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COMPARATIVE ANALYSIS OF THE TRAINING NEEDS AND JOB PERFORMANCE OF EXTENSION AGENTS IN ABIA AND AKWA IBOM STATES ADPs OF NIGERIA.

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ABSTRACT

The study compared the training needs and job performance of extension agents in Abia and Akwa Ibom States of Nigeria. Multi-stage random sampling technique was adopted to select 56 Extension agents from each State to give a total of 112 extension agents.Data were collected using Structured Questionnaire and analyzed with Descriptive statistics and Inferential statistics such as Z-test, Likert scale, least square, regression, correlation and t-test were used to compare socio-economic characteristics, training needs, job performance and highlight challenges limiting job performance of extension workers. Akwa Ibom State Extension agents had more training needs those in Abia State in Livestock management with mean scores of 3.07 and 3.39which no doubt affected their levels of Job performance with mean scores of 2.94 and 3.05 for AkwaIbom and Abia State extension agents respectively. Similar results were also obtained in Training Needs for Extension message Delivery where AkwaIbom and Abia States extension agents had mean scores of 4.20 and 4.09 and mean scores of 3.37 and 3.64 for level of Job performance for AkwaIbom and Abia State extension agents, respectively.The T-test showed that there was no significant difference between training needs and job performance of Abia State extension agents[p-value= 0.064 while the alpha value is 0.05] whereas there was a significant difference between the training needs and job performance of Akwa Ibom extension agents [p-value = 0.000 while alpha value is 0.05].Multiple regression result showed that marital status [t-value of 1.988 was significant at 0.10%], level of education and years of extension were positively significant at 1% and 5% respectively to job performance of Extension Agents in both States. Among the constraints identified by both Abia State and Akwa Ibom extension agents as militating against their job performance were irregular supply of OFAR and SPAT inputs. The study recommended policy measures to address the problems of extension agents such as poor input backup of extension agents as it would lead to improvement in level of workers job performance and corresponding performance in ADPs which will boost food production.

Keywords: Comparative, Training needs, job performance and extension agents

INTRODUCTION

The extension staff of Agricultural Development Programmes (ADPs) have the primary role of teaching, advising and informing many farmers quickly about improved technologies that are beneficial to them and quickly bringing feedback to research and other input agencies. They are programmed to demonstrate to the farmers' technologies that can generate quick and successful tangible and visible results as a way of persuading more farmers to adopt them and improve their productivity. Towards the realization of the first goal of the millennium development (eradication of extreme poverty and hunger) farmers need technology, which must be technically viable, economically feasible, socially acceptable and easily communicable in order to improve their skills so as to enhance their productivity. For obvious reasons less than 2% of the farmers in Nigeria go to research stations where the technologies abound. They rely on the extension agents on whose shoulders the dissemination of new technology from research is saddled with other non-farming related problems confronting the farmers and their families. (Issa F.O., Auta, S.J. and Adedokun, I.K.2011) A high level of professional competence on the part of these extension agents is therefore important in order to make an impact on the clientele.

The task of persuasion and spreading of knowledge and technology is usually that of an advisory service undertaken by extension agencies. They are the conduit pipes through which millions of individual producers are taught to improve the management of their own resources. The foundation upon which agricultural development is built are research for development and extension education. They are the essential ingredients for sustained growth in agriculture.

In Nigeria, efforts over several decades to avail farmers with beneficial research based agricultural technology do not seem to have yielded the expected impact. Most Nigeria rural farmers are still tradition bound in their production methods and therefore contrived to suffer as a result from low productivity, low income, and deprivation. Quite often the farmers are totally blamed or considered to be change resistant and therefore responsible for the country's slow agricultural and industrial take off. The technologies being introduced to the farmers are viewed as being taken for granted so are the extension agents who are the promoters of the technologies. (Farouk, U.B, Okpokpo, S.S., 1997)

Owing to the functions of these extension workers, they need to be adequately trained to be able to render first grade quality service to the farmers. In this case, programmes are designed in such a way as to provide for wide/ better use of the extension staff in terms of performance. However, no programme or plan either by government or any other agency for rural development can be optimistic of success if it lacks extension officials who are committed and hardworking. If extension staff are not competent, extension programmes (new technologies) no matter how lofty, technically, or economically viable cannot achieve more than partial success.

