J Krishi Vigyan 2019, 8 (1) : 279-283 DOI : 10.5958/2349-4433.2019.00113.2

Tool to Measure Attitude of Postgraduate Scholars towards Extension Service

Naveenkumar G[1] and Chauhan N B [2]

Department of Agricultural Extension and Communication,
B A College of Agriculture, Anand Agricultural University, Anand (Gujarat)

ABSTRACT

Extension is broadly divided into three major components namely extension education, extension work and extension service. Therefore, persons who want to work in various line departments of government extension agencies like Department of Agriculture, Animal Husbandry, Forestry, Fishery etc. are expected to build positive feeling towards extension service.It is therefore significant to know the attitude of postgraduate scholars towards extension service. Keeping this in view a standardized scale has been developed to measure the attitude of the postgraduate scholars towards extension service as one of the important components of extension. A summated (Likert) rating scale was used to develop scale. The process started with identifying the dimension, collection of items followed by relevancy and item analysis and checking the reliability and validity for precision and consistency of the results. A total of 24 statements were framed in which 11 statements were finally retained which has practical applicability in measuring the attitude towards extension service. The scale contains total eleven statements, out of which five are positive and six are negative. The developed scale was found highly reliable.

Key Words: Attitude scale, Extension service, Likert scale, Summated rating scale, Postgraduate scholars.

INTRODUCTION

The activities of extension are broadly divided into three major components namely extension education, extension work and extension service. It is essential to have positivism towards extension education, extension work and extension service amongst those who want accept extension as profession. The extension service is dealing with location specific, input and intensive service oriented field professional activities, concerned with providing various kinds of input services to the farmersto work as bridge by between farmers and farm scientists. In short,the work done by line departments of government extension agencies like Department of Agriculture, Animal Husbandry, Forestry, Fishery etc. are the examples of extension service. Under the function of extension education, academic institutions and organizations like State Agricultural Universities, Indian Council of Agricultural Research etc. educate, train and develop professionals to understand and apply philosophy of extension, extension research and extension activities.

Thus, it is expected that persons who want to develop career in the field of extension should have encouraging feeling towards above mentioned three components of extension. Keeping this in view a standardized scale has been developed in the year 2018-19 to measure the attitude of the postgraduate scholars towards extension service as one of the important components of extension.

MATERIALS AND METHODS

Among the techniques available for construction of scale, the methodology suggested by Likert (1932) and Edward (1957) was used in this study for scale construction and for ascertaining the response of the scale. The technique chosen to construct

Corresponding Author's Email: naveenkumargattupalli@gmail.com

[1] Ph.D. Scholar, [2] Professor and Head

the attitude scale was "Scale Product Method" which combines the technique of Equal Appearing Interval Scale of Thurstone (1946) for selection of the items and Likert's techniques of summated rating for ascertaining the response on the scale. Similar procedure was also followed by Christian and Chauhan (2008), Patel and Chauhan (2015) andVaidya and Chauhan (2008).The following procedure was applied to develop scale.

RESULTS AND DISCUSSION

Collection of Items

The items making up attitude scale are known as statements. A statement is anything said about psychological object. As a first step in developing scale a list of statements were prepared by reviewing the available literature and consulting academicians and researchers who are having expertise in that particular field. A list of 40 statements were prepared and these statements were edited to match the Edwards criteria in which finally 24 items were retained and presented to judges for their rating.

Judge's rating of attitude statements

In order to judge the degree of "Unfavourableness" to "Favourableness'" of each statement on the five point equal appearing interval continuum a panel of 50 judges was selected. The judges selected for the study comprised extension educationists and statisticians with considerable practical experience from the Anand Agricultural University. The judges were visited personally along with letter of instructions to guide them for rating the statements in desired manner for each set of the statements.

