

A Scale to Measure the Attitude of Young Rural Women Towards Their Participation in Agriculture

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ABSTRACT

One of the major approaches to retain the youth in agriculture originates with determining attitude of the youth towards agriculture. The present study has been carried out to develop and standardize a scale for measuring the attitude of young rural women towards their participation in agriculture. Likert's summated rating scale technique was followed for the construction of attitude scale. At first, a total of 72 statements were sent to judges and after obtaining relevance scores for each statement, 38 were retained. These statements were further interviewed by 45 respondents from non -sample area and analysed. The final scale developed consisted of 19 statements (7 positive and 12 negative statements). The reliability and validity of the scale indicates its precision and consistency of the results.

Keywords: Attitude; Scale; Young rural women;

The National Youth Policy, 2014 Document, defines the youth age-group between 15-29 years, which comprise 27.5 per cent of the total population. The youth unemployment rate has been reported to be 12.9 per cent which is estimated to increase to 15.5 per cent by the end of year 2017 (www.tradingeconomics.com). Rural youth will continue to face challenges related to unemployment, underemployment and poverty. Though, agriculture sector has an ample potential to provide income generating opportunities, but the drudgery of low-productivity is simply not attractive to youth. Youth perceive farming as boring, stressing and as a profession which require hard physical labour (Holz-clause and Jost, 1995; Talbert et al. 1999 and Cotton et al. 2009) and have a less favourable attitude towards farming (Hari, 2014). But, when the discussion is about youth, an unconscious attention is given to only the male counterparts and the aspirations of the young rural females are left out. Today gender budgeting is being institutionalized at all levels by ensuring allocation of 30 per cent of funds for women under various major schemes/programmes (CIWA, 2015). But in the course

of the agricultural modernization process of the last decades, the role of farm women in production has been considerably marginalized. Women have themselves become a much less visible part of the work force (Beneria, 1982; Berlan-Darque, 1988; Whatmore, 1988).

A few studies have reported that a negative stance is cultivated among girls in relation to the prospect of working in farming or even becoming part of a farming household in future through marriage (Gasson and Errington, 1993; Shortall, 1996). But the survival of family farming in developing communities needs the women's employment, as also suggested by Sachs, 1983; Bouquet, 1984; and O'Hara, 1986. Therefore, the major challenge lies in the fact that this young stratum needs to be retained in agriculture and for this, it is necessary to know the attitude of the young women towards their participation in agriculture. Attitude has been defined as the degree of positive or negative affect associated with the some psychological object (Edwards, 1957). In this study, a scale was developed to determine the attitude of young rural women towards their participation in agriculture.

METHODOLOGY

Attitude is defined as the degree of positive or negative feelings attached to any object, etc. In the present study, attitude of young unmarried rural females towards their participation in agriculture was studied. Summated rating method as suggested by *Likert (1932)* was followed in the development of scale. A summated rating scale is a set of attitude statements, all of which are considered of approximately equal attitude value and to each of which subjects respond with degrees of agreement or disagreement carrying different scores.

Item collection: A list of statements depicting the attitude of young women was made with reference to the review of literature. A provisional list of 80 statements was first made regarding the applicability of the study.

Editing: These statements were then subjected to edition by the experts on the basis of criteria suggested by *Thurstone, Likert and Edward (Edward, 1957)*. After editing 72 statements were retained for inclusion in performa.

Relevancy of the statements: The list containing the 72 tentative statements was sent online to 280 judges using the Google Forum tool. The Google Forum is a handy tool which can be used for creating and analysing surveys. The responses are automatically collected with proper information. The judges selected were the experts in the field of agriculture, veterinary and extension education in the various ICAR universities and research institutes. A total of 45 expert judges responded back in a span of 32 days. Each item was requested to be examined by the experts and mark its relevancy under the three point continuum, i.e., most relevant, relevant or not relevant with scores of 3, 2 and 1, respectively.

