identify the major constraints to their participation in agriculture value chains.

MATERIAL AND METHODS

The study was carried out in three out of six states of Southwestern Nigeria. These are Ekiti, Ondo and Osun States. The states were selected in view of the fact that most of these PCP have associations where they can be easily reached and intervention programme can be extended to them. Ten percent of the local Governments (LGAs) in each state were selected. In all, 7 LGAs were used. Fifteen PCP (physically impaired, visually impaired and hearing impaired) were selected in each LGA, to give a total of 105. Structured interview was used to collect relevant quantitative data. Descriptive statistics such as percentages, mean and standard deviation were used to summarize the data. Pearson correlation coefficient was used to draw inferences from the hypotheses. In order to determine the level of participation of PCP in agriculture value chains, statements of opinion on their level of participation were grouped into three. That is fully participating, partially participating and never participated. These were scored 2, 1 and 0, respectively. Mean± standard deviation was used to categorise statements into high, medium and low level of participation.

RESULTS AND DISCUSSION

The results from Table 1 show that majority (82.9%) of the PCP were not more than 60 years old. This indicates that majority of the PCP in the study areas were still in their productive age in which they could still be productive and contribute meaningfully to the socio- economic well being of the society. This is in line with Ogunjimi et al. (2012) findings that majority of farmers in southwestern Nigeria were in their productive age. Moreover, majority (61.0%) were male, while 39.0 percent were female. The findings were expected because of involvement of women in domestic activities. It may also be attributed to the tenure system where females right to land ownership is denied. Moreso, farming activities required time and energy which women may not be able to cope with talk of PCP. This finding corroborates previous findings by Tijani (1999) and Ogunjimi (2011) that population of male farmers in Osun and Edo States were higher than females. However, contrary to expectation that majority of the PCP ought to have married, less than average (38.1%) were married while 61.9% were either single, divorced or widowed. This might be as a result of discrimination against PCP where people without disabilities might not be willing to marry them because of their disabilities. Majority (73.3%) of the PCP either had no education or stop at primary level. This might be a result of inadequate provision of schools for disabled people and where available, there were a lot of rigours in getting to schools due to constraints such as inadequate transportation and trained personnel. This finding also corroborated the submission of Beresford (1996) that the unemployment of disabled people is due to lack of education and training. The results of the study further reveals that PCP were rarely visited by extension agents and majority that claimed having extension contact had it less than 5 times in a year.

Major source of information was other rural dwellers (60%), while extension agents who ought to have been the major source of information were either inadequate in number or not well equipped to face the challenges. Results in Table 1 also reveal that majority were living below the poverty level because above average (54%) realized less than 50,000 Naira (294.12 USD) annually. The finding is in line with the study carried out in India and Uganda as reported by Emmel (2012). The report showed that in India, households with people who have disabilities are worse off than the average household. Similarly, research revealed that in Uganda, households headed by an individual with a disability are 38 percent more likely to be poor than households headed by a person without a disability due to low level of income.

Table 1. Distribution of PCP according to socio-economic characteristics

N=225

Socio-economic characteristics	Frequency	Percentage	Mean/ (STD)
Age (year)			
Below 30	43	41.0	
31 – 60	44	41.9	37.0 (11.3)
61and above	18	17.1	
Sex			
Male	64	61.0	
Female	41	39.0	
Marital Status			
Single	38	36.2	
Married	40	38.1	
Divorced	23	22.0	
Widowed	4	3.7	
Year of schooling			
1-6	33	31.4	
7-12	21	20.0	
13 and above	7	6.7	
Never	44	41.9	
*Source of information			
Other rural dwellers	63	60.0	
Fadama Facilitators	46	44.0	
Radio and television	38	36.4	
Non-Governmental Ogranisations	35	33.3	
Extension agents	29	27.6	
Newspaper	21	20.0	
Income /annum			
Less than 50	57	54.3	
51,000-100,000	41	39.0	₦65, 243 (12,352)
Above 100,000	7	6.7	
Extension contact in the last one year			
Never	79	75.2	
1-5	19	20	
6-10	5	4.8	