Determination of scale and quartile value

The five points of the rating scale were assigned, ranging from 1 for most unfavourable and 5 for most favourable. On the base of judgment, the median value or scale value (S value) and the Q value for the statement concerned was calculated, the inter-quartile range [Q = (Q_3 or C_{75}) – (Q_1 or C_{25})] for each statement was also worked out for determination of ambiguity involved in the statement. Following formulas were applied to work out S, Q_3 and Q_1values.

$$S \text{ or } Median\ Value = L + \frac{0.50 - \sum Pb}{Pw} \times i$$

Where,

S = Median or scale value of the statement

L = Lower limit of the interval in which the median falls

$\sum Pb$ = The sum of proportion below interval in which median falls

Pw = The proportion within the interval in which median falls

i = The width of the interval and is assumed to be equal to 1.0

$$C_{25} \text{ or } Q_1 = L + \frac{0.25 - \sum Pb}{Pw} \times i$$

Where,

C_{25} = The 25thcentile value of the statement

L = Lower limit of the interval in which the 25thcentile falls

$\sum Pb$ = The sum of proportion below interval in which 25thcentile falls

Pw = The proportion within the interval in which 25thcentile falls

i = Thewidth of the interval and is assumed to be equal to 1.0

$$C_{75} \text{ or } Q_3 = L + \frac{0.75 - \sum Pb}{Pw} \times i$$

Where,

C_{75} = The 75thcentile value of the statement

L = Lower limit of the interval in which the 75thcentile falls

$\sum Pb$ = The sum of proportion below interval in which 75thcentile falls

Pw = The proportion within the interval in which 75thcentile falls

i = The width of the interval and is assumed to be equal to 1.0

Final statements for attitude scale

When there was a good agreement among the judges, in judging the degree of agreement or disagreement of a statement, Q was smaller compared to the value obtained, when there was relatively little agreement among the judges it was reverse. Only those items were selected whose median (scale) values were greater than Q values. However, when a few items had the same scale values, items having lowest Q value were selected. Based on the median and Q values 11 statements were finally selected to constitute attitude scale. The scale values were ranging from 1.50to 3.86

Reliability of the scale

A scale is reliable when it consistently produces the same results when applied to the same sample. In the present study, split-half method of testing

Table 1. Calculation of S values and Q values to measure attitude of postgraduate scholars towards extension service.

Sr. No.	Statement	S Value	Q Value	Decision
1	I am confident to work in State Department of Agriculture (SDA)	1.65	1.25	Rejected
2	I feel motivated to be a part of SDA to serve farmers	1.65	1.14	**Selected**
3	I dislike working in rural area for farmers	3.86	3.09	**Selected**
4	I like to stay permanently in rural area to work for rural area	2.30	2.12	Rejected
5	I like to face any odd situation to work for farmers in rural area	1.90	0.92	**Selected**
6	Working as extension service provider in SDA has never excited me	3.50	2.13	**Selected**
7	I prefer academic extension job more than working directly with farmers	2.80	2.21	Rejected
8	I like to work as bridge between farmers and agricultural scientists	1.50	1.28	Rejected
9	I believe that job of extension service provider is dull	3.81	4.19	Rejected
10	Working with SDA is respectful job	1.83	1.23	Rejected
11	Working as extension service provider in SDA is thankless job	3.60	2.37	**Selected**
12	Organisational structure of SDA is not perfect to work	3.07	1.80	**Selected**
13	Working pattern of SDA is not inspiring	3.50	2.24	Rejected
14	Working with SDA provides opportunity to serve nation	1.90	1.12	Rejected
15	Working in rural areas through SDA provides more opportunity to serve country	1.80	1.12	Rejected
16	SDA work culture does not encourage me to work	3.07	2.24	Rejected
17	I like cheering my family to reside with farmers in rural areas for extension service	2.04	1.01	**Selected**
18	I visualize better potential in the job of extension service provider	1.90	1.16	Rejected
19	Limited socialize scopes prevents me to work in SDA	2.80	1.90	**Selected**
20	Working with SDA for farmers means service to humanity	1.80	1.03	**Selected**
21	Beauty of moral life lays in working with rural farmers	1.98	0.86	Rejected
22	Acceleration of Indian growth is possible if we love to stay with farmers in rural area	1.90	1.10	Rejected
23	I believe that extension service has potential to develop farmers	1.50	1.00	**Selected**
24	Unwanted political interventions are more in extension service sector	2.31	1.73	**Selected**

Table 2. Final attitude scale with 11 statements representing the attitude of postgraduate scholars towards extension service.

No.	Statements	SA	A	UD	DA	SDA
1	I feel motivated to be a part of State Department of Agriculture (SDA) to serve farmers. (+)					
2	I dislike working in rural area for farmers. (-)					
3	I like to face any odd situation to work for farmers in rural area. (+)					
4	Working as extension service provider in SDA has never excited me. (-)					
5	I like cheering my family to reside with farmers in rural areas for extension service. (+)					
6	Organisational structure of SDA is not perfect to work. (-)					
7	Working with SDA for farmers means service to humanity. (+)					
8	Limited socialize scopes prevents me to work in SDA. (-)					
9	I believe that extension service has potential to develop farmers. (+)					
10	Unwanted political interventions are more in extension service sector. (-)					
11	Working as extension service provider in SDA is thankless job. (-)					

SA=Strongly Agree A=Agree UD=Undecided DA=Disagree SD=Strongly Disagree

reliability was used. The 11 statements were divided into two halves with six odd numbered in one half and other five even-numbered statements in the other. These were administered to 25 respondents. 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 came to 0.8594.

As reliability is directly related with the length of the scale when we split the scale on odd and even number items. The reliability coefficient which has been calculated is the value of half size of the original scale. Thus correction factor is calculated by using Spearman Brown formula (Kishan et al, 2016).

$$rtt = \frac{2\,roe}{1 + roe}$$

rtt = Coefficient of reliability of original test

roe = reliability of coefficient of odd and even score

The coefficient of reliability was calculated by the Spearman Brown formula which came to be 0.92 for Extension Service Thus, the scale developed was found highly reliable.

Content validity of the scale

The validity of the scale examined for content validity by determining how well content were selected by discussion with specialists, extension academicians, etc. thus, the present scale satisfied the content validity.

Scoring system

The final scale which measures the attitude of postgraduate scholars towards extension service consists of 11 statements. The responses of the selected 11 statements can be collected on five points continuum viz. strongly agree, agree, undecided, disagree and strongly disagree with respective weights of 5, 4, 3, 2, and 1 for the favourable statements and with the respective weights of 1,

2, 3, 4 and 5 for the unfavourable statements and scores obtained for each item was summed up to get the attitude score towards extension service. The maximum score was 55 and minimum score was 11.

CONCLUSION

The extension service is dealing with location specific, input and intensive service oriented field professional activities, concerned with providing various kinds of input services to the farmersto work as bridge by between farmers and farm scientists. The developed scale is scientific and standardized tool to measure the attitude of postgraduate scholars towards extension service, which helps in analyzing the intensity of postgraduate scholars to accept extension service as their profession to work in any of the line departments of agricultural development for the benefit of farming community. This scale also aids in enabling the universities and extension departments in developing course curriculum in making future decisions regarding the development of extension service.

REFERENCES

Christian B M and Chauhan NB (2008). Scale to Measure Attitude of Woman Research Scholars towards the Use of Computer for Their Empowerment. Gujarat J Ext Edu 18:18-20. http://www.gjoee.org/papers/365.pdf.

Edward A L (1957). Techniques of attitude scale construction. Vakils, Feffer and Simons Pvt. Ltd. Bombay.

Guilford J P (1954).Psychometric Methods. Tata McGraw-HillPublication Co. Ltd., Bombay, pp: 378-382.

Kishan K, Chauhan N B and Patel J B (2016). Development of scale to measure attitude of the farmers towards neem based biopesticides. *Int J Agri Sci* **8**(21): 1394-95.

Likert R A (1932). *A Technique for the Measurement of Attitude Scales.* Arch. Psychol. New York, No. 140.

Patel MC and Chauhan N B (2015).Development of Scale to Measure Attitude towards Farmer's Training Programmes Organized by SAUs of Gujarat State. Gujarat J Ext Edu 26(1): 1-3. http://gjoee.org/papers/67.pdf.

Thurstone L L (1946). The Measurement of Attitude. *American J Socio* **52**: 39-50.

Vaidya A C and Chauhan N B (2008). Scale to Measure Attitude of Farmers towards Poultry Farming. *Gujarat J Ext Edu* **19**: 15-17. http://www.gjoee.org/papers/364.pdf.

Received on 19/08/2019 *Accepted on 03/11/2019*