After the collection of the judgments, the responses were subjected to analysis and Mean Relevancy Percentage, Mean Relevancy Weightage and Mean relevancy Score were calculated which are defined as follows:

Relevancy percentage (RP): It is the number of respondents who rated the statements as ‘most relevant’ and ‘relevant’, which is converted into percentage.

$$RP = \frac{FS}{\text{No. of respondents}} \times 100$$

FS= Frequency score of most relevant and relevant

Relevancy Weightage (RW): It is the ratio of actual score obtained to the maximum possible scores obtainable for each statement.

$$RW = \frac{AS}{MPS}$$

AS=Actual scores obtained for the statement

MPS=Maximum possible scores obtainable for the statement

Mean Relevancy Score: It is the ratio of actual score obtained by each respondent to the number of judges responded for the variable.

$$MRS = \frac{\text{Actual Score obtained for item}}{\text{No. of judges responded}}$$

Item analysis: For the construction of attitude scale by *Likert’s* method, item analysis is an important step. The selected 38 statements were administered to 45 unmarried young rural females lying between the ages of 15-29 years. The respondents were selected from the non- sample area and direct interview method was used for collection of responses. They were directed to indicate the degree of agreement or disagreement on a five point continuum namely strongly agree, agree, undecided, disagree and strongly disagree with the weightages of 5, 4, 3, 2 and 1 for positive statements and 1, 2, 3, 4 and 5 for negative statements, respectively. The scores given by each respondent was summed up to compute the total score for each statement. The obtained scores were then arranged in descending order. The top 25 per cent of the respondents with their total scores were considered as the high group and the bottom 25 per cent as the low group, so as these two groups provide criterion groups in terms of evaluating the individual statements as suggested by *Edwards (1957)*. Therefore, out of 45 respondents, 11 respondents with highest scores were taken in high group and least 11 formed the lower group. These two groups provided the criterion groups in terms of which item analysis was conducted. The ‘t’ value (critical ratio), a measure of the extent which a given statement differentiates between high and low groups of subjects for each statement was calculated using the formula given by *Edwards (1957)*.

$$t = 1 + \frac{X_H - X_L}{\sqrt{\frac{S_H^2}{n_H} + \frac{S_L^2}{n_L}}}$$

Where,

XH = the mean score on a given statement for the high group

XL = the mean score on the same statement for the low group

S²_H = the variance of the distribution of responses of high group to the statement

S²_L = the variance of the distribution of responses of low group to the statement

n_H = number of subjects in the high group

n_L = number of subjects in the low group

Table 1. Mean relevancy score, relevancy weightage and relevancy percentage of the statements based on the responses given by judges.

Statements	MRS	RW	RP
I will take up farming, as it is my family occupation	2.6	0.866	100
I am proud that my family occupation is farming	2.15	0.718	82.22
There have always being health issues to my parents being in farming, therefore I don't want to opt for it	2.155	0.718	82.22
Farming allows a person to be near to his family	1.933	0.644	75.56
I have seen my father suffer in agriculture, therefore, I don't want to take it as profession	2.044	0.681	73.33
Neither my mother works in field nor I will work	1.911	0.637	66.67
The land is never named after girl, therefore I cannot do farming on it	1.888	0.629	64.44
Selling of agricultural plots to turn into commercial lands is a better option	1.8	0.6	55.56
Only people of the lower stratum of society will take up farming	2.288	0.762	88.89
I feel my self-esteem will go down if I choose to be a farmer	2.422	0.807	95.56
Farming is the most laborious profession	2.488	0.829	93.33
Labour shortage is a problem for females to work in field	1.977	0.659	71.11
Labour shortage and high labour charges have made farming uneconomic	1.955	0.651	73.33
Females can't be entrepreneur in farming	2.177	0.725	73.33
It will be difficult for women to sustain as farmer	2.288	0.762	86.67
Agripreneurship skills are not possessed by all youth and it cannot be created	1.822	0.607	57.78
Educated youth should come to farming sector	2.288	0.762	88.89
I am well educated and don't want to go for agriculture	2.288	0.762	86.67
My parents have paid for my education so that I can have a decent marriage outside of farming	2	0.666	71.11
No female wants a farmer as her groom	2.11	0.703	73.33
Low price for agriculture produce along with high production cost has made farming uneconomical in the present age	2.44	0.814	91.11
Agriculture is dominated by males and females don't have a say in it	2.178	0.725	80
Service sector jobs are more ideal for women	2.04	0.681	75.56
To ensure food security is by attracting youth towards agriculture	2.11	0.703	80
Being in farming will allow me to grow unadulterated crops	1.6	0.533	53.33
None of friends do farming, therefore I also don't want to go for it	1.889	0.629	71.11
Peer pressure does not support the female involvement in agriculture	2.333	0.777	93.33
Farming restricts urban contact and recreational enjoyment	1.889	0.629	68.89
None of the Indian agriculture produce can compete in the global agriculture market	1.622	0.540	46.67
Scientific farming will be profitable for me	2.311	0.770	91.11
Scientific farming requires high intelligence which is not possible for me	1.88	0.629	68.89
Indian farming sector does not have modern scientific technology	1.82	0.607	66.67
There is lack of innovations in farming	1.93	0.644	66.67
If youth comes to farming it would be made more scientific and innovative	2.46	0.822	91.11
Most of the farmers are below poverty line	1.8	0.6	55.55
Small scale farming cannot use modern techniques	1.867	0.622	66.67
Only large scale farming is profitable in India	1.93	0.644	68.89
There are policies which favour movement of youth out of agriculture	1.88	0.629	60
The Government should invest more in farming sector	2.222	0.740	84.44
Govt. should organise youth farmer clubs and related programmes to attract youth to agriculture	2.422	0.807	91.11
Agricultural scientist and staff are not working for progress of Indian farming	1.711	0.570	48.89
Extension workers concentrate more on adults than youth	1.978	0.659	71.11
Women have reluctance to talk to extension workers	2.222	0.740	84.44
Extension workers talk preferably to men than women	2	0.666	75.56
Lack of a constant source of income discourage the youth from farming	2.333	0.777	86.67
Agriculture is being changed as a female dominated profession, so young women should enter it	2.488	0.772	100
Many policies are women oriented so young females can take agriculture as profession	2.444	0.814	100
Farming is the noblest profession	2.244	0.748	80
Youth involved in farming have unattractive lifestyle	2.13	0.711	77.77