Results in Table 2 show that almost a half (49.5%) of PCP interviewed had physical impairment (any impairment which limits the physical function of limbs, fine bones, or gross motor ability). Furthermore, 23.9% of PCP interviewed were hearing impaired (hearing impairment or hard of hearing or deafness refers to conditions in which individuals are fully or partially unable to detect or perceive at least some frequencies of sound which can typically be heard by most people). Meanwhile, 14.3% of the PCP were visually impaired. This is loss of vision of a person to such a degree as to qualify as an additional support need through a significant limitation of visual capability resulting from either disease, trauma, or congenital or degenerative conditions that cannot be corrected by conventional means, such as refractive correction, medication, or surgery). Few (12.4%) of the PCP had intellectual retardation (specific learning disability). There is ability in disability. Despite their challenges all are still participating in one agricultural production or the other.

Table 2. Types of disabilities

Types of disabilities	Frequencies	%
Visual impairment (Partial blindness)	15	14.3
Hearing impairment (deafness, partial hearing and speech defect)	25	23.9
Physical impairment	55	49.5
Intellectual (learning disability), mental retardation	13	12.4

Results in Table 3 show major areas of agricultural production in which PCP participated. Majority (58.1%) of PCP were into crop production while others were into livestock production (26.7%), fisheries and aquaculture (6.7%) and beekeeping (5.7%). The implication of this is that despite their disability, they were still involved in agricultural production in which they were able to contribute their quotas to national food sufficiency. This finding corroborated Emmel (2012) report from a work carried out among disabled people in Haraspada village in Puri district, Odisha, India in which majority of disabled people in the village were into agricultural production.

Table 3. Major areas of agricultural production in which PCP participate

Area of agricultural production	Frequencies	%
Crop production	61	58.1
Livestock keeping	31	29.5
Fisheries and aquaculture	7	6.7
Beekeeping	6	5.7

Analysis of the study showed that the total mean score of participation level in agricultural value chain was 2.5 with standard deviation of 0.6. Participation was rated in descending order. Crop production was rated first with mean score of 2.8, while marketing of agricultural products was rated next. Others include livestock production (mean=1.5), processing of agricultural products (mean=1.5), packaging of agricultural products (mean=1.1). Considering the level of participation, crop production had high level of participation while marketing had medium level of participation. For other agricultural production and value chains, participation by pcp was at low level. The implication of this finding is that pcp have low level of participation in other agricultural value chains apart from crop production and marketing of agricultural production which might be as result of inadequate knowledge and skill about other activities. In order to attain high participation in agricultural value chain, factors hindering it must be taken into considerations and necessary actions needed to be taken.

Table 4: Distribution of pcp according to mean score of level of participation in agricultural value-chains

Participation in agricultural production	Production	Rank
Crop production	2.8	1st
Marketing of agricultural products	2.5	2nd
Livestock production	1.5	3rd
Processing of agricultural products	1.5	4th
Packaging of agricultural products	1.1	5th
Fisheries and aquaculture production	1.1	6th
Honey production	0.9	7th

Table 5. Rank–order of statement of opinion on perception of PCP about agricultural production

Statement of opinion	Mean	Rank
Agriculture is worthwhile venture hence PCP should be encouraged to participate in it.	4.1	1st
Agriculture increase the income of farmers hence participating in it is necessary.	3.8	2nd
Market values of agricultural products are commensurate with the cost of production	3.6	3rd
Most of the activities are environmental friendly	3.5	4th
Agricultural value chains required a lot of training hence discouraged participation in them.	2.8	5th
Agricultural activities required a lot of technical skill, which is very difficult to acquire.	2.6	7th
Agricultural production is a waste of time venture hence involvement is not necessary	2.3	8th
Income from other occupations is enough to spend throughout the year hence participation is a waste of time	1.9	9th

Responses from pcp on who market products that they produced in table 5 showed that only 31.4 percent of the pcp marketed their products themselves while a good number (68.6%) claimed that their parents, relatives/friends and other farmers were in charge of marketing their agricultural products for them it could be deduced from pcp responses that they were not directly in charge of what they produced which might be due to constraints such as distance from village to market, transportation problems and other related problems.

