

Attitude scale construction to measure the attitude of extension personnel towards farm women

■ Poree Saikia*, Manju Dutta Das and Manoshi Baruah Deka

Department of Extension and Communication Management, College of Home Science, Assam Agricultural University, Jorhat (Assam) India

(Email : poreesaikia@gmail.com, ppp.aau@gmail.com and manoshibdeka@gmail.com)

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*Author for correspondence

ABSTRACT

A scale was developed to measure the attitude of the extension personnel towards farm women based on Likert's technique. A list of 60 statements indicating the positive or negative attitude was drafted suited to the area of study. The statements were edited in the light of 14 criteria enunciated by Edwards (1969). The score of each individual item on the scale was calculated by summing up the weights of the individual items. On the basis of total score, 25 per cent of the subjects with the highest total score and also 25 per cent of the subjects with lowest total scores were taken assuming that these groups provided criterion groups in terms of high and low evaluated by the individual statement. In order to find out the discriminating index for each item, 't' value was calculated using the formula and procedure given by Edwards (1969). The scale so developed finally consisted of 10 statements (5 positive and 5 negative) whose 't' values were found to be significant at one per cent level of probability.

INTRODUCTION

Women are the backbone of agricultural workforce also and make essential contributions to the agricultural and rural economies in all developing countries. Women are usually employed in most difficult field operations like sowing, transplanting, weeding, intercultural operations, harvesting, threshing and agro-processing. It can be seen that mechanization and modernization of agriculture have

led to increased agricultural productivity and decreased drudgery, but mechanization has occurred for activities usually carried out by men, women continue to toil in labour intensive chores. Unfortunately the contribution of women in agricultural production has not been given its due status due to lack of interest, information and equally by neglect. Consequently women are denied their rightful status as active producers in agriculture and are thus, unable to access resources and services. To

increase productivity at a faster rate and to enhance women's standard of life, women in agricultural sector have to be empowered completely. This can be achieved by enhancing their awareness, knowledge, skills and efficiency to use technology. This calls for, first and foremost due recognition of the role and contribution of farm women followed by sensitization of extension services towards their specific problems, capacity and capability leading to their total integration in agriculture.

Agriculture extension is one of such development efforts taken up by government and non-government agencies that aim at reaching farming community for bringing about an increased level of total as well as per unit agricultural production. These efforts include bringing about a positive change in knowledge, attitude and skills of all those engaged in farming related operations by means of providing training and technical advice and also assisting farmers in taking decisions regarding adoption and integration of new research results/extension message to farm conditions. Importantly, the clientele of such programme and efforts is inclusive of both farmers as well as farm women. However, extension personnel of these development activities/programmes often consider 'men as farmers' and women as 'farmer's wives' thereby systematically marginalizing and underestimating women's productive role in agriculture as supportive rather than productive one.

Attitude of extension functionaries and project managers towards the clientele is one of the major factors affecting their communication behaviour. In fact positive and favourable attitude of the functionaries is quite essential for successful delivery of agricultural information and technology to the clientele. And without this, there is every chance of distortions in message delivery system. The present workforce in the extension system is dominated by men. Hence, it is feared that the system lacks the kind of positive attitude towards that is urgently required. Thus, it was, therefore, thought that there is necessary to develop a scale to measure the attitude of extension personnel towards farm women.

MATERIAL AND METHODS

For construction of the scale 60 agriculture extension personnel who were non-sample respondent from Jorhat district were taken. Further for collection of data 125 Government officials having complete knowledge on the

operation of the agricultural extension service namely Village Level Extension Workers (VLEW), Agriculture Development Officers (ADO), Senior Agriculture Development Officer (SADO), Sub-divisional Agricultural Officer (SDAO), District Agriculture Officers (DAO), Administrative Officer, Director of Directorate of Agriculture, Additional Director of Extension, Deputy Director of Planning, Joint Director of Statistics, Govt. of Assam were randomly selected from three agro-climatic zones of Assam state in India: Upper Brahmaputra Valley Zone, Central Brahmaputra Valley Zone and North Bank Plain Zone

Construction of scale:

The procedure that has been employed for constructing the scale through this study was Likert's (1932) Technique of Summated Rating scale. For scale construction statements were collected from relevant literature and discussion with agriculture extension officers. A total of sixty statements were obtained from these sources.

These statements were then edited as per the 14 criteria enunciated by Edwards (1969). These criteria were of much help in eliminating the ambiguous and irrelevant statements and consequently a total of 20 statements were eliminated.

Having obtained a set of 40 statements, each statement was then subjected to a 3 point continuum as Suitable (3), Not suitable (2) and Absurd (1) and typed copies were made. The copies were then sent to 30 judges to examine the relevancy of message, appropriateness of term and clarity of language of each of these statements for inclusion in the final scale. Thus, after scrutiny of the judges, a total of 30 (15 positive and 15 negative) statements were retained for further analysis with arrangement.

Finally 30 statements, was subjected to Likert's (1932) technique with five point continuum *viz.*, strongly agree, agree, undecided, disagree and strongly disagree with 5, 4, 3, 2 and 1 score for favourable statements, respectively. However, for negative statements, the scoring pattern was reversed. The scale was then administered to 60 agriculture extension personnel, who were asked to respond to each item in terms of their own agreement or disagreement with the statement.