Youth migration retards growth of farming	2.22	0.740	84.44
Farming involves exposure to sun, chemicals, dust and dirt, which will ruin my beauty	1.93	0.644	68.88
Farmer is always dark and not good looking, so no one will marry me	1.778	0.592	60
Farmers is always exploited by middlemen	2.15	0.718	82.22
It is very difficult for a farmer to attend social functions	2	0.666	75.55
Environmental conservation laws have made farming difficult in the future	1.48	0.496	42.22
There is always a problem of credit for women	2.35	0.785	88.88
Lack of agency to guide an interested youth has retarded youth's interest in agriculture	2.2	0.733	80
Farming is a good solution for unemployment in our country	2.31	0.770	86.66
Farmers are most indebted persons of the country	2.2	0.733	82.22
There is decline in number of farmers now-a-days, so it will be profitable in future if I go for farming	2.15	0.718	84.44
Farming is mostly dependent on nature	2.044	0.681	75.55
Farming is a tough walk, so I can't handle it	2.11	0.703	75.55
Selling of farm produce at profitable price is not possible now-a-days	2.24	0.748	84.44
Commission agents and input dealers earn more from farming than farmers	2.44	0.814	97.77
High risk is involved in farming	2.4	0.8	95.55
Industry is the future of India, not agriculture	2	0.666	68.88
Farming in India is still traditional and backward	2	0.666	71.11
No parent wants their daughter to be a farmer	2.42	0.807	93.33
Only people with passion for farming can be engaged in agriculture	2	0.666	73.33
Non availability of timely inputs has retarded youth from farming	2.15	0.718	91.11
It is better to stay idle than opt for farming	1.8	0.6	60
Farming is good for men only	1.978	0.659	71.11

Accordingly, statements having relevancy percentage >75, relevancy weightage >0.70 and mean relevancy score >2.1 were considered for final selection of statements. Hence, 38 statements were selected after scrutiny.

Table 2. Statements for the item analysis for the respondents in non-sample area

Statements	t-value		
I will take up farming, as it is my family occupation	3.207	related programmes to attract youth to agriculture	
I am proud that my family occupation is farming	1.012	Agriculture is being changed as a female dominated profession, so young women should enter it	1.129
There have always being health issues to my parents being in farming, therefore I don't want to opt for it	1.438	Lack of a constant source of income discourage the youth from farming	1.129
Only people of the lower stratum of society will take up farming	3.230	Women have reluctance to talk to extension workers	2.067
I feel my self-esteem will go down if I choose to be a farmer	0.922	Many policies are women oriented so young females can take agriculture as profession	4.227
Farming is the most laborious profession	5.163	Farming is the noblest profession	1.129
Females can't be entrepreneur in farming	2.185	Youth involved in farming have unattractive lifestyle	1.490
It will be difficult for women to sustain as farmer	5.284	Youth migration retards growth of farming	1.205
Educated youth should come to farming sector	1.589	Farmers is always exploited by middlemen	1.490
I am well educated and don't want to go for agri.	5.397	There is always a problem of credit for women	2.470
No female wants a farmer as her groom	4.810	Lack of agency to guide an interested youth has retarded youth's interest in agriculture	1.282
Low price for agriculture produce along with high production cost has made farming uneconomical in the present age	1.690	Farming is a good solution for unemployment in our country	3.190
Agriculture is dominated by males and females don't have a say in it	2.599	Farmers are most indebted persons of the country	2.927
To ensure food security is by attracting youth towards agriculture	4.666	There is decline in number of farmers now-a-days, so it will be profitable in future if I go for farming	1.494
Peer pressure does not support the female involvement in agriculture	3.050	Farming is a tough walk, so I can't handle it	1.069
Scientific farming will be profitable for me	4.159	Selling of farm produce at profitable price is not possible now-a-days	1.613
If youth comes to farming it would be made more scientific and innovative	5.006	Commission agents and input dealers earn more from farming than farmers	3.616
The Govt. should invest more in farming sector	4.340	High risk is involved in farming	1.150
Govt. should organise youth farmer clubs and	1.649	No parent wants their daughter to be a farmer	1
		Non availability of timely inputs has retarded youth from farming	0.395

Table 3. The statements in the final scale

Statements (Nature of statement)	MA	HA	A	LA	LeA
I will take up farming, as it is my family occupation (+)					
Only people of the lower stratum of society will take up farming (-)					
Farming is the most laborious profession (-)					
Females can't be entrepreneur in farming (-)					
It will be difficult for women to sustain as farmer (-)					
I am well educated and don't want to go for agriculture (-)					
No female wants a farmer as her groom (-)					
Agriculture is dominated by males and females don't have a say in it (-)					
To ensure food security is by attracting youth towards agriculture (+)					
Peer pressure does not support the female involvement in agriculture (-)					
Scientific farming will be profitable for me (+)					
If youth comes to farming it would be made more scientific and innovative (+)					
The Government should invest more in farming sector (+)					
Women have reluctance to talk to extension workers (-)					
Many policies are women oriented so young females can take agriculture as profession (+)					
There is always a problem of credit for women (-)					
Farming is a good solution for unemployment in our country (+)					
Farmers are most indebted persons of the country (-)					
Commission agents and input dealers earn more from farming than farmers (-)					

Selection of statements for the final scale: After computing the t-value for the statements, the thumb rule of rejecting items with 't' value less than 1.75 was followed (Edwards, 1957). Thus, the statements having the highest t-values were selected. Thus, a total of 19 statements were selected.

Standardisation of the scale: The scale developed was further standardized by establishing its reliability and validity.

Reliability: Reliability is the ability of a test instrument to yield consistent results from one set of measures to another. According to Kerlinger (1964) reliability is the accuracy or precision of a measuring instrument. The reliability was tested using Cronbach's alpha technique. Cronbach's alpha is a measure of internal consistency, that is, how closely related a set of items are as a group. It is considered to be a measure of scale reliability. The formula for the standardized Cronbach's alpha is:

$$\alpha = \frac{N \cdot \bar{c}}{\bar{v} + (N - 1) \cdot \bar{c}}$$

Where, N is equal to the number of items, c-bar is the average inter-item covariance among the items and v-bar equals the average variance.

The alpha coefficient for the 38 items was 0.983, suggesting that the items have excellent internal consistency. The reliability coefficient of 0.70 or higher is considered "acceptable" in most social science research situations.

Validity: The content validity is the representative of the content, the substance, the matter and the topics of a

measuring instrument. The content of the statements covered an exhaustive aspect of the attitude of young rural women towards agriculture with the review and validation of the experts, therefore, it was assumed that content and face validity was satisfying.

Method of scoring: For each positive statement the score ranged from 5 to 1 with 5 for most acceptable, 4 for highly acceptable, 3 for acceptable, 2 for less acceptable and 1 least acceptable. Scoring pattern was reversed for negative statements. The scale consists of 19 items having 7 positive and 12 negative statements. The final scale was further used to study the attitude of young rural women towards their participation in agriculture.

CONCLUSION

Although, there has been an explosion of interest in recent years towards the study of youth in relation to agriculture, but they mainly focus on male youth. The importance of rest 50 per cent of the population cannot be neglected and there is still a dearth of studies related to the young women. The attitudes of the young rural women with respect to agriculture in particular have not been documented well. Therefore, the scale was designed to assess the attitude of young rural women towards agriculture. Further, the scale can be used to analyse the attitude of young rural women beyond the study area with required modifications.

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