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Development of scale to measure the empowerment of farm women in eastern dry zone of Karnataka

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Abstract

In the present study reliability of empowerment scale was determined by two methods, namely, test retest method and Brown Prophecy Formula, which is otherwise called as Split-half method.

The correlation between the two sets of scores was calculated by using Pearson-product moment correlation coefficient. The 'r' value of 0.829 was found to be significant at 0.01 level of probability indicating high degree of evidence of reliability. The co-efficient of correlation between two sets of score was 0.755. The Pearson-product moment correlation coefficient formula was employed to find out the Split-half reliability for total length of scale. The reliability value was found to be significant at 0.01 level of probability indicating high reliability of the scale. The content validity indicates how adequate the content of the scale is. It was established in two ways; firstly, the items selected for inclusion in the scale were based on extensive review of literature. Secondly, the opinion of the panel of judges, discussion with experts and resource personnel was done to find whether the statements suggested were suitable for inclusion in the scale or not. Thus, validity of the present scale is established. The scale consists of item was provided with a five point continuum and the response categories were Strongly Agree (SA), Agree (A), Undecided (U), Disagree (D), Strongly Disagree (SD). The considered item was scored in the above said pattern, which received 5, 4, 3, 2 and 1 score, respectively. The cumulative score of each respondent for all the statements was considered as Extent of Empowerment of farm women score for that individual. The minimum possible score was 86 whereas the maximum possible score was 430.

Keywords: Scale, empowerment, reliability, validity

Introduction

The concept, Women empowerment, was introduced at the international women's conference is 1985 at Nairobi. In India, empowering women, especially at the grassroots level was focused in the Eighth five year plan (1992-1997) through Panchayati Raj Institutions and empowering women through translating the recently adopted National Policy for Empowerment of Women (2001) into action and ensuring survival, protection and development of women and children through rights based approach was taken care in Tenth five year plan (2002-2007).

Empowerment of women is a socio-political ideal, encompassing notions of dignity and equality, envisioned in relation to the wider framework of women's rights. It is a process of gaining control over self, over resources and over existing societal perceptions and attitudes and would be achieved only when an improvement in the 'condition' of women is accompanied by an advancement in their 'position' by enlarging the economic, social and political freedoms and choices available to them.

But this may require the support of development agencies. Importantly the study attempt to asses' the extent of farm women empowerment belong to different land holding category. The designed study is intended to evolve meaning full empowerment scale which serves as a tool for estimating empowerment level of farm women. Based on results of this study, it is hoped that appropriate strategies can be worked out to improve their level of empowerment

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Women's empowerment and the movement toward gender equality is a modern phenomenon that continues to develop around the world.

Empowerment implies intellectual enlightenment, economic enrichment and social emancipation of women. The core strength of empowerment lies in the ability of a woman to control her own destiny. An empowered, a woman must have equal opportunities, equal capabilities and equal access to resources. Furthermore, she should be enabled to use those rights, capabilities, resources and opportunities to make strategic choices and decisions in her life. The concept of women empowerment is associated with gender equality. Gender equality and women empowerment are central to the achievement of different national developmental goals. Various development policies, programmes and the efforts put in by both government and non-government organizations in empowering women can bring out perceptible improvement in the status of women only when they are in line with the cultural expectations.

Empowerment is the process of enabling or authorizing an individual to think, behave, take action and central work in an autonomous way. It is the process by which one can gain control over one's destiny and the circumstances of their lives. Empowerment can be viewed as means of creating a

social environment in which one can make decisions and make choices either individually or collectively for social transformation. Empowerment is the process by which those who have been denied the ability to make choices acquire such ability (Kabeer and Naila, 1999; 2005).

Women empowerment enables autonomy and control over their lives. The empowered women become agents of their own development, able to exercise choices to set their own agenda and be strong enough to challenge their subordinate position in the society. Keeping this in view, the present investigation was planned at five districts in eastern dry zone of Karnataka during 2019-20.

