DEVELOPMENT OF SCALE TO MEASURE ATTITUDE OF ATMA BENEFICIARY FARMERS TOWARD ATMA

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ABSTRACT

The study was conducted to develop and standardize a scale to measure attitude of ATMA beneficiary farmers toward ATMA. From the available methods to develop attitude scale, 'Scale product method' which combines the Thurstone's technique of equal appearing interval scale (1928) for selection of items and Likert's technique of summated rating (1932) for ascertaining the response on the scale as proposed by Eysenck and Crown (1949) was used. Total 34 statements were selected for judgment. A team of 50 judges was appealed to give the score for each statement on five continuum. Based on the Scale (median) and Q values, twenty two statements were finally selected to constitute the scale to measure attitude of ATMA beneficiary farmers toward ATMA.

Keywords: beneficiary farmers, scale, ATMA

INTRODUCTION

The National Agriculture Technology Project (NATP) is a bold initiative of the Government of India to reutilize Indian agriculture and Agriculture Technology Management Agency (ATMA) is the part of NATP. The Indian Council of Agricultural Research (ICAR) and Ministry of Agriculture (MOA) have jointly implemented the ATMA project in the country. Since the pilot study in 28 districts of India from 1998 to 2003, ATMA has been scaled up to all 591 development districts of India over the five years from 2005 to 2010. In Gujarat State, all the districts have been selected for ATMA project as a part of the Innovations in Technology Dissemination (ITD) component of the project. Although, ATMA has been highlighted as an innovative example of agricultural extension, it is beginning to receive criticism due to implementation challenges. ATMA implementation suffers from continued public-sector organisational performance issues like continued low number of personnel, weak research-extension links and poor organisational and human resource capacity. The performance of ATMA is still restrained by the pre-existing organisational structure, culture, and capacity of the public-sector extension system, which varies from state to state and district to district. ATMA is working with the farmers who are registered under Farmers Interest Groups (FIGs) with ATMA. These farmers are involved in many farmers oriented activities conducted by ATMA. Thus, it was felt necessary to develop a scale to measure attitude of ATMA beneficiary farmers toward ATMA.

OBJECTIVE

To develop scale to measure attitude of ATMA beneficiary farmers toward ATMA

METHODOLOGY

To measure the degree of positive or negative feelings of the farmers toward ATMA, a scale was developed by adopting systematic methodology. The procedure followed to develop attitude scale is explained below. Among the various techniques available, researcher selected 'Scale product method' which combines the Thurstone's technique of equal appearing interval scale (1928) for selection of items and Likert's technique of summated rating (1932) for ascertaining the response on the scale as proposed by Eysenck and Crown (1949).

Statement collection

At initial stage of developing the scale, large number statements reflecting feelings of the ATMA beneficiary farmers toward ATMA were collected from relevant literature, discussion with extension educationists and ATMA personnel. The collected statements were edited according to the criteria laid down by Edwards (1957). Finally, 34 statements were selected as they were found to be non-ambiguous and non-factual.

Statement analysis

In order to judge the degree of 'Unfavourableness' to 'Favourableness' of each statement on the five point equal appearing interval continuum, a panel of judges was selected. Fifty slips of the selected statements were handed over to the experts working in Department of Extension Education, Extension Education Institute, ATMA Personnel, Directorate of Extension Education and Department of Agriculture and co-operation. The judges were requested to judge each statement in terms of their most agreement or most disagreement with the statements on five equal appearing interval continuums. All slips handed over to the experts got returned after duly recording their judgments and were considered for the analysis.

Determination of scale and 'Q' values

Based on responses of the judges, frequency distribution in five continuums was prepared. On the basis of judgment, the Median value of distribution and 'Q', Q3 and Q1 value for 34 statements were worked out. The inter-quartile range(Q= Q3-Q1) for each statement was exercised for determination of vagueness involved in the statement. Only those statements as item were selected, whose median (scale) value were greater than Q value. On the other hand, when a few items had the same scale value, item having lowest Q value were selected. Based on this, 22 statements were finally selected to constitute attitude scale. The selected 22 statements for final format of the attitude scale were randomly arranged to avoid response bias. The final scale is presented in Table 1.