Problems encountered by pcp are shown in table 7. They are multi-faceted, which ranges from negative attitude of people to the plight of pcp and discrimination against them (mean=4.4). Other problems encountered were stated in descending order of their severity: inadequate assistive and rehabilitation appropriate for agricultural workers ranked next. This was followed by problems such as inadequate credit facilities, high cost of input, inadequate processing equipment, inadequate skill on improvement practices, inadequate information, distance to rural market, insufficient access to labour and lands. Attention needs to be focussed on all the constraints stated above for livelihood of pcp to be sustainable. The finding is in line with hanko and polman (2002) fao project reports that pcp lack access to the most basic social services, including education, health services, access to production resources and opportunities for income generation, and employment. Moreover, emmel (2002) concluded in a study carried out in puri village in india that absence of savings and credit facilities within villages, corruption and lack of faith in banking institutions by disabled people's ability deny them credit. Furthermore, unavailability of raw materials and limited marketing opportunities are challenges for disabled people in initiating their business.

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Table 7 Constraints to pcp participation in agricultural production value chains

Constraints	Mean	Rank
Discrimination against PCP by people in the society	4.4	1st
Inadequate assistive/ rehabilitation appropriate for agricultural workers	4.1	2nd
Inadequate credit facilities	3.8	3rd
High cost of input	3,5	4th
Inadequate processing equipment	3.4	5th
Inadequate skill on improvement practices	3.2	6th
Inadequate information	3.0	7th
Distance to rural market	2.9	8th
Insufficient access to labour	2.9	9th
Inadequate land	2.7	10th

Testing of Hypotheses

The correlation results show that there exists a positive and significant relationship between PCP perception of agricultural production and level of participation. This indicated that the higher the level of perception the higher the level of participation. Furthermore, there were significant relationship at $P \leq 0.5$ between participation in agricultural production and some socio-economic characteristics of the respondents such as educational status (r=0.412), extension contact (r=0.378) and income realized from agricultural production (r=0.317) while age (r-=0.008) was not significantly correlated. The implication of the finding is that high educational level, extension contact, income and good source

of information have positive effect on the participation of PCP in agricultural production.

Table 8. Correlation analysis between level of participation of pcp and personal, socio-economic characteristics variables and type of disabilities.

Variables	Correlation ®	Co-efficient of determination (r^2)
Perception of PCP about agriculture	0.547**	0.229
Level of education	0.412**	0.170
Extension contact	0.378**	0.143
Income realized from agricultural production	0.317**	0.101
Type of disabilities	-0.251**	0.063
Age	0.056	0.003

CONCLUSIONS

The overall conclusion is that majority of the physically challenged people participated in agriculture at low level, which were due to the constraints ranging from discrimination, inadequate assistive and rehabilitation appropriate for agricultural workers. Moreover, PCP had high perception towards agricultural production and other related value chains such as processing, parking and marketing. However, high level of perception of PCP about agricultural production did not translate to high level of participation which might be as result of challenges encountered by PCP in the course of their participation in agricultural production.

There is need to arouse the interest of physically challenged people through training on the relevant agricultural value chains from production to consumption by the extension agents and other relevant agencies. Government at all levels and Non-Governmental Organisations should integrate disabled people into sustainable agriculture and rural development policies and programmes meant for them. Provision of appropriate technologies and credit facilities through public and private partnership will facilitate maximum participation in agricultural production. The future implication for food security and poverty alleviation is that, if the capability of physically challenged persons is enhanced through training by extension agents and necessary materials are provided, they can produce their own healthy foods and make meaningful contribution to agriculture and community development.

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