

A Scale for Measurement of Empowerment

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ABSTRACT

Since independence a number of poverty alleviation programmes including agricultural developmental programmes was launched. Development programme intending to improve rural, livelihoods normally targeted men in early eighties. However, in the latter decade to today the programmes are being increasingly focused towards women. Close relationships refer to the ability to negotiate and influence the nature of one's relationships and the decisions made within them. Collective empowerment involves individuals working together to achieve a greater impact than they could have achieved alone. This detailed study together with strict follow-up of data collection from the sample respondents has been extremely useful in developing a relatively consistent tool to measure farmers' empowerment.

Key words *Scale, item, reliability, validity and empowerment*

Empowerment can take place at a hierarchy of different levels individual, household, community and society and is facilitated by providing encouraging factors and removing inhibiting factors. Investments in capacity building among women have increased during the last three decades in many developing countries. Development programme intending to improve rural, livelihoods normally targeted men in early eighties. However, in the latter decade to today the programmes are being increasingly focused towards women. The United Nations and World Bank have highlighted the importance of empowering women. Especially, the poor that live in rural areas. One of the Eight Millennium Development Goals is promotion of gender equality. The World Bank has recommended that women empowerment should be a feature of all development programmes. Empowering women is considered essential not only for their personal well being and welfare at household level but women are often considered to be a member of society who pass one social norm and modify the quality and quantity of country's future generations. Thus investments in women are seen as strategies that can generate well being of entire societies (Gupta and Yesudian, 2006). Women have come to be considered as key factor of sustainable development. Empowerment of women has become a strategic tool to defeat poverty and experience has shown that it leads to improving life conditions within households and communities. According to (Sida, 2011 and Vijayanthi, 2002) studies have demonstrated that the link between economic growth, greater educational skills among youth, poverty reduction and empowerment of women has mentioned that empowerment should give women freedom of choice, equal access to domestic and community resources, opportunities and powers. In a study in Honduras

recognized three levels of empowerment: personal empowerment, close relationships, and collective empowerment. Personal empowerment refers to developing a sense of self-confidence, capacity and undoing the effects of internalized oppression. Close relationships refer to the ability to negotiate and influence the nature of one's relationships and the decisions made within them. Collective empowerment involves individuals working together to achieve a greater impact than they could have achieved alone. The entire process involves some degree of personal development and involves moving from insight to action. It is also agreed that certain key measures of empowerment such as decision-making, self-confidence and self-esteem are very difficult to measure (Kulkarni, 2011).

MATERIALS AND METHODS

Empowerment of tribal women in social, economic, technological and political sphere was to be seen hence for assessing the empowerment of the tribal women. The scale was constructed the procedure followed for developing scale is described as follows.

Reliability and validity of scale

Validity refers to the property of the scale which ensures that the obtained test scores measure the variable that it supposes to measure. In other words it will ascertain whether test will measure what it is intend to measure. The tool for empowerment was standardized on the basis of content validity. It was validated on the basis of suitability of items. The experts examined carefully the outline of the content and the object for which the statements were designed.

Total 86 statements after reviewing the literature on different aspects of empowerment from different sources and agencies. The statements were than categorized into social, political, economical and technological empowerment. The selected statements were sent to experts to give their response related to suitability of the item. Reviewing the statements by the subject matter experts they were again clubbed into 54 statements. Finally 54 statements were selected for preparing final the empowerment tool.

The schedule of scale was sent to the 30 experts in the field of women development, working in KVK and were having experiences in the field of women empowerment, gender equality, women development programme implementation etc. The judges were selected from all over India. The judges were asked to give there expert opinion about the statement as 'relevant' or 'non relevant' from three point continuum scale to be developed for the empowerment.

The schedule of scale was sent to the judges through email, postal *dak*, local judges were given the schedule of scale personally and also collected the schedule personally