Table 1 : Final selected statements to measure attitude of the ATMA beneficiary farmers towards ATMA

Sr. No.	Statements	SA	A	UD	DA	SDA
1	ATMA enables farmers to adopt improved agricultural technology with available resources. (+ve)					
2.	ATMA is not effective medium for increasing agricultural production. (-ve)					
3.	ATMA helps to increase annual income & profit of the farmers. (+ve)					
4.	ATMA neglect the small and medium farmers. (-ve)					
5.	ATMA increases the affection and credibility of the officers and staff of development department. (+ve)					
6.	ATMA enables farmers to increase knowledge regarding improved scientific technology. (+ve)					
7.	Affiliation with ATMA increases the economic standard of the farmers. (+ve)					
8.	ATMA plays a significant role in increasing per unit production of crops grown by farmers. (+ve)					
9.	Various combined activities carried out by development departments of government through ATMA confuse the beneficiaries instead of helping them. (-ve)					
10.	ATMA helps the farmers in procurement of improved seeds, fertilizers and pesticides in time. (+ve)					
11.	Scientists and functionaries work together to plan and implement ATMA activities in the village. (+ve)					
12.	ATMA put great impact on knowledge and adoption of agricultural technology by the farmers. (+ve)					
13.	ATMA is only for progressive farmers. (-ve)					
14.	ATMA is concentrated more on supply of inputs rather than education and training. (-ve)					
15.	Money spent on ATMA is just a wastage. (-ve)					
16.	ATMA do not establish better rapport between the farmers and the officials. (-ve)					
17.	ATMA motivates the farmers to come forward for participation in community affairs. (+ve)					
18.	Adoption of modern agricultural practices is increased due to activities of ATMA. (+ve)					
19.	ATMA is one of the steps towards innovation technology dissemination. (+ve)					
20.	ATMA help in developing confidence among the farmers in their works. (+ve)					
21.	ATMA do not provide need based advisory services to the farmers. (+ve)					
22.	ATMA creates interest among the farmers to participate in other extension activities. (+ve)					

SA: Strongly agree **A:** Agree **UD:** Undecided **DA:** Disagree **SDA:** Strongly disagree

Reliability of the scale

A scale is reliable when it consistently produces the same results if it applies to the same sample repeatedly. In the present study, due to limited time and resources available to the researcher, only split-half method of testing reliability was used.

The 22 statements were divided into two halves with 11 odd numbered in one half and 11 even-numbered statements in the other. These two sets were administered to 20 ATMA beneficiaries farmers. Each of the two sets of statements was treated as a separate scale and then these two sub-scales were correlated. The co-efficient of reliability was calculated by the Rulon's formula (Guilford, 1954), which was 0.823 and significant at 0.01 level of significance. Thus, the scale developed was found highly reliable.

Validity of the scale

The validity of the scale was examined for content validity by determining how well content was selected by discussing it with 20 specialists of extension and academicians of state agricultural university. Thus, the present scale was also satisfied the content validity.

Administration of the scale (Scoring technique)

The selected 22 statements for the final format of the attitude scale were randomly arranged to avoid response biases, which might contribute to low reliability and detraction from validity of the scale. Out of 22 selected statements, fifteen statements had the indicators of the favorable attitude and seven had unfavorable attitude. Against these 22 statements, there were five columns representing five points continuum of agreement and disagreement to the statements as followed by Likert (1932) in his summated rating technique of attitude measurement. The five points on continuum were; strongly agree, agree, undecided, disagree and strongly disagree

with respective weights of 5, 4, 3, 2 and 1 for the favorable statements and with the respective weights of 1, 2, 3, 4 and 5 for the unfavorable statements. The weights of Likert's technique and the scale value of Thurston's technique were combined in the form of a product and the total score for an individual was the sum of the product.

CONCLUSION

There are various methods available to construct attitude scale. From the various methods, Scale product method' which combines the Thurstone's technique of equal appearing interval scale (1928) for selection of items and Likert's technique of summated rating (1932) for ascertaining the response on the scale as proposed by Eysenck and Crown (1949) was used to measure attitude of ATMA beneficiary farmers toward ATMA.

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