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A Scale to Measure the Attitude of Youth Towards Farming

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Abstract

An attempt is made to develop and standardize a scale to measure the attitude of youth towards farming using summated ratings method. The attitude scale developed was found to be reliable and valid. Thus, the scale developed is useful in explicitly measuring the attitude of youth towards farming.

Youth constitute a numerically dominant potential, resourceful and also adventurous segment of the population in our country. More than 50 per cent of India's current population is below the age of 25 years and over 65 per cent is below the age of 35 years. Majority of them live in rural areas. The population in the age group of 15-34 years increased from 351 million in 2001 to 430 million in 2011. By 2020, India is set to become the world's youngest country with 64 per cent of its population in the working age group (Anonymous, 2011). To handle the standards of globalised farming situation, the need for high technological backup, knowledge base, extension networking and risk involvement among the farming community is the need of the hour. The only option to bring laurels to farming and to make it as a lucrative option in the rural areas is the involvement of youth in farming. Youth have a very strong mind set, possess high self confidence, risk taking ability and inquisitiveness to adopt innovations in farming. Their education, cosmopoliteness and group dynamics will give strong support to handle the present farming environment, but a rising number of rural youth are more interested in going to cities for acquiring necessary skills for getting jobs in companies or corporate sector. Limited access to markets, assets, finance and infrastructure in rural areas, coupled with rapid growth and opportunities in urban areas increasingly makes cities, the obvious choice for the youth in the search for a better life.

The responsibility of youth is to carry forward the tradition of farming because it has the potential of keeping the economy healthy even at times of recession by all means. There is a need to consider farming as an important industry to rely upon even in the modern era of industrialization and urbanization. In this context, a scale on attitude of youth towards farming is developed and standardized.

Development of Scale to Measure the Attitude of Youth towards Farming : Attitude is defined as the degree of positive or negative affect associated with some psychological object. (Thurstone, 1946). Kreth and Crutchfield (1948) defined attitude as an enduring organization of motivational, emotional, perceptual and cognitive process with respect to some aspect of the individuals world. For the present study, attitude of youth towards farming was operationalised as the psychological disposition of the rural youth about farming in varying degrees of favourableness or unfavourableness. Youth was operationalised as, a farmer who was been in farming since three years and are below 35 years of age. The method of Summated Rating scale developed by Likert (1932) was used in this study to develop an attitude scale to measure the attitude of youth towards farming.

The following steps were carried out to construct the scale to measure the attitude of youth towards farming.

Collection and Editing of Statements : In this step, a number of statements about attitude of youth towards farming were gathered from books, magazines, newspapers, research articles, journals, academic attainments, expertise of intellectuals in extension, research, teachers, farmers, self intuitions and own experiences. From all these sources a tentative list of 60 statements belonging to attitude of youth towards farming were prepared keeping in view of the applicability of statements suited to the area of study. The 60 statements collected were carefully edited by using 14 criteria given by Wang (1932), Bird

(1940) Edwards (1941), Thurstone (1946) and Kilpatrick (1948).

After editing the 60 statements, 14 statements were deleted, thus making a total of 46 Statements (Table I).

Testing the Statements for Relevancy : All the statements collected may not be relevant equally in measuring the attitude of youth towards farming. Hence, the statements were subjected to scrutiny by judges to determine the relevancy and screening for inclusion in the final scale. For this purpose, the list of all the 46 statements was prepared in the form of questionnaire and was sent to 100 judges. They were requested to give their responses on a four point continuum *viz.,* highly relevant, moderately relevant, slightly relevant and less relevant with scores 4, 3, 2 and 1 of respectively. They were also requested to feel free to add some more statements, if they feel important and also delete unrelated statements. The judges included the faculty and scientists working in Acharya N. G. Ranga Agricultural University, Extension Education Institute, Hyderabad, University of Agricultural Sciences, Bangalore, College of Agriculture, Pune, Central Agrciultural University, Meghalaya, Punjab Agricultural University, Ludhiana and also progressive farmers. The responses obtained from judges were subjected to Standard Normal Deviate test (z test). 'z' values were calculated for each statement after scoring the statements. Finally, the grand 'z' of all the 46 statements was obtained and ' ' was calculated. All the statements with 'z' values above $\bar{z}$ (-0.013) were selected as the scalable statements of attitude of youth towards farming. The statements with 'z' values below '$\bar{z}$' were eliminated. Thus, 34 statements out of 46 were selected through relevancy testing. The list of statements selected with their 'z' values are presented in Table I.

Treating the statements with Likert's Summated Rating Technique of Scale Construction : In this step, the 34 statements selected through relevancy test were given to 100 youth practicing farming in a non sample area and were asked to indicate their responses on a five point continuum viz., strongly agree (SA), agree (A), undecided (UD), disagree (DA) and strongly disagree (SDA) with 5,4,3,2 and 1 for positive statements and vice-versa for negative statements. After receiving the responses from the youth, the sum of the scores of all statements given by each respondent was calculated and the respondents were arranged in descending order based on the sum of the scores obtained for all the statements. The top 25 per cent of the respondents with the highest scores and the bottom 25 per cent of the respondents with the lowest scores were considered as criterion groups to evaluate individual statements. The middle 50 per cent of the respondents were deleted for further analysis. The top 25 per cent was considered as high group and bottom 25 percent was considered as low group to calculate the critical ratio i.e. 't' value for each statement. The calculated 't' value for each statement will measure the extent to which the statement differentiates between the respondents of high group and low group. The 't' values were calculated by using the formula suggested by Edwards (1969). The 't' value for each statement was calculated by using the following formula.

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

where,

X_L = Mean score on a given statement for the high group

X_H = Mean score on a given statement for the low group

$$\Sigma\left(X_H - \bar{X}_H\right)^2 = \Sigma X^2_H - \frac{\Sigma\left(XH\right)^2}{n_H}$$

$$\Sigma\left(X_L - \bar{X}_L\right)^2 = \Sigma X^2_L - \frac{\left(\Sigma X_L\right)^2}{n_L}$$

$$\bar{X}_H = \frac{\Sigma X_H}{n_H}$$

$$\bar{X}_L = \frac{\Sigma X_L}{n_H}$$

$$n = n_L = n_L$$

TABLE I

Selection of attitude statements based on relevancy test

Statements	'Z' Value	
Advanced technologies encourage youth to flourish in farming	0.19	+
I want to be an elite person in society through farming	0.60	+
There is less opportunity for career development in farming*	0.78	+
I prefer to be a farmer than as an employee	0.84	+
As there is no other means of income I am forced to do farming*	0.91	+
For highly educated youth it is unwise to do farming*	0.31	+
I enjoy the relationship with nature through farming	0.11	+
Farming is not viewed as a respectable profession in the society*	0.08	+
I will not encourage my children to be in farming*	0.38	+
Access to inputs and marketing is poor in farming*	0.91	+
Farming is cumbersome compared to other occupations*	0.11	+
I feel proud to be as part of profession feeding the nation	0.43	+
Farming will give less scope for higher education accessibility to our children*	0.83	+
The present environment is more hopeful for farming	0.31	+
I feel farming is more profitable than any other occupation	0.21	+
If you choose farming, you have to be ready to face the adverse effects*	0.04	+
I am willing to seek for further knowledge and skills in farming	0.43	+
I am ready to invite innovations in farming	0.44	+
I work hard and smart to make farming worthy	0.95	+
I can overcome any type of hardships in farming	0.48	+
I do not want to continue in farming further*	0.52	+
Farming leads to increasing standard of living	0.52	+
Shortage of resources is major limiting factor in farming*	0.06	+
Farming is more stressful*	0.18	+
People who are able to take risks in farming are successful	0.06	+
It is pleasure to lead a life in rural areas by farming	0.35	+
I have my own vision to develop my farm	2.36	+
Climate vagaries are the major threat for farming*	2.20	+
For smallholders farming is not profitable *	1.52	+
Farming gives us good reputation in society	0.91	+
Farming is a major source of livelihood for rural people	1.26	+
Low education qualification will force the youth to take up farming*	0.38	+
Farming is only a type of tradition for rural people*	2.51	+
I feel myself productive being involved in farming	2.36	+
I perform different operations in farming with lot of interest	-1.05	
Intelligent people will persist in the farming with a hope of success	-0.25	
I will encourage others to engage in farming	-1.57	
As a hereditary occupation I am doing farming for livelihood*	-2.56	
I have freedom to work in my own way in farming	-1.44	
I do experiments to improve my farming	-0.99	
One should have passion towards farming to practice it	-0.90	
It is my privilege to sustain in farming	-0.46	
I will focus on economic gains rather than productivity in farming	-1.23	
I am in doldrums due to troubles in farming*	-2.31	
I prefer to take risks in farming at any cost	-0.68	
The existing farm amenities are not enough for farming*	-0.44	