Table 1. Statements empowerment of tribal women

Si. No.	Statement	Scale value	Q value
A. Economic Empowerment			
1.	I decide upon kind of inputs for the farm (fertilizers, pesticides seeds etc) in consultation with my family members	7.3	1.2
2.	I have information on Mandi rates	7.4	1.3
3.	I decide upon how much and when to sell the produce in the market	6.3	1.5
4.	I can spent the farm income as and when the need be	7.2	1.1
5.	I regularly handle household expenditure	7.4	1.2
6.	I have a say in the purchase of household assets	7.5	1.3
7.	I borrow money for farm activities from various financial institutions.	7.5	1.1
8.	I know that I can procure fertilizers from societies on credit	7.5	1.4
9.	I often hire labour required for the farm	9.6	2.4*
10.	I have freedom to increase or decrease the area of sowing	8.3	2.8*
11.	I borrow money for farm activities from various financial institutions.	8.1	2.3*
B. Political Empowerment			
1.	I participate in discussions on new technology in peer groups/ group meetings	7.5	1.3
2.	If I come across a new technology, I often inform the peer group about it	5.3	1.1
3.	I participate in group activities of KVKs	6.9	1.4
4.	I often put forth my opinion and ideas in front of officials and others	5.8	1.5
5.	My opinion is valued and considered important at Panchayat level	5.1	1.2
6.	I am invited to meetings and functions of other organizations other than KVK	7.2	1.3
7.	I often put my views in field day Kisanmela or other function of KVK.	6.8	1.4
8.	I am aware of programmes taken by Gram Panchayat in my village	7.9	1.3
9.	I complete the task assigned to me by the group / KVK	5.7	2.4*
10.	I raise community problem in front of the officials	8.3	2.7*
C. Social Empowerment			
1.	I can easily adjust with outsiders who are not necessarily from my own community	5.9	1.4
2.	I often attend training programmes conducted by the KVK (On campus)	6.9	1.5
3.	I attend the training programmes conducted by KVK at my village only (Of campus)	7.9	1.4
4.	I am included in discussion on farm and livestock	6.6	1.3
5.	I have started a new activity after receiving training of KVK	6.9	1.5
6.	I plan spending of money during family and social function	6.8	1.4
7.	I often go to the village market for buying and selling of farm produce & other products	7.9	1.5
8.	I go to other village/places to for participate in meetings	6.8	1.2
9.	I feel shy in front of men and in large groups	8.3	2.5*
D. Technological Empowerment			
1.	I often try out new agricultural practices	6.6	1.4
2.	I can identify pests and diseases in crops	7.6	1.3
3.	I am able to use knowledge about time and control of diseases	7.8	1.1
4.	I seek information on new crop varieties	6.9	1.2
5.	Use of drudgery reducing equipments lessens the workload (maize shelter, seratted sickle, wheel hoe, sprayer)	6.6	1.1
6.	I use improved methods of compost making (NADEP, pit making, Fresh Fermented cowdung)	6.4	1.4
7.	I know about the different varieties of Mushroom for Mushroom production	7.2	1.3
8.	I believe in value addition of the farm products and local available food materials	7.8	1.4
9.	I apply commonly used insecticides and pesticides	8.6	2.3*
10.	Residual effects of insecticides and pesticides are harmful for consumption	8.3	2.2*
11.	I know about soil management in different crops	8.4	2.6*

after their expert opinion. The continuous follow up was made to get the schedule back at the earliest. The schedule was sent in the month of March 2013 and was returned back by the experts in the month of April, 2013.

Scoring procedure for scale and final format of the scale

In all 24 experts responses were received. After compilation of the statements, the statements which got 50 percent of favour were kept in the scale schedule. At this point 41 statements were finalized and for these statements scale values were calculated. The statements which had high 'Q' value marked with (*) were removed from the scale as they were having high discrepancies in the experts responses. Finally 32 statements were kept in the scale and the scale was tested in the field in the month of May 2013 at Bastar. The scale was administered on the 100 samples i.e. 50 beneficiaries and 50 non beneficiaries. The raw data was compiled as per the score assigned as follows for always-3, sometimes 2 and for never 1. On the basis of the score assigned the reliability of scale was calculated.

Scale value and inter quartile range of scale

The scale values and Q values for 41 statements were computed by calculating the median (S) and inter quartile range (Q) by using following formula

$$S = 1 + [(0.50 - apb) / pw] \times i$$

Where,

S= the median of the scale value

l= the lower limit of the interval in which the median falls

apw=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 assumed to be equal to 1.00

The inter quartile range (Q) was computed by using following formula

$$25^{\text{th}} \text{ centile} = 1 + [(0.50 - apb) / pw] \times i$$

Where,

l= the lower limit of the interval in which the 25th centile falls

apw=the sum of the proportion below the interval in which the 25th centile falls

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

i= the width of the interval assumed to be equal to 1.00

$$75^{\text{th}} \text{ centile} = L + [(0.50 - apb) / pw] \times i$$

Where,

l= the lower limit of the interval in which the 75th centile falls

apw=the sum of the proportion below the interval in which the 75th centile falls

P_w = the proportion within the interval in which the 75th falls

i= the width of the interval assumed to be equal to 1.00

For estimating the Q value, Q₁(first quartile or 25th percentile) and Q₃ (third quartile or 75th percentile) were calculated and the inter quartile difference between these two quartiles represented Q value

$$Q = 75^{\text{th}} \text{ centile} - 25^{\text{th}} \text{ centile}$$

When there is good agreement among the subjects in judging the degree of positive feeling of a statement, Q value will be small. A large Q values indicates disagreement among the judges. Accordingly (Thurstone, Chave, 1929) regard large Q values primarily as an indication that a statement is ambiguous. It is also maybe due to the fact that statement is interpreted in more than one way by subject. The scale and Q values for all 38 statements were calculated. The statements with large Q values omitted as they were considered vague and ambiguous.

Reliability of the scale

The reliability refers to the consistency of measurement for calculating reliability split half method was used.

Split half method

This method consists in breaking the original test into two equivalent halves and computing the correlation (r_{hh}) between the scores, in half test. The coefficient of the reliability r_{rr} for the whole test is calculated r_{hh} of the half by using Spear Man Brown formula.

$$r_{hh} = \frac{2r_{hh}}{1 + r_{hh}}$$

The score for reliability was 0.832 suggesting that the scale had a very high degree of reliability or internal consistency.

Final selection of the statements

In the present study the statement with smaller Q values were finally selected. The statements having higher Q values were eliminated. Equal number of the statements were kept in the scale i.e. eight statement for each category. Following thirty two statements were selected.

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