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Socio-economic Characteristics of ATMA (Agricultural Technology Management Agency) Extension Functionaries in Assam and Their Relationship to Their Training Needs

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Authors' contributions

This work was carried out in collaboration between both authors. Author PD under the guidance of author SB designed the study, performed the research work, done statistical analysis, wrote the protocol, managed the literature searches and also wrote the first draft of the manuscript. Both authors managed the analyses of the study. Both authors read and approved the final manuscript.

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ABSTRACT

The most prominent step in improving the skills of extension functionaries is to analyse their training needs. The ATMA (Agricultural Technology Management Agency) Extension Functionaries are always engaged in effective transfer of improved agricultural technologies to service agencies for increasing agricultural production. They act as the nervous system in the process of communicating the latest agricultural knowledge from lab to land. So, it is of utmost importance to update their knowledge and skill periodically according to their needs through systematic and continuous in-service training programme. The aim of the present study was to find out the socio-economic characteristics of ATMA extension functionaries and determine the relationship between those

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socio-economic characteristics with their training needs. The study revealed that age, educational qualification, service experience, length of service in the present place of posting and training exposure had a negative and significant relationship with training needs of the ATMA extension functionaries.

Keywords: ATMA extension functionaries; socio-economic characteristics; training needs; in service training programme.

1. INTRODUCTION

Training is "systematized tailor made programme to suit the needs of a particular group for developing certain attitudes, actions, skills and abilities in individuals irrespective of their functional levels" [1]. It is thus an essential affair for increasing the potential of individuals so as to boost their job performance. Hence, training need analysis is necessary before conducting any training programme. It helps to meet the expectations of extension functionaries [2]. Training needs for extension personnel can be defined as the gap between job requirement and job performance [3,4]. The training needs of extension functionaries change from time to time due to rapid changes in technology and information delivery system. Therefore, it is required to find out the needs of individual trainee to form a breed of professional know-how, which could be able to carry out the set of allocated jobs in an organization.

ATMA extension functionaries help in circulating improved agricultural technologies to the farmers [5]. To increase agricultural production, it is not only necessary to accelerate improved technologies appropriate to the farm situation, but there must also be systematic efforts to transfer the relevant technologies from the research system to the ultimate users, the farmers. Thus, extension functionaries should be updated with latest technologies so as to improve their knowledge and skill regarding transfer of technologies, which is possible through periodical pre-in-service training programmes [6].

2. METHODOLOGY

2.1 Research Methods

ATMA extension functionaries of four districts of Assam viz. Jorhat, Dibrugarh, Golaghat and Sivasagar were selected as respondents purposively for the study. Since there were no ATMA offices at sub-division level, the blocks were directly selected from the district. From the 4 selected districts, a total numbers of 32 blocks has been surveyed for collection of data. Total 120 respondents (30 from each district) were selected through proportionate random sampling method. Two sets of variables viz. independent variables and dependent variables were selected in the present study. Age, educational qualification, service experience, length of service in present place of posting, job satisfaction, sources of information, training exposure, decision making pattern and motivational profile were the independent variables and training needs of ATMA extension functionaries were the dependent variables. The data collection was carried out both through mail and personal interview method with a pre-tested questionnaire.

2.2 Methods of Analysis

The frequency, percentage, mean and standard deviation were used in analysing and interpreting the data. In order to find out the training needs of ATMA extension functionaries, the training need index (TNI) of the respondents were calculated [7]. The TNI for each item was calculated using the formula:

$$\text{TNI of an item} = \frac{\text{Sum of scores obtained for an item by all the respondents}}{\text{Maximum possible score for the item}} \text{ X } 100$$

The Pearson's Product Moment Coefficient of Correlation analysis was carried out to find out the relationship between dependent and independent variables.

3. RESULTS AND DISCUSSION

3.1 Socio-economic characteristics of ATMA Extension Functionaries

It is evident from Table 1 that 54.17 per cent of the respondents were in age group of 36 years and less than that and around 65 per cent of the respondents' possessed graduate degree.

Table 1. Socio-economic characteristics of ATMA extension functionaries

Sl. no	Independent variable	Category	Frequency	Percentage
1	Age	Young(35years or below)	65	54.17
		Lower middle(36 -47 years)	28	23.33
		Upper middle(48 years and above)	27	22.50
2	Educational qualification	Graduate	78	65.00
		Post Graduate	39	32.50
		Doctorate	3	2.50
3	Service experience	Below 10 years	2	1.67
		10 to 20 years	75	62.50
		20 years or above	43	35.83
4	Length of service in present place of posting	Below 9 years	74	61.67
		9 to 17 years	21	17.50
		18 years or above	25	20.83
5	Training exposure	None	8	6.67
		One	16	13.33
		Two	31	25.83
		Three	9	7.50
		Four	4	3.33
		More than four training programmes	52	43.33
6	Motivational profile	Low(below 41.08)	62	51.67
		Medium(41.08 to 51.14)	58	48.33
		High(above 51.14)	0	0
7	Decision making pattern	Satisfactory(score above 30)	120	100
		Unsatisfactory(score 36 or below)	0	0
8	Job Satisfaction	Highly Satisfied	13	10.83
		Satisfied	107	89.17
		Unsatisfied	0	0
9	Attitude towards agricultural profession	Favourable(score above 60)	47	39.17
		Unfavourable(score 60 or below)	73	60.83
10	Sources of information	Satisfactory(score above 15)	116	96.67
		Unsatisfactory(score 15 or below)	4	3.33

Educated and young people entering the ATMA are an encouraging trend. Majority (51.21%) of the extension personnel were in age group of 35 years [8,9]. 62.50 per cent of the respondents had been found to have more than 10 years of service experience [10]. As majority of the respondents were in the younger category of age group, they also belonged to less than 9 years of category of service length in the present place of posting. It was well understood that majority of functionaries were professionally trained but it was not clear whether it was need based enough to help them in performing their jobs better [11]. More than half of the respondents had low motivational profile which may be due to lack of job expertise and accountability [12]. Cent per cent of the respondents have satisfactory decision making pattern. Majority of the respondents (89.17%) were satisfied with their job [13]. As far as use of information source is concerned, senior officer and departmental circular occupied the first rank from individual, groups and mass media sources of information respectively [13]. The study further revealed that majority of the respondents (60.83%) has unfavourable attitude toward agricultural profession.

3.2 Extent of Training Needs of ATMA Extension Functionaries

There were eight broad training needs areas in the structured schedule viz., Soil Science, Agronomy, Horticulture, Entomology, Plant Pathology, Agricultural Extension, Agricultural Economics and Agricultural Engineering. They ranked ‘soil testing techniques and method of soil sample collection’ as the most needed training area with TNI 73.06. It is evident from the training needs areas of Agronomy, that the functionaries perceived ‘varieties for different cropping pattern and situations’ as most needed training area.

Table 2. Co-efficient of correlation of extent of training needs with socio-personal characteristics of the functionaries

Sl. no	Variables	r value	t value
1	Age	-0.095*	2.36
2	Educational qualification	-0.13*	4.57
3	Service experience	-0.54*	5.78
4	Length of service in present place of posting	-0.37*	3.59
5	Training exposure	-0.16*	4.62
6	Motivational profile	0.11*	3.84
7	Decision making pattern	0.16*	9.68
8	Job satisfaction	-0.16ns	1.11
9	Attitude towards agricultural profession	0.28ns	1.02
10	Sources of information	-0.08ns	1.64

**= Significant at 0.05 level of probability, Ns= Not significant, r= Co-efficient of correlation, t = Calculated value*

'Improved methods of cultivation of coconut and arecanut' are ranked first as most needed training area by the respondents in case of Horticulture. The perceived training needs of ATMA Extension Functionaries in the field of Entomology were 'integrated pest management and symptoms, spread and control of important insect pests of rice'. The most needed training area as perceived by the respondents from Plant Pathology was 'plant protection in organic farming'. The most important training needs area from Agricultural Extension, Agricultural Engineering and Agricultural Economics were 'new schemes of Govt. of India in agricultural development', 'plant protection equipments-their care, maintenance and minor repairing' and 'marketing techniques of agricultural produce' respectively.

3.3 Relationship of Different Characteristics of ATMA Extension Functionaries with Their Training Needs

It can be inferred from Table 2 above that age (2.36), educational qualification (4.57), service experience (5.78), length of service in present place of posting (3.59), training exposure (4.62) were significantly and negatively correlated with the training needs at 0.05 level of probability. It could be explained that more trainings are needed for young extension functionaries. Therefore, it is clear that the extension functionaries who have more experience in agricultural job need less training. On the other hand, the less educated extension functionaries needed more training to be experienced. Again, the extension functionaries who were newly recruited needed more training. Training for training sake may not be useful but they need to be need based and considering field problems of farmers. Thus, the extension functionaries who have attended less training according to their needs, they needed more training [14]. Again, the relationship between decision making patterns and extent of training needs was significant and positive. It indicates that to maintain favourable decision making pattern they need more training [7,13,15].

4. CONCLUSION

The first and foremost step in improving the skills of extension functionaries is to assess their training needs. It is of utmost importance to conduct need based trainings on new agricultural technologies to update knowledge and skills of ATMA extension functionaries. The present study reveals that age, educational qualification, service experience, length of service in present place of posting, training exposure and decision making pattern were some of the factors to be considered before conducting any training programme for ATMA extension functionaries.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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