Materials and Methods

Even though there are number of studies related to the empowerment of women it was observed that in those studies few components related to the empowerment was covered. Keeping this in view it was decided to develop the scale to measure the empowerment of women by considering all the components as far as possible. The different steps adopted for this purpose are elaborated in forth coming paragraph.

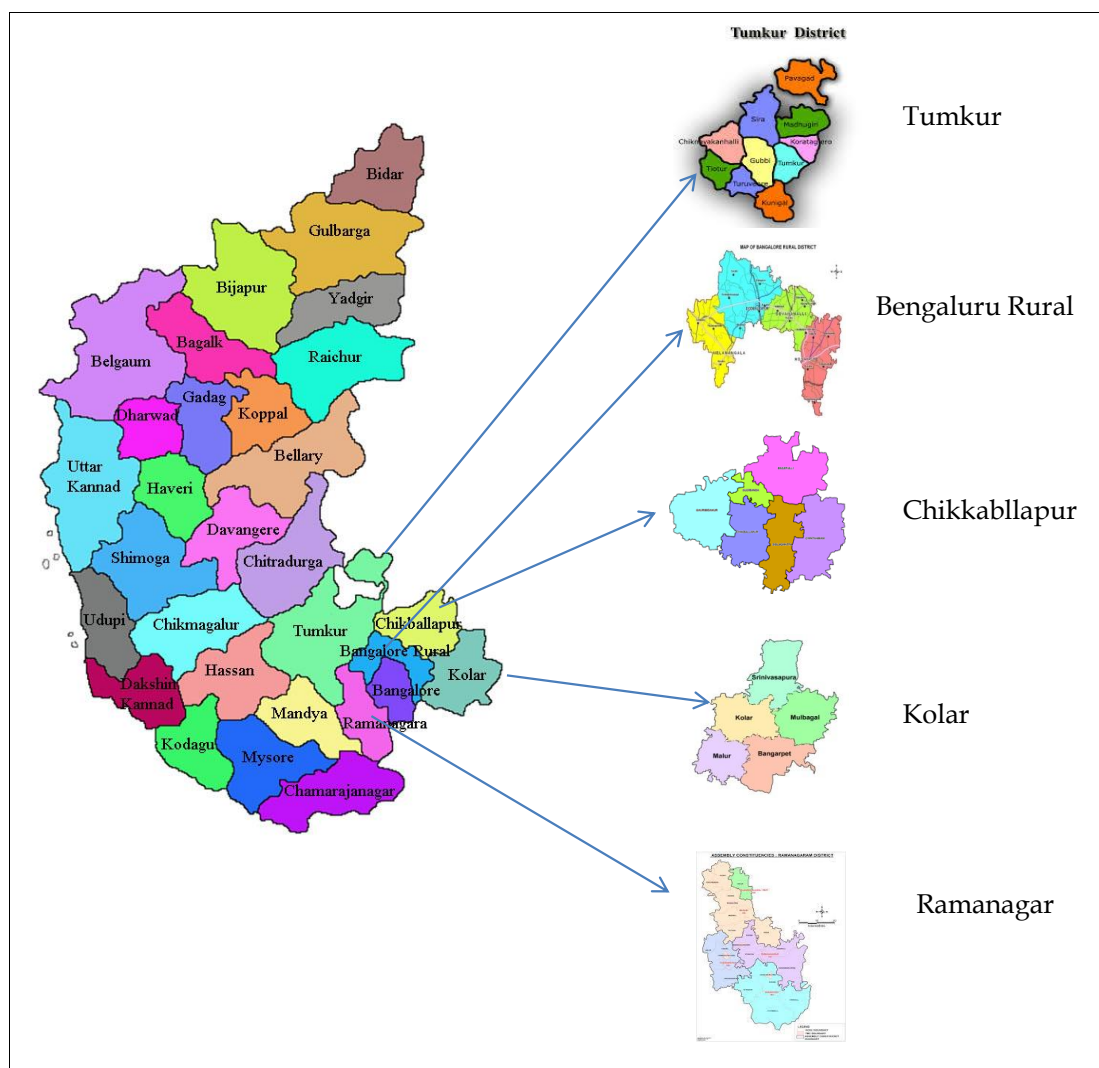


Fig 1: Locations of the study

Pooling of experts opinion

A thorough review of literature related to the empowerment was done. After preparing the draft of broader outlines regarding the components and sub components, it has been

discussed with experts in extension and other social sciences. Finalization of components and sub components was done with proper care by pooling the expert's opinion. In the final format, 'Economic', 'Social', 'Health', 'Political', 'Legal'

and 'Psychological' components were retained.