Note- * Negative Statements, + Statement with $\bar{z}$ value of -0.013 and less

TABLE II

Selection of final attitude statements based on 't' values

Statements	't' Value	
Advanced technologies encourage youth to flourish in farming	4.13	#
I work hard and smart to make farming worthy	4.08	#
For highly educated youth it is unwise to do farming*	4.04	#
I am willing to seek for further knowledge and skills in farming	2.89	#
Farming will give less scope for higher education accessibility to our children*	2.44	#
I prefer to be a farmer than as an employee	2.39	#
Farming leads to increasing standard of living	2.33	#
Access to inputs and marketing is poor in farming*	2.19	#
As there is no other means of income I am forced to do farming*	2.14	#
Shortage of resources is major limiting factor in farming*	2.05	#
Farming is cumbersome compared to other occupations*	2.04	#
I feel proud to be as part of profession feeding the nation	2.04	#
I do not want to continue in farming further*	2.03	#
I will not encourage my children to be in farming*	2.02	#
I am ready to invite innovations in farming	1.94	#
I want to be an elite person in society through farming	1.91	#
There is less opportunity for career development in farming*	1.86	#
If you choose farming, you have to be ready to face the adverse effects*	1.84	#
Farming is not viewed as a respectable profession in the society*	1.82	#
Farming is more stressful*	1.81#	
The present environment is more hopeful for farming	1.80	#
I feel farming is more profitable than any other occupation	1.80	#
I can overcome any type of hardships in farming	1.80	#
I enjoy the relationship with nature through farming	1.78	#
Low education qualification will force the youth to take up farming*	1.54	
Farming gives us good reputation in society	1.50	
Farming is a major source of livelihood for rural people	1.21	
I feel myself productive being involved in farming	0.99	
Farming is only a type of tradition for rural people*	0.79	
It is pleasure to lead a life in rural areas by farming	0.72	
For smallholders farming is not profitable *	0.71	
Climate vagaries are the major threat for farming*	0.66	
People who are able to take risks in farming are successful	0.56	
I have my own vision to develop my farm	0.48	

Note : * Negative Statements, #The statement with 't' values more than 1.75

TABLE III.

Scale to measure the attitude of youth towards farming

Statements	Measurement				
	SA	A	UD	DA	SDA
Advanced technologies encourage youth to flourish in farming					
I want to be an elite person in society through farming					
There is less opportunity for career development in farming*					
I prefer to be a farmer than as an employee					
As there is no other means of income I am forced to do farming*					
For highly educated youth it is unwise to do farming*					
I enjoy the relationship with nature through farming					
Farming is not viewed as a respectable profession in the society*					
I will not encourage my children to be in farming*					
Access to inputs and marketing is poor in farming					
Farming is cumbersome compared to other occupations*					
I feel proud to be as part of profession feeding the nation					
Farming will give less scope for higher education accessibility to our children*					
The present environment is more hopeful for farming*					
I feel farming is more profitable than any other occupation					
If you choose farming, you have to be ready to face the adverse effects*					
I am willing to seek for further knowledge and skills in farming					
Shortage of resources is major limiting factor in farming*					
I am ready to invite innovations in farming					
I work hard and smart to make farming worthy					
I can overcome any type of hardships in farming					
I don't want to continue in farming further*					
Farming leads to increase in standard of living					
Farming is more stressful*					

* Negative Statement

SA = strongly agree ; A= agree; UD= undecided; D= disagree and SDA= strongly disagree

After computing 't' values for all the 34 statements, they were arranged in the order of highest 't' value to lowest 't' value. The statements with 't' values more than 1.75 were selected for the final attitude scale. Thus out of 36 statements, 24 statements with 't' value of 1.75 were selected in the attitude scale and are presented in the Table II.

The final attitude scale to measure the attitude of youth towards farming comprised of 24 statements (Table III), out of which were 12 are positive statements and the other 12 are negative statements measured on a five point continuum viz., strongly agree (SA), agree (A), undecided (UD), disagree (DA) and strongly disagree (SDA) with 5,4,3,2 and 1 for positive statements and vice-versa for negative statements as shown in the Table III.

Reliability of the scale : A scale is reliable when it will consistently produce the same results when

applied on the same sample (Goode and Hatt, 1952). Split half method was employed for testing the reliability. The attitude scale of 24 statements was distributed to 30 youth practicing farming in non sample area to check the reliability of the scale. After obtaining the response, the scale was divided into two halves, all odd statements into one half and all even statements into another. Then the co-efficient of reliability was calculated between the two halves. The correlation coefficient for both the sets was worked out. The correlation coefficient (r=0.84) was significant at 0.01 level indicating the attitude scale was highly suitable for administration to the youth in farming.

Validity of the scale : The validity of the scale on attitude of youth towards farming was obtained through content validity considering the judges opinion. The statements selected for the scale were evaluated individually and as a whole by the judges. These were again checked by experts in Acharya N.G. Ranga Agricultural University for their relevance and coverage. As the content of the attitude scale was borne out by the method of collecting statements within the universe of attitude of youth towards farming, it may reasonably be assumed that the attitude of youth towards farming scale has content validity. The final standardized scale to measure the attitude of youth towards farming was used for the main research study (Table III).

Administration of the attitude scale and method of scoring : Attitude of youth towards farming could be measured using 24 statements (Table III). Each statement of scale are provided with five point continuum viz., strongly agree (SA), agree (A), undecided (UD), disagree (DA), strongly disagree (SDA) with scores of 5,4,3,2 and 1, respectively for positive statements and 1,2,3,4 and 5 for negative statements. The total score of the respondent on the scale could be obtained by summing up the scores of all the statements in the scale. The possible minimum and maximum score was 24 and 120, respectively. The higher score indicates that respondent had more favourable attitude towards farming and vice-versa.

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