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A SCALE TO MEASURE SELF-CONFIDENCE OF RURAL YOUTH ABOUT ORCHARD FARMING

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ABSTRACT

Orchard farming is the fastest growing sector in India and contributes immensely to poverty eradication and nutritional security. This sector has immense scope in India to increase the income and employment for the population and helps in sustaining a large number of industries.Orchardcrops play a unique role in the Indian economy by improving the income of the farmers. For understanding the orchard farming adopting self-confidence of rural youth, the scale to measure the orchard farming adopting self-confidence of rural youth was developed. In initial stage, 36 statements reflecting self-confidence of rural youth about orchard farmingwere collected from relevant literature and discussion with experts of extension and horticulture disciplines. The collected statements were edited according to the criteria laid down by Edward (1957) and then 27 statements reflecting self-confidence of rural youth about orchard farming were selected as they were found to be unambiguous.Based on the median and Q values, 12 statements reflecting self-confidence of rural youth about orchard farming were finally selected to constitute self-confidence scale.The test was found to be reliable (0.81) and valid.

Keywords: *orchard farming, self-confidence, rural youth, horticulture, scale development*

INTRODUCTION

Cultivators are said to be very important citizens on this earth because they feed the world. They are the most independent, vigorous and virtuous individuals. India is an agricultural country with 143 million hectares of land as net sown area, the highest percentage of land under cultivation in the world. The country accounts for 17 per cent of the world's population and 2.4 per cent of the world's area. Horticulture sector encompasses a wide range of crops such as fruit crops, vegetable crops, ornamental crops, spices, medicinal and aromatic crops etc. Orchard farming is the fastest growing sector in India and contributes immensely to poverty eradication and nutritional security. This sector has immense scope in India to increase the income and employment for the population and helps in sustaining a large number of industries. Orchard crops play a unique role in the Indian economy by improving the income of the farmers. With this backdrop, the present research study on 'Development and standardization of a scale to measure the self-confidence of rural youth about orchard farming is undertaken with the following objective.

OBJECTIVE

To develop scale to measure the self-confidence of rural youth about orchard farming

METHODOLOGY

In the present study self-confidence is conceptualized as the abilities and belief on oneself to be a part of orchard farming independently. Among the techniques available, 'Scale product method' which combines the Thurstone's technique (1928) of equal appearing interval scale for selection of items and Likert's technique (1932) of summated rating for ascertaining the response on the scale as proposed by Eysenck and Crown (1949) was used. The steps followed to develop the scale in sequence were item collection, item analysis, determination of scale and 'Q' values, finding reliability of the scale and validity of the scale. The methods are followed as suggested by Vinaya et al. (2018), Jagadeeswari, et al. (2019), and Yeragorla et al. (2021).

Item collection

The items of self-confidence scale are called as statements. In initial stage, 36 statements reflecting self-confidence of rural youth about orchard farming were collected from relevant literature and discussion with experts of extension and horticulture disciplines. The collected statements were edited according to the criteria laid down by Edward (1957) and then 27 statements reflecting self-confidence of rural youth about orchard farming were selected as they were found to be unambiguous.

Item analysis

In order to judge the degree of 'Unfavorableness' to 'Favorableness' of each statement on the five point equal appearing interval continuum, a panel of judges was selected. Fifty slips of the selected statements were handed over to the experts connected with extension educational and orchard farming work. The judges were requested to judge each statement in terms of their most agreement to most disagreement with the statements with the five equal appearing interval continuums. All 50 experts returned the statements after duly recording their judgments and were considered for the analysis.

Determination of scale and 'Q' values

Frequency distribution of the judges based on responses in five continuums was prepared. On the bases of judgment, the median value of the distribution and the Quartile (Q) value for for each of 36 statements was calculated with the help of following formula.