Collection of items

A various factor contributing to the empowerment have been thoroughly reviewed. This was done by review of literature and in consultation with the extension experts, field functionaries and administrators. As a result of this work a list of 122 items were prepared as given in the Appendix I, which encompasses different components of empowerment. The items thus prepared were screened further for their appropriateness, simplicity, clarity and correctness

Development of scale to measure the empowerment of farm women

Note: Please indicate the relevancy of items under each component of empowerment of farm women viz., most

relevant/relevant/partially relevant/least relevant/not relevant by putting (√) mark in appropriate column. You are also requested to add any other relevant items if necessary, under relevant column.

Economic empowerment

Economic empowerment of farm women refers to exercising the control over economic resources and her contribution to the family which enables her to make decision related to the house hold expenditure which helps farm women to involve more in economic activities.

We have identified five components related to economic empowerment.

1) Decisions taken related to house hold expenditure

SL. No.	Items	RW	RP	MRS	T-Value
1	Day to day family expenditure	0.87	86.90	4.34	0.71 ^{NS}
2	Expenditure related to food	0.86	85.52	4.28	1.16 ^{NS}
3	Expenditure related to clothes	0.84	84.48	4.22	2.25*
4	Expenditure related to marriage	0.80	80.00	4.00	2.04*
5	Expenditure related to festival	0.82	82.41	4.12	2.17*
6	Expenditure related to house construction	0.75	74.83	3.74	2.10*
7	Expenditure related to house modification	0.75	75.17	3.76	2.12*
8	Expenditure related to land purchase	0.73	73.10	3.66	2.06*
9	Agriculture expenditure	0.86	85.86	4.29	1.47 ^{NS}
10	Children's health	0.87	86.90	4.34	0.71 ^{NS}

2) Control over economic resources

SL. No.	Items	RW	RP	MRS	T-Value
1	Control over income from agriculture	0.85	85.17	4.26	1.53 ^{NS}
2	Control over own savings	0.86	85.52	4.28	1.53 ^{NS}
3	Control over loans to be repaid	0.86	86.21	4.31	1.47 ^{NS}
4	Control over income from allied activities	0.82	81.72	4.09	2.10*
5	Control over other types of benefits from government like subsidies, funds etc	0.76	75.86	3.79	2.04*

3) Contribution to the family support

SL. No.	Items	RW	RP	MRS	T-Value
1	Through earning labour	0.86	85.52	4.28	1.08 ^{NS}
2	Through savings	0.86	86.21	4.31	1.53 ^{NS}
3	Raising loans	0.83	82.76	4.14	1.99*
4	Taking up subsidiary activities like poultry, fishery, dairy	0.86	85.52	4.28	1.08 ^{NS}
5	Collection of pongamia seeds, castor seeds etc	0.74	73.79	3.69	2.06*

4) Involvement of farm women in marketing activities

SL. No.	Items	RW	RP	MRS	T-Value
1	Purchase of inputs	0.86	85.52	4.28	2.01*
2	Selection of market	0.79	78.62	3.93	2.17*
3	Taking farm products to the market	0.79	78.97	3.95	2.04*
4	Negotiate with the trader	0.78	77.59	3.88	3.33**

5) Involvement in banking activity

SL. No.	Items	RW	RP	MRS	T-Value
1	Operating the bank account	0.86	85.52	4.28	1.08 ^{NS}
2	Communicating with the bank officials	0.86	85.52	4.28	1.08 ^{NS}
3	Transaction of the bank account	0.83	82.76	4.14	2.25*

Social empowerment

Social empowerment refers to physical mobility of farm women and participation in programmes which enable her to

become part of the social sphere of life which encourages freedom in personal decision making and leadership quality.

