

A Scale to Measure Attitude Towards People's Participation in Soil and Water Conservation Programme

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INTRODUCTION

In soil and water conservation (SWC) programmes through watershed management, the local people's participation is essential at the time of programme planning, implementation and maintenance of conservation structure. The beneficiaries, the local people who are affected with the SWC programme, must have favourable attitude to participate in the development programme. Keeping this in view the study was undertaken to develop a scale for measurement of attitude to towards people's participation in soil and water conservation programmes.

METHODOLOGY

Collection of attitude items Statements covering all aspects of people's attitude towards participation in soil and water conservation programme were collected with the help of available literature, subject matter specialists and discussion with scientists. As such 30 statements were prepared.

Editing of statements All the statements were edited by applying the 14 informal criteria and guidelines given by Edwards (1957). Out of 30 statements collected initially, 21 attitude statements relevant to the people's participation in soil and water conservation programmes were selected.

Experts' rating of attitude statements The selected 21 statements were given for judgement to a group of 60 experts comprising extension specialists, scientists and subject matter specialists in soil and water conservation from agricultural institutions and research centres of Indian Council of Agricultural Research and four agricultural universities. The experts were requested to indicate their degree of agreement or disagreement towards all the statements on five-point-continuum i.e., strongly agree, agree, undecided, disagree and strongly disagree with the weightage of 5, 4, 3, 2 and 1 scores respectively for positive statements and reverse scores for negative statements. Out of the 60 experts, 27 responded with rating.

Item analysis was carried out on the basis of difference between the means of high and low group as suggested by Murphy and Likert (1937). Under this method, the total scores obtained on the statements by all the experts were arranged in descending order. The top 25 per cent respondents and the bottom 25 per cent respondents were selected for item analysis as high and low groups, respectively to select the most discriminating items. The items with mean difference of high and low group i.e. $(\bar{X}_H - \bar{X}_L)$ more than the grand mean difference of high and low group i.e. $(\sum \bar{X}_H/n - \sum \bar{X}_L/n)$ were selected. The statements mean differences and grand mean difference worked out between high and low groups for 21 statements are presented in table 1.

Reliability of the scale The reliability of the scale was analyzed with the help of test-retest method. The developed scale was administered twice to 30 farmers at an interval of one month. The correlation coefficient r-value of two set of data was calculated. The respondents were randomly selected from Antisar watershed of Kapadwanj taluka in Kheda district of Gujarat. The correlation coefficient was calculated and the r value 0.864 was determined, which was highly significant at 1 per cent level of probability. It indicates that the scale is reliable and more degree of dependability on the scale for measuring attitude towards people's participation in soil and water conservation programme.

Validity of the scale was examined with the help of content validity method to determine how well the contents of the scale represented the subject matter under the study. The contents of the attitude scale were derived from available literature and discussions held with subjects matter specialists. All the edited statements of the scale were given to different extension scientists and soil and water conservationists for their expert guidance in developing the scale. The 27 subject matter experts returned all the statements with their suggestions after checking suitability of all statements to the subject of the study. The suggestions of the experts were incorporated in the scale.

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Hence, the present developed scale satisfied the content validity.

FINDINGS AND DISCUSSION

Selection of statements for construction of scale:

Table 1: Statements showing mean scores and mean difference of high and low groups.

S. No.	Mean of high group	Mean of low group	Mean difference
1.	4.000	3.857	0.143
2.	3.428	2.714	0.714 S
3.	3.428	3.429	0.000
4.	3.428	2.714	0.714 S
5.	3.428	3.429	0.000
6.	3.714	3.429	0.286
7.	3.428	2.571	0.857 S
8.	3.714	3.286	0.429
9.	3.285	2.429	0.857 S
10.	3.571	2.286	1.286 S
11.	3.714	3.143	0.571
12.	3.714	2.857	0.857 S
13.	3.428	2.000	1.429 S
14.	3.428	2.429	1.000 S
15.	3.428	2.714	0.714 S
16.	3.428	2.714	0.714 S
17.	3.142	3.000	0.143
18.	4.000	3.000	1.000 S
19.	2.142	1.571	0.571
20.	3.428	2.571	0.857 S
21.	3.428	1.857	1.571 S

Total $\sum X_H = 72.14$ $\sum X_L = 58.000$

(S = Statement selected for final scale)

Grand mean of high group : $(\sum \bar{X}_H/n) = 72.714/21 = 3.46$

Grand mean of low group : $(\sum \bar{X}_L/n) = 58/21 = 2.76$

Grand mean difference : $(\sum \bar{X}_H/n - \sum \bar{X}_L/n) = 3.46 - 2.76 = 0.70$

According to table 1, it was revealed that 13 attitude statements had mean difference values of high and low groups more than the grand mean difference value i.e. 0.70. Therefore, the statements having value more than 0.70 were selected for construction of final attitude scale to measure attitude towards people's participation in soil and water conservation programme.

Final Format of the Scale is given in table 2. The developed scale contains total thirteen statements, comprising seven positive and six negative statements. The positive statements are 1, 2, 4, 5, 9, 10, 11 and negative statement are 3, 6, 7, 8, 12, 13.

Table 2: Scale to measure attitude toward people's participation in SWC programme.

Statements	SA	A	UD	DA	SDA
A. Participation in programme planning					
Farmers should participate in soil & water conservation (SWC) programme planning meetings.					
Farmers should suggest point of individual or collective interest in planning of SWC programme.					
Women's participation in SWC programme planning meetings is inessential.					
B. Participation in programme implementation					
Farmers should contribute materials or equipments in construction of SWC structures.					
Farmers should contribute own labour or money in construction of SWC structures.					
Farmer's contribution of labour or money in construction of SWC structures is not required.					
SWC structures should be constructed by government money through project implementing agency (PIA)					
PIA is totally responsible for construction of SWC structures in farmer's fields.					
Farmers should maintain and repair their SWC structures time to time by own expenses.					
Farmers should contribute labour or money towards repair and maintenance of their SWC structures					
Farmers should motivate their fellow farmer's for collective contribution in repair and maintenance of SWC structures.					
Maintenance and repair works should be done through PIA by government money.					
Farmers should not contribute labour or money to the government body PIA for repair of SWC structure.					

Where,

SA = Strongly Agree
DA = Disagree

A = Agree

UD = Undecided

SDA = Strongly Disagree.

Attitude measurement People's Participation Index (PPI) was developed by the author to measure the extent of attitude of the farmers towards participation in soil and water conservation programmes. While measuring the extent of attitude of people's participation in soil and water conservation programme the respondents may be asked to indicate their degree of agreement and disagreement against the attitude statement and tick mark (✓) in appropriate column against each statement. The scores are assigned 5, 4, 3, 2, and 1 for SA, A, UD, D, SD respectively for positive statements and reversed for negative statements.

PM_j = Total scores of attitude towards people's participation in programme maintenance.

K = Total number of statements on which responses of the respondents will be recorded.

The scores to be computed with the help of the developed people's participation index (PPI) would be obtained in percentage and that would indicate the per cent attitude of people towards participation in soil and water conservation programme as a whole. The index could also be useful in measuring per cent attitude towards participation during different stages of planning, implementation and maintenance of soil and water conservation programme. The higher percentage of attitude of farmers may indicate that there would be good people's participation during execution of soil and water conservation programme. The value calculated by the People's Participation Index (PPI) will be categorized as shown below:

$$PPI = \frac{\text{Mean attitude towards participation score (P)}}{\text{Maximum attitude towards participation score}} \times 100 \dots (i)$$

$$P = \frac{\sum_{i=1}^N P_i}{N}$$

where,

N = Total number of respondents

$$P_i = \sum_{j=1}^K (PP_j + PI_j + PM_j)$$

where,

PP_j = Total scores of attitude towards people's participation in programme planning.

PI_j = Total scores of attitude towards people's participation in programme implementation.

Attitude Category	PPI value (%)
Highly favourable	84-100
Favourable	68-83.9
Neutral	52-67.9
Unfavourable	36-51.9
Highly unfavourable	20-35.9

REFERENCES

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 Goode, W.J. and Hatt, P.K. (1981). Methods in Social Research, Mc Graw - Hill Book Co., Singapore P. 237.
 Likert, R. (1932). A Technique for the Measurement of Attitudes. Arch. Psychol. No. 140.