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

Where,

S = Scale value

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

$\sum_{Pb}$ = The sum of the proportion below the interval in which the median falls

P_w = The proportion within the interval in which the median falls

i = The width of the interval and is assumed to be equal to 1.0 (one).

Thurstone and Chave (Edwards, 1957) used the inter-quartile range Q as a means of the variation of the distribution of the judgments for a given statement. To determine value of Q, two other point were measured, the 75th centile and 25th centile.

The 25th centile was obtained by the formula.

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

Where,

C_{25} = The median or scale value of the statement

L = The Lower limit of the interval in which the 25th centile falls

$\sum_{Pb}$ = The sum of the proportion below the interval in which the 25thcentile falls

P_w = The proportion within the interval in which the 25th centile falls

i = The width of the interval and is assumed to be equal to 1.0 (one).

The 75th centile was obtained by the following formula.

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

Where,

C_{75} = The median or scale value of the statement

L = The Lower limit of the interval in which the 75th centile falls

$\sum_{Pb}$ = The sum of the proportion below the interval in which the 75th centile falls

Pw = The proportion within the interval in which the 75th centile falls

i = The width of the interval and is assumed to be equal to 1.0 (one).

Then the interquartile range would be given by taking the difference between C_{75} and C_{25}, thus,

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

The inter-quartile range ($Q = Q_3 - Q_1$) for each statement was worked out for determination of ambiguity involve in the statement. 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 this,12 statements reflecting self-confidence of rural youth about orchard farming were finally selected to constitute self-confidence scale. The selected 12 statements reflecting self-confidence of rural youth about orchard farming for final format of the self-confidence scale were randomly arranged to avoid response bias. The final format of the scale is presented in Table: 1.

Reliability of the scale

To know the consistency of the scale, reliability was worked out. The split-half technique was used to measure the reliability of the scale. Selected 12 statements reflecting self-confidence of rural youth about orchard farming were divided into two equal halves with 6 odd and 6even numbered statements. Each of the two sets was treated as separate scales

having obtained two score, for each of the 20 respondents. Co-efficient of reliability between two sets of score was calculated by Rulon's formula (Guilford 1954), which was found 0.81.

Validity of the scale

The validity of content of scale was examined by discussing with specialists of the extension, horticulture and statistics. Specialists examined and realized appropriateness of the each statement to measure the orchard farming adopting self-confidence of rural youth.

Administration of the scale (Scoring technique)

For application of the scale, the researcher can collect information against each statement in five point continuum viz. 'Strongly agree', 'Agree', 'Undecided', 'Disagree' and 'Strongly disagree' with weighted score of 5,4,3,2 and 1 for positive and reverse to negative statements (Table 1).

Table 1 : Final format of selected statements to measure the self-confidence of rural youth for adopting orchard farming

Sr. No.	Statement	SA	A	UD	DA	SDA
1	I have enough confidence to establish an orchard farm on my own (+)					
2	I am confident to choose the ideal varieties of fruit crops for my farm (+).					
3	I am self-reliant to manage plant protection measures in orchard farming (+).					
4	Managing Integrated Pest Management in orchard farming is beyond my capacity(-)					
5	I can handle plant protection appliances independently in orchard farming (+).					
6	I am not confident to do training in my fruit trees(-)					
7	I have self-confidence to handle Integrated Nutrient Management in orchard farming (+).					
8	I am capable to produce quality fruit productions (+).					
9	I am confident to handle risks involved in orchard farming independently (+).					
10	I am not good at the maintenance of machinery used in my orchard farming (-).					
11	I am confident to include scientific methods in my orchard farming (+).					
12	I feel self-reliant in adopting orchard farming permanently (+).					

SA = Strongly Agree, A = Agree, UD = Undecided, D = Disagree, SDA = Strongly Disagree

CONCLUSION

Looking to the value of reliability and validity of the scale it is advised to use/apply this scale for further research.

CONFLICT OF INTEREST

The authors of the paper declare no conflict of interest.

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