1) Physical mobility

SL. No.	Items	RW	RP	MRS	T-Value
1	Visit nearby market to purchase the household items	0.87	86.90	4.24	1.59 ^{NS}
2	Visit nearby market to sell the produce	0.88	87.59	4.38	1.26 ^{NS}
3	Visit relatives house to attend family function	0.88	87.93	4.40	1.08 ^{NS}
4	Visit to the hospital to get the health service	0.89	89.31	4.47	1.53 ^{NS}
5	Visit to the bank for financial transactions	0.86	85.86	4.29	1.59 ^{NS}
6	Visit to the government department	0.85	85.17	4.26	2.11*
7	Visit to the Self Help Groups	0.87	87.24	4.36	1.26 ^{NS}
8	Visit to the Non-Governmental Organizations	0.82	82.07	4.10	1.99*

2) Participation in programmes organized by the social organizations

SL. No.	Items	RW	RP	MRS	T-Value
1	Participation in Self Help Group activities	0.89	88.62	4.43	1.08 ^{NS}
2	Participation in Government department activities	0.88	87.59	4.38	1.50 ^{NS}
3	Participation in Cooperative activities	0.86	86.21	4.31	0.97 ^{NS}
4	Participation in Non-government organization activities	0.83	82.76	4.14	2.04*
5	Participation in Commodity based organization activities	0.74	73.79	3.69	2.69**

3) Interaction with the persons other than family members

SL. No.	Items	RW	RP	MRS	T-Value
1	Interaction with the neighbours	0.87	86.90	4.34	1.26 ^{NS}
2	Interaction with the village leaders	0.86	85.86	4.29	1.50 ^{NS}
3	Interaction with the village level workers	0.86	86.21	4.31	1.50 ^{NS}
4	Interaction with the political leaders	0.70	70.00	3.50	2.06*
5	Interaction with the volunteers of NGOs	0.82	82.41	4.12	2.26*

4) Personal freedom in decision making

SL. No.	Items	RW	RP	MRS	T-Value
1	Opting higher education	0.87	87.24	4.36	1.08 ^{NS}
2	Decision related to marriage timing	0.83	82.76	4.14	2.59**
3	Say in spouse selection	0.87	86.55	4.33	1.53 ^{NS}
4	Decision related to job selection	0.88	88.28	4.41	1.50 ^{NS}
5	Decision related to practicing rituals	0.87	86.55	4.33	1.26 ^{NS}
6	Decision related to way of dressing	0.88	87.59	4.38	1.50 ^{NS}

5) Exhibition of leadership quality

SL. No.	Items	RW	RP	MRS	T-Value
1	Ability to lead the group	0.88	87.93	4.40	1.26 ^{NS}
2	Speaking on behalf of the group	0.75	74.83	3.74	2.12*
3	Encouraging the team work	0.88	88.28	4.41	1.92 ^{NS}
4	Inspiring others to join the group	0.88	88.28	4.41	1.59 ^{NS}
5	Ability to form the group for any social cause	0.88	87.59	4.38	1.50 ^{NS}
6	Ability to sort the issue among the group	0.87	87.24	4.36	1.97 ^{NS}
7	Ability to influence the group members to move in one direction	0.87	86.90	4.34	1.26 ^{NS}

Health Empowerment

Health empowerment refers to women's accessibility to the nutrient food and modern health services which lead to better

health condition and her freedom in making decision related to personal health.

1) Accessibility of nutritious food

SL. No.	Items	RW	RP	MRS	T-Value
1	Intake of pulse	0.87	87.24	4.36	1.59 ^{NS}
2	Intake of vegetables	0.89	88.97	4.45	0.97 ^{NS}
3	Intake of fruits	0.88	87.59	4.38	1.26 ^{NS}
4	Intake of milk	0.88	87.59	4.38	1.97 ^{NS}
5	Intake of egg	0.86	86.21	4.31	1.08 ^{NS}
6	Intake of meat	0.86	86.21	4.31	1.26 ^{NS}

2) Decision making related to personal health

SL. No.	Items	RW	RP	MRS	T-Value
1	Decision making related to family planning	0.89	88.62	4.43	1.16 ^{NS}
2	Decision making related to number of children to have	0.87	87.24	4.36	1.26 ^{NS}
3	Decision making related to use of contraceptives	0.88	87.93	4.40	1.92 ^{NS}
4	Decision making related to vaccinating the child	0.86	85.86	4.29	1.50 ^{NS}

3) Access to modern health service

SL. No.	Items	RW	RP	MRS	T-Value
1	Access to clean water	0.87	86.90	4.34	1.50 ^{NS}
2	Presence of modern toilets in the house	0.86	85.86	4.29	1.26 ^{NS}
3	Protective measures to avoid mosquito bite	0.87	86.90	4.34	1.26 ^{NS}
4	Utilizing the services of asha volunteer	0.85	85.17	4.26	1.97 ^{NS}
5	Presence of skilled attendant during child birth	0.86	86.21	4.31	1.08 ^{NS}
6	Accessibility to Primary Health Centre	0.90	90.00	4.50	1.59 ^{NS}

Political Empowerment

Political empowerment of women refers to her involvement in political activities like voting, political campaign, her interest

towards present political system and the commitment to work for social justice and poverty alleviation.

1) Political participation Political participation

SL. No.	Items	RW	RP	MRS	T-Value
1	Participation in voting	0.87	87.24	4.36	1.08 ^{NS}
2	Participation in political programmes like campaigns, political march, protests, meetings etc	0.85	85.17	4.17	0.71 ^{NS}
3	Participation in election as a volunteer	0.87	87.24	4.36	1.08 ^{NS}
4	Promoting other persons to join the party	0.85	85.17	4.26	1.59 ^{NS}
5	Ability to contact politician for solving the problems	0.88	88.28	4.41	1.16 ^{NS}

2) Political commitment

SL. No.	Items	RW	RP	MRS	T-Value
1	Commitment to work for social justice	0.88	88.28	4.41	1.26 ^{NS}
2	Commitment to work for alleviating poverty	0.88	87.93	4.40	1.08 ^{NS}
3	Commitment to work for improving livelihood status	0.88	87.93	4.40	1.97 ^{NS}
4	Commitment to work for attaining economic equality	0.87	86.90	4.34	1.50 ^{NS}
5	Commitment to work for political equality	0.83	82.76	4.14	2.41*

3) Political interest

SL. No.	Items	RW	RP	MRS	T-Value
1	Extent of faith in present political system	0.79	78.62	3.93	2.12*
2	Interest to work as a party worker	0.73	73.45	3.67	2.41*
3	Extent of influencing other people to work for the party	0.76	75.52	3.78	2.06*
4	Extent of interest to take position in the political party	0.76	76.21	3.81	4.13**

Legal Empowerment

Legal empowerment of women refers to the extent of awareness and utilization of some of the important law to

improve the standard of living of farm women.

1. Awareness of the law

SL. No.	Items	RW	RP	MRS	T-Value
1	Aware of equal right to women in parental property	0.87	86.55	4.33	0.71 ^{NS}
2	Aware of dowry act	0.87	87.24	4.36	1.08 ^{NS}
3	Aware of act against domestic violence	0.87	86.55	4.33	1.08 ^{NS}
4	Aware of right to education act	0.86	85.52	4.28	1.50 ^{NS}
5	Utilization of MGNREGA	0.86	85.86	4.29	1.59 ^{NS}
6	Aware of child marriage act	0.88	87.93	4.40	0.71 ^{NS}
7	Aware of child labour act	0.84	84.48	4.22	3.33**

Psychological empowerment

Psