Scale to measure attitude of tribal farmers towards developmental programmes in Kolli hills of Namakkal district

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ABSTRACT

India has the largest scheduled tribal population compared to any other countries of the world. Tribal communities are most disadvantaged groups than others. Tribal developmental programmes were introduced into the various tribal streams for their upliftment in various directions. To analyse the different programmes, the study was conducted in Kolli hills of Namakkal district with the main objective of assessing the attitude of tribes towards developmental interventions. A sample of 100 farmers was selected from 5 village Panchayats and total tribes were interviewed. It was found that the majority of the tribes expressed about the information on governmental and non-governmental schemes. Considering the objective, an attitude scale was developed to measure the attitude of tribes towards developmental programmes by using equal appearing scale interval method. Since the selected scale values should have equal appearing interval and distributed uniformly along the psychological continuum, it was necessary to form nine compartments so as to select nine statements at one statement from each compartment. Based on high scale and low Q values, nine attitude statements were finally selected and administered for assessing the tribal attitude. Majority of the farmers possessed favourable attitude towards government and non-governmental programmes.

KEY WORDS : Attitude scale construction, Developmental programmes, Tribal farmers, Equal appearing interval method

In Tamil Nadu the major tribes that inhabit the state include Kadar, Muduvan, Paaliyan, Kanikkar, Malayali, Soliga and Konda Reddi. Here, the study concentrated on Malayali tribes of Kolli hills. Majority of them are economically deprived, socially marginalized and lack resources. Their access to health, education, employment and other income generation opportunities is limited. The literacy percentage of the scheduled tribes is low when compared with general population. Despite several programmes and projects for the upliftment of tribal communities are still marginalized and remain invisible to hilly tribes. The success of any developmental programmes would mainly depend upon the people's attitude towards it. Hence, it is necessary to study the attitude of tribal people towards the developmental programmes. Attitude is the degree of positive or negative effect associated with some psychological object like symbol, person, institute, ideal or idea towards which people can differ in varying degrees (Thurstone, 1946). Attitude in this study was operationally defined as the respondent's degree of favourable or unfavourable views, opinions, feelings or interest of tribes towards developmental programmes. Such a favourable or unfavourable attitude helps in better implementation of schemes among the tribal families. According to Mansingh

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(1993), the tribes are the most adversely affected ethnic group due to developmental projects of dams, factories and mines. Though they constitute 8.00 per cent of the national population, but about 40.00 per cent of displaced persons due to developmental projects are tribals. Marimuthu (2001) observed that almost 57.14 per cent of the tribal respondents had low, followed by medium (25.72%) and high level (17.14 %) of attitude towards tribal developmental programmes. Seema (2002) revealed that the differential level of attitude of tribes towards tribal development schemes is evident through the significant F value.

Objective :

To develop attitude scale to know the tribal farmers attitude towards tribal developmental programmes as one of the specific objective of the study.

METHODOLOGY

To measure the degree of the tribes like or dislike for the tribal developmental programmes an attitude scale was constructed following the method of equal appearing interval method developed by Thurstone (1946). Eighty two attitude statements about the tribal developmental programmes were initially collected from all the possible sources, relevant literature and discussion with experts from TNAU. The editing was done on the basis of the criteria suggested by Edwards (1969). Of the 82 statements collected, initially 62 statements were selected. The statements, thus selected reflected the opinion of the tribes about the tribal developmental programmes.

After screening 62 items were selected to form the universe of contents. These 62 statements were provided for judges opinion on a five point continuum ranging from strongly agree to strongly disagree and was administered to 50 judges comprising extension specialists in various universities. Out of the 50 judges, 30 responded by sending their judgements. Based on the judgements, the scale values and Q values for

each statement were calculated by applying the equal appearing scale interval formula as suggested by Thurstone and Clave (1929) :

$$S = 1 < \frac{|0.50 - \ddot{y}pb|}{Pw}$$

where,

S - The median or scale value of the statement
L - The lower limit of the interval in which the median falls
ΣPb - The sum of the proportions below the interval in which the median falls
Pw - The proportion within the interval in which the median falls and
I – the width of the interval and is assumed to be equal to 1.0

$$Q = C_{75} - C_{25}$$

where,

Q - interquartile range
C_{25}- The 25th centile

$$C_{25} = 1 < \frac{|0.50 - \ddot{y}pb|}{Pw} \quad i$$

C_{75} = The 75th centile

$$C_{75} = 1 < \frac{|0.75 - \ddot{y}pb|}{Pw} \quad i$$

Selection of attitude items :

The attitude items to be included in the final attitude scale were selected based on those items with high scale value and smaller Q values.