A total score for each individual was obtained by adding up scores on each item. The total scores of each

subject on all the items were arranged in descending order *i.e.* from highest to lowest. The top 25 per cent (15 respondents) and the bottom 25 per cent (15 respondents) were selected for item analysis as high and low groups, respectively. The middle group was omitted from the analysis, so that these two groups provided criterion groups to evaluate the individual item. With the help of these two criterion groups, 't' values were computed for all the 30 statements using the under mentioned formula.

$$t = \frac{\bar{X}_H - \bar{X}_L}{\sqrt{\frac{\sum(X_H - \bar{X}_H)^2 + \sum(X_L - \bar{X}_L)^2}{n(n-1)}}$$

where,

t = The extent to which a given statement differentiates between the high and low groups,

\bar{X}_H = The mean score on a given statement for the high group,

\bar{X}_L = The mean score on the same statement for the low group,

$\sum(X_H - \bar{X}_H)^2$ = The variance of the distribution of responses of the high group to the statement,

$\sum(X_L - \bar{X}_L)^2$ = The variance of the distribution of responses of the low group to the statement

n (n - 1) = Number of subjects in low or high group.

The statements finally retained in the scale, having 't' value equal to or more than 1.75, significant at 5 per cent level. Based on this criterion, 10 statements were filtered out leaving 5 positive and 5 negative statements were selected for inclusion in the attitude scale.

Reliability of the scale:

The reliability of the attitude scale was tested in two ways namely split half technique and test-retest technique. In the split half technique the ten statements were divided into two parts, five even numbers in one part and five odd numbers in the other part. These two sets of statements were administered to 30 respondents separately and their responses were recorded. Correlation co-efficient when calculated between the two sets of scores thus obtained, was found highly significant (0.89) which indicated high degree of internal consistency of the attitude scale.

In the test retest technique the ten statements were administered twice to 30 respondents at an equal interval of 20 days. The co- efficient of correlation obtained between these sets of scores, was also highly significant

(0.87) thus, revealing high reliability of the scale.

Validity of the scale:

For testing the validity of the scale, content validity was considered. Since the statements of these attitude scale were derived from a long list of opinions and from literature, the statements reflected varied attitudes representing the universe. Therefore, the scale could be considered as having content validity.

Scoring techniques of the scale:

The final scale consisted of 10 statements (5 positive and 5 negative). Extension personnel's responses were recorded on a five point continuum as Strongly agree (SA), Agree (A), Undecided (UD), Disagree (DA) and Strongly disagree (SDA). Scores were given to positive statement as 5, 4, 3, 2, 1 and for negative statement 1, 2, 3, 4 and 5.

Based on mean (\bar{X}) and standard deviation (SD) of the obtained attitude scores, respondents were classified into three categories as : Low below ($\bar{X} - Sd$), medium $\bar{X} - Sd$ to $\bar{X} + Sd$, high Above $\bar{X} + Sd$

OBSERVATIONS AND ANALYSIS

Based on items analysis ('t' values) 10 items were finally retained in the scale, having 't' value more than 1.75 significant at 5 per cent level. Thus, 10 items were selected to constitute the scale to measure the attitude of extension personnel towards farm women (Table 1). Due care was exercised while selecting and working the statements so as to cover all the relevant aspects of vermiculture technology thus, ensuring a fair degree of content validity.

Attitude towards of extension personnel towards farm women:

It appears from Table 2 that 44.80 per cent of the extension personnel had favourable attitude towards farm women, followed by less favourable attitude (33.60%) and highly favourable attitude towards farm women (21.60%). This finding is in line with Sadangi *et al.* (2009).

The data further reflects that slightly more than one-fifth of extension personnel had highly favourable attitude, hence, the women farmer as clientele of extension services was found to be low.

These findings might help policymakers, planners and

Table 1: Final attitude scale for measuring attitude of extension personnel towards farm women with 't' value

Sr. No.	Statements	't' value
1.	Women make a significant contribution to agriculture	2.48
2.	Improved technologies are laborious for women to implement.	1.89
3.	The information relating to new farm technologies are not given to the women as they are mostly involved in household activities	2.01
4.	As women are more traditional and orthodox they can not adopt modern farming.	1.92
5.	Women are capable of developing agro-based household enterprises for supplementing the family income.	3.05
6.	Farming without women are impossible.	3.12
7.	Empowering women in farming will ultimately lead to all-round development of family.	4.06
8.	Agricultural production can be increased by imparting latest technologies to men than women.	2.78
9.	The interest of the women in farming is so natural that the agency may secure their participation readily.	1.98
10.	Information given to men are automatically passed on to the other member of the family.	2.24

Table 2 : Distribution of extension personnel according to attitude towards farm women (n=125)

Sr. No.	Category	Frequency	Percentage	Mean	S.D	C.V
1.	Not favourable < 17.43	42	33.60			
2.	Favourable 17.43 to 29.03	56	44.80	23.23	5.80	24.97
3.	Highly favourable > 29.03	27	21.60			

extension agents to provide clear directives regarding farm women's efforts to gain access to critical knowledge and inputs for the improvement of agricultural productivity. It could also encourage more constructive extension planning for reaching farm women in near future. Moreover, it facilitates the discussion with policymakers and high-level officials in different seminars and conferences on national policy statements on farm women as a very important target group, with the same rights as male farmers, e.g. land ownership, access to inputs, credit, acquisition of knowledge and skills for agricultural production, marketing facilities, etc., in order to effectively improve the extension service for farm women.

Conclusion:

The scale was found to be reliable and valid. Therefore, it would correctly measure the attitude of extension personal towards farm women to the maximum

precision possible and can yield constant results when used on different occasions involving the similar and or different subjects. Further, study clearly shows that 44.80 per cent of the extension personnel had favourable attitude towards farm women, followed by less favourable attitude (33.60%) and highly favourable attitude towards farm women (21.60%).

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