These desirable skills and competences are acquired through training. Competence refers to the ability of the extension staff to undertake extension duties effectively utilizing human capabilities acquired through training, experience, and practice (Jibowo 1987, Gwary, 1998)

Objectives of the Study

i. compare the training needs and the job performance of the Extension Agents in Abia State and Akwa Ibom State ADPs, respectively.

ii. compare the training needs of extension agents in Abia State and Akwa Ibom State ADPs.
iii. compare the job performance of extension agents in Abia State and AkwaIbom State ADPs.
iv. compare the training needs and job performance of extension agents in Abia State and AkwaIbom State ADPs.

Hypothesis of the Study

Ho^1 There is no significant relationship between the training needs and job performance of extension agents in Abia and Akwa Ibom States ADPs.

Ho^2 There is no significant relationship between the socio- economic characteristics and job performance of extension agents in each state ADP.

METHODOLOGY

Study Area

The study was carried out in Abia and Akwa-Ibom States of Nigeria.

Population of the Study

The population of the study include all the extension agents (EAs) in Abia and Akwa Ibom states Agricultural Development Programmes (ADPs). Willmake up the population of the study. Akwa-Ibom state has 183 EAs, while Abia state has 274 EAs, (Abia State ADP Extension Services Report 1999; and Akwa-Ibom Extension Services Report 1999).

Sampling Procedure

A multi-stage random sampling technique was used to select the sample size. In the first stage 2 agricultural zones were randomly selected from the list of zones that make up each state ADP under study. Secondly, four circles were randomly selected from the list of circles that make up each selected block. The Extension Agents (EAs) whose circles were selected served as respondents. Thus, in each state 56 EAs were randomly selected for the study. In all, 112 EAs made up the sample size for the study.

Data Collection Procedure

Questionnaire was used to collect data from the EAs and their supervisors. Secondary data were collected from related literatures, such as agricultural journals and books.

Measurement of Variables

The socioeconomic characteristics of extension agents in Abia and Akwa Ibom States Agricultural Development Programmes was analyzed using simple statistics like frequency distribution, percentages and means. The socio-economic characteristic variables include the following,

X_1: Age (in years)
X_2: Sex (Male 1, Female 0)
X_3: Marital status (married 1single 0,)
X_4: Level of formal Education (in years) (primary education, Secondary education, OND, NCE, HND, B.Sc, M.Sc, Ph.D)
X_5: Extension experience (in years)
X_6: Household size (number of persons in each household)

The variables were measured on a five points likert-type scale weighted as follows: very much (5 points) much (4 points) little (3 points), very little (2 points) and never (1 point). The extension workers gave answers based on how much training they received on each of those practices.

Decision rule for training needs
The responses were summed to get the mean scores
1.00 – 2.59 = disagree they have need for training.
3.00 – 5.00 = agree they have need for training. The grand mean score was used in deciding whether there is training need or not for extension workers in each area of agriculture.

The same variables for training needs were also used as variables or parameters for determining job performance of the extension agents in both states. The variables were measured on a five point likert scale: very high performance (5 points), high performance (4 points) average performance (3 points) low performance (2 points) and very low performance (1 point). The block extension supervisors (BESs) assessed the performances of Extension Agents (EAs) in their blocks using the variables listed below. The responses were summed to obtain the mean scores.

Decision rule for level of job performance.
1.00 - 1.59 – very low performance,2.00 - 2.59 – low performances, 3.00 - average performance, 4.00 - 4.49 – high performance, 5.00 – very high performance
The job performance index was obtained by aggregating the responses for each of the variables or parameters used to assess the job performance. Each response was assigned value ranging from 1-5 the grades that were obtained for all the responses were summed up and divided by total expected score (TES).
That was then multiplied by 100 to convert job performance index to percent

Job performance index (JPI) =

$$\sum_{i=1}^{n} \frac{TAS}{TES} \times 100$$

Total expected sum (TES)
Total Actual sum (TAS)
n = Sample size

Note: The results obtained from the tables below were used in the a above calculations
The models for Multiple Regression Analysis of relationship between Job performance and Socio-economic Characteristics of Extension Agents:

$Y = a + b_1 x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + b_6x_6 + b_7x_7 + e$ (linear functional form)
$InY = a + b_1 x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + b_6x_6 + b_7x_7 + e$ (exponential form)
$InY = a + Inb_1 x_1 + Inb_2x_2 + Inb_3x_3 + Inb_4x_4 + Inb_5x_5 + Inb_6x_6 + Inb_7x_7 + e$ (double log functional form)
$Y = a + Inb_1 x_1 + Inb_2x_2 + Inb_3x_3 + Inb_4x_4 + Inb_5x_5 + Inb_6x_6 + Inb_7x_7 + e$ (semi-log functional form)

Where,
Y = Job performance of extension workers
In = Log

a = Constant
b = Slope
X_1 = Age (in years)
X_2 = Sex (male 1, female 0)
X_3 = Marital status (married 1, single 0)
X_4: = Level of formal Education (in years)
X_5: = Extension experience (in years)
X_6: = Workers income per annum (in naira)
X_7 = Household size (number of persons in each household)
ei = error term

RESULTS AND DISCUSSION

Table 1: Training Needs in Livestock Management

		Abia State		**Akwa Ibom State**	
		$\overline{X}$	**D**	**$\overline{X}$**	**D**
1.	Construction of livestock pens	3.70	A	3.79	A
2.	Selection of animal foundation stock	3.45	A	3.38	A
3.	Diagnosis of sick animals	2.89	DA	3.55	A
4.	Drug selection and administration	2.61	DA	3.27	A
5.	Feed formulation for small ruminants	2.79	DA	3.32	A
6.	Feed formulation for poultry	3.41	A	3.21	A
7.	Feed formulation for monogastrics	2.83	DA	3.21	A
8.	Identification of livestock diseases	3.14	A	3.32	A
9.	Proffering solution to livestock diseases	2.96	DA	3.43	A
10.	Control of ecto parasites	2.98	DA	3.39	A
11	Control of endo parasites	3.05	A	3.39	A
Total		**33.81**		**37.26**	
Grand mean		**3.07**	**A**	**3.39**	**A**

Key: $\overline{X}$ = Mean Score, D = Decision Rule, A = Agree, DA = Disagree

Table 1 showed the training needs of Extension Agents in livestock management both in Abia and Akwa Ibom States. The mean scores showed that even though Abia State Extension Agents had Training Needs in Livestock management Akwa Ibom Extension Agents had more Training Needs as shown in mean scores of (3.07 and 3.39) for Abia State and Akwa Ibom State, respectively.

Table 2 showed that Akwa Ibom State extension agents had more Training Needs in extension message delivery than Abia State extension agents with mean scores of 4.20 and 4.09 for Akwa Ibom and Abia State extension agents respectively.

Table 2: Training Needs in Extension Message Delivery Variables

S/N	Extension message delivery	Abia State		Akwa Ibom State	
		$\bar{X}$	D	$\bar{X}$	D
1	Method/result demonstration	4.13	A	4.23	A
2.	Conduction of field days	4.11	A	4.20	A
3.	Establishment of On Farm Applied Research trials	3.88	A	4.13	A
4.	Simple / statistical analysis	3.63	A	3.86	A
5.	Ability to speak local/native language	3.89	A	4.02	A
6.	Ability to speak English fluently	4.02	A	4.25	A
7.	Reporting farming/field problems	4.21	A	4.34	A
8.	Formation/organizing farmers group	4.12	A	4.34	A
9.	Establishment of small Plot Adaption technique (SPAT)	4.61	A	4.43	A
10.	Advisory visit to farmers	4.38	A	4.29	A
11.	Identification of new farmers	4.25	A	4.25	A
12.	Keeping of farm diary	3.96	A	4.20	A
13.	Compilation of farmers registers	3.75	A	4.12	A
14.	Coordination of farmers meeting	4.16	A	4.04	A
15.	Registration of farmers group.	3.86	A	4.05	A
16.	Participation at FNT	4.59	A	4.45	A
	Total Mean	**65.55**	**Total**	**67.20**	
	Mean Score	**4.09**	**A**	**4.20**	**A**

Key: $\bar{x}$ = Mean Score, D = Decision Rule, A = Agree DA = Disagree

Table 3: Z-test result of no difference between the Training Needs and Job Performance Extension Agents

Variables	Individual mean	Pooled mean	z-calculated	z-tabulated	Level of significance.
Training in livestock management for Extension Agents in Abia State	3.0736			1.658	5%
Training in livestock management for Extension agents in Akwa Ibom State	3.3873	0.31364	3.668	1.658	5%

Table 4: Job Performance in Livestock Management

		Abia State	Akwa Ibom State
	Job Performance in livestock Management	$\overline{x}$	$\overline{x}$
1.	Construction of livestock pens	3.61	3.04
2.	Selection of animal foundation stock	2.32	3.00
3.	Diagnosis of sick animals	2.86	4.11
4.	Drug selection and administration	3.57	3.75
5.	Feed formulation for small ruminants	2.50	2.86
6.	Feed formulation for poultry	2.84	3.00
7.	Feed formulation for monogastrics	3.34	2.14
8.	Identification of livestock diseases	2.50	2.48
9.	Proffering solution to livestock diseases	3.36	3.04
10.	Control of ecto parasites	3.21	2.30
11.	Control of endo parasites	3.39	2.68
Total mean		**33.50**	**32.39**
Level of job performance		**3.05**	**2.94**

Table 5. shows data on the means of job performance variables for EAs in Abia State and Akwa Ibom State ADPs. The grand means for job performance of EAs in Abia State ADP was 33.50 and their job performance level was 3.05 while the grand mean score for job performance of EAs in Akwa Ibom State ADP was 32.39 with a job performance level of 2.94. These findings implied that the job performance of EAs in Abia State ADP was rated with average job performance while EAs in Akwa Ibom State ADP was rated with low job performance

Table 5: Level of Job Performance in Extension Message Delivery

S/N	Variables	Abia State EAs $\overline{x}$	Akwa Ibom State EAs $\overline{x}$
1.	Method/result demonstration	3.91	3.21
2.	Conduction of field days	4.04	3.61
3.	Establishment of On Farm Applied Research trials	4.25	3.04
4.	Simple / statistical analysis	3.61	3.61
5.	Ability to speak local/native language	3.73	3.05
6.	Ability to speak English fluently	3.79	3.54
7.	Reporting farming/field problems	4.46	3.41
8.	Formation/organizing farmers group	3.21	3.39
9.	Establishment of small Plot Adaption technique (SPAT)	3.75	3.64
10.	Advisory visit to farmers	2.93	3.96
11.	Identification of new farmers	2.86	3.0
12.	Keeping of farm diary	3.04	3.04
13	Compilation of farmers registers	3.75	3.36
14.	Coordination of farmers meeting	3.79	3.43
15.	Registration of farmers group.	3.57	3.93
16.	Participation at FNT/BM	3.61	2.68
Total mean		**58.29**	**53.91**
Mean scores		**3.64**	**3.37**

Table 6 shows the data on the means of job performance variables for EAs in Abia State and Akwa Ibom State ADPs. The grand mean score for the job performance of EAs in Abia State was 58.29 and the job performance level was 3.64 which means that they were rated above average. The grand mean for the job performance of EAs in Akwa Ibom State was 53.91 and the job performance level was 3.37 which indicates that the job performance of Akwa Ibom EAs was rated on average too.

Table 6: Z-test result showing the comparison between the training needs and job performance of extension Agents in Abia and Akwa Ibom States.

Parameters	Training & performance	Mean ± S.D.	t-value	p-value	α – value	Remarks
Livestock management	Abia Training Needs	3.98±0.08	2.261	0.064	0.05	Not Significant
	Abia Job Performance	8.50±0.07				
	Akwa-ibomTraining Needs	3.89±0.04	9.738	0.000	0.05	Significant
	Akwa-IbomJob Performance	8.26±0.06				
Extension message delivery	Akwa-IbomTraining Needs	3.89±0.04	2.570	0.039	0.05	Significant
	Abia Job Performance	8.50±0.07				

Note: Confidence level = 95%

Table 7 shows that:

1. The relationship between the training needs and job performance of ADP extension agents in Abia State in livestock management was not significant at p-value = 0.064 while the alpha value was 0.05. The p-value of 0.064 is greater than the significant level of 0.05. Therefore, the null hypothesis of no significant difference between the Abia State extension agents training Needs and the job performance (equal mean) was accepted.
2. The relationship between the training needs and job performance of ADP Extension agents in Akwa Ibom State is significant at p-value = 0.000 while the alpha value was 0.05. Since the p-value was less than the significant level therefore the null hypothesis of no significant relationship between the training needs and job performance of the extension agents is rejected and the alternative hypothesis was accepted.
3. The relationship between the training needs of Abia State ADP extension agents and job performance of Akwa Ibom State ADP extension agents is significant at p-value = 0.000 while the alpha value was 0.05. Therefore, the null hypothesis of no significant difference between the training needs and job performance of Abia State and Akwa Ibom State ADP extension agents respectively was rejected.
4. The relationship between the training needs of Abia State ADP extension agents and job performance of Akwa Ibom State ADP extension agents is significant at p-value = 0.039 while the alpha value is 0.05. Therefore, the null hypothesis of no significant relationship between the training needs and job performance of extension agents in Abia and Akwa Ibom States was rejected.

Table 7: Multiple Regression Analysis Showing Relationship between Job Performance and Socioeconomic Characteristics of Extension Agent

Variables	Linear	Exponential	Semi log	Double log
Constant	15.282	4.187	54.060	3.985
	(0.764)	(11.785)***	(0.310)	(1.621)**
Age	0.420	0.000	41.541	0.611
	(0.233)	(0.033)	(1159)	(1.210)
Sex	0.220	0.054	2.906	0.038
	(0.100)	(1.359)***	(0.209)	(0.192)
Marital status	7.003	0.102	22.366	0.336
	(1.988)*	(1.553)	(1.025)	(1.093)
Formal Education	4.210	0.011	54.303	0.782
	(3.337)***	(0.531)	(0.738)	(0.752)
Extension Experience	0.754	0.004	2.693	0.038
	(2.075)**	(0.532)	(0.241)	(0.242)
Household size	0.658	0.007	11.900	0.163
	(0.831)	(0.477)	(0.895)	(0.869)
F-ratios	6.001***	0.933	0.431	0.468
R^2	63.70	21.10	34.10	36.00
R^{-2}	53.30	-1.50	-4.50	-4.09

***Significant at 1%, ** Significant at 5%,* Significant at 10%

Table 8 shows the relationship between job performance of EAs and their socio-economic characteristics, namely age, sex, marital status, formal education, extension experience and household size. Based on the appropriateness of signs, number of significant variables and magnitude of R^2, (coefficient of determination) the linear functional form was chosen as lead equation. From table 4.27, 63.70% of variation in the job performance of Extension Agents could be explained by the variables in the equation. Three variables (marital status, formal education and extension experience) were significantly related to job performance at 10%, 1% and 5% levels respectively as shown in the lead equation.

Marital status was positively related to job performance of EAs with t-value of 1.988 which was significant at 0.10% level. This implies that marital status of respondent increases their job performance and vice versa. Level of formal education of extension Agent (EAs) was positively significant at 1% level of probability which implies that the higher the level of formal education received by EAs the higher their job performance. The finding agrees with Ekumankama and Anyanwu (2007) that level of formal education was positively and significantly related with job performance of EAs implying that the higher the level of formal education received by the EAs the more they made regular and timely visits to farmers and thus the higher their job performance. Also it agrees with Asiabaka (1992) that level of education of women extension agents was positively related to their job performance

Extension experience of EAs was also positively significant at 5% the indication is that the higher the extension experience of EAs the higher their job performance. The result is in agreement with Issa (2008) who found a positive relationship between the village extension agents years of experience and their job performance. The findings also agrees with Asiabaka (1992) who noted that there exists a positive relationship with the extension personnel years of experience in extension work and her job performance. The implication of this result is that the more the number of years put on the job the higher the performance of workers.

Other socio-economic variables like age, sex and household size were not significantly related to the workers job performance. The alternative hypothesis of a relationship between socio economic characteristics and job performance of extension workers was therefore accepted.

CONCLUSION AND RECOMMENDATIONS

The Study revealed that Abia State and Akwa Ibom State ADPs extension agents have some similarities in their socio-economic characteristics, training needs and job performance. The result showed that there was some differences between the training needs and job performance of the field extension workers in Abia State and Akwa Ibom State ADPs. More so, levels of formal education, extension experience were positively related to job performance of EAs in Abia State and Akwa Ibom State ADPs. Poor input backup and irregular supply ofsmall Plot Adaptive technology(SPAT) inputs were perceived as major problems for EAs, in both Abia State and Akwa Ibom State ADPs. The study therefore called for policies to employ extension workers with high level of formal education and experience to remain in extension service through motivation for higher job performance in both States.

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