In Table 1, the second column indicates the statement number. The scale values were arranged in descending order of magnitude in the fourth column with corresponding Q values in the third column. The differences between successive scale values were computed and entered in the fifth column. The cumulative total of these computed differences were worked out in the sixth column. Considering

Sr. No.	Statement No.	Scale value	Q value	Difference between successive scale values	Cumulative value of the differences	Equal appearing class intervals	Compartments
1.	12	4.293	0.909	0.040	0.413	<0.394	I
2.	8	4.184	0.685	0.085	0.522	0.394 to 0.788	II
3.	49	3.745	0.757	0.037	0.961	0.788 to 1.182	III
4.	58	3.392	1.107	0.027	1.290	1.182 to 1.576	IV
5.	18	2.369	1.496	0.074	2.038	1.576 to 1.970	V
6.	11	2.205	1.645	0.187	2.337	1.970 to 2.364	VI
7.	29	1.985	0.052	0.030	2.721	2.364 to 2.758	VII
8.	20	1.815	0.732	0.059	2.891	2.758 to 3.152	VIII
9.	31	1.333	0.236	0.001	3.373	3.152 to 3.546	IX

Table 1 : Computation of equal appearing scale intervals

the time limitation from the tribes point of view, first it was decided to select nine statements to constitute the final attitude scale. Since, the selected scale values should have equal appearing interval and distributed uniformly along the psychological continuum, it was necessary to form nine compartments so as to select 'nine' statements at the rate of one statement from each compartment.

The basis for forming the compartments is that, each compartment should be equally spaced in the continuum. For this purpose, the difference between the highest scale value (4.706) and the lowest scale value (1.157) were worked out. This difference value (3.459) is divided by nine. Since, it was decided to select nine statements and this value (0.394) forms the width of the class interval. The second interval worked out by adding the value 0.394 with the width of the class interval. So, the second interval comes around 0.788. Then again adding the value 0.394 with 0.788 gives the third interval. Subsequently all the nine intervals were worked out. These equal intervals were worked out. These equal appearing class intervals form the eighth column. The width/value of equal class interval cutting the nearest or closest cumulative value of difference forms the compartments. For example the value 0.394 is closest to the value of 0.413 of the cumulative value of difference. So, this forms the first compartment. Subsequently nine compartments were formed.

ANALYSIS AND DISCUSSION

The final stage was to select the attitude items from the nine compartments. Based on the criteria already mentioned, items having higher scale value and lower Q value were selected from the first compartments. Then, for the selection of items from the subsequent compartments, same procedure was followed.

Adequate care was taken to ensure that the selected items represented the universe of content. Thereby, nine statements were selected. The selected statements are given in Table 2.

Reliability of the scale :

The reliability of the scale was determined by split half method. The selected nine attitude statements were divided into two halves containing five statements in one set and four statements in the other by odd even method (Singh,1986). The two halves were administered separately to 30 tribes in a non-sample area. The scores were subjected to product moment correlation test in order to find out the reliability of the scale. The half test reliability coefficient (r) was 0.523, which was significant at 5% level of probability. Further, the reliability coefficient of the whole test was computed using the Spearman Brown Prophency formula given below :

$$\text{Reliability coefficient of whole test} = \frac{2r \text{ Reliability co-efficient of half test}}{1 - \text{Reliability co-efficient of half test}}$$

The whole test reliability co-efficient of the whole test was computed using the Spearman Brown Prophency worked out to 0.56. According to Singh (1986), when the mean scores of the two groups are of narrow range, reliability co-efficient of 0.50 or 0.60 would be sufficient. Hence, the constructed scale was considered reliable as the rtt was>0.50.

Validity of the scale :

To test the validity of the scale, the content validity method was adopted. To ensure content validity, provision was given in the format provided for judges opinion as most adequately, more adequately covered, less adequately covered and least covered.

Judges were requested to express their judgement regarding the extent to which the universe of content covered the domains of developmental programmes . Judges expressed their judgement by selecting anyone of the five response categories concerning the validity of the universe of content.

Totally 25 judges were requested to offer their judgements. Out of 25 judges 20, judges (80 %) opined that the universe of contents "more adequately covered" the object (tribal developmental programmes). Hence, it was concluded that the scale was valid owing to the judgement given by the majority of the judges regarding the content validity.

Table 2 : The final set of selected attitude statements		
Sr. No.	Statement No	Statement
1.	11	Tribal developmental programmes are the way to ensure prosperity among the tribal farmers.
2.	13	Tribal developmental programme improves the per capita income of the tribal farmers.
3.	23	Tribal developmental programme brings more innovative ideas in agriculture.
4.	30	Tribal developmental programmes creates on farm and off farm employment opportunities.
5.	34	Tribal developmental programme are wastage of public funds.
6.	36	Tribal developmental programme creates conflict among tribal farmers.
7.	43	Retaining tribal farmers in agriculture is impossible through tribal developmental programme.
8.	45	Participation in tribal developmental programme does not guarantee income generation.
9.	56	Constant technical guidance is needed for effective participation of tribes in developmental programmes.

Conclusion :

The scale was administered in a five point continuum as strongly agree, agree, undecided, disagree and strongly disagree. Favourable statements (statements 11, 13, 23, 30, 56) to the object eco-friendly agricultural practices were considered and scored in the following pattern, strongly agree, agree, undecided, disagree and strongly disagree and received the scores as 5, 4, 3, 2 and 1, respectively. For those items that were negative (statements 34, 36, 43 and 45) to the object tribal developmental programmes, the scoring procedure was reversed.

Score was obtained for each item. All the scores obtained by individual tribes were summated in order to yield an attitude score for the individuals concerned. The maximum score was 45 and minimum score was 9.

Using cumulative frequency values, the respondents were classified into most favourable, favourable and less favourable attitude towards developmental programmes. Attitude towards tribal developmental programmes was used as an independent variable for testing its relationship with the effectiveness of developmental programmes among the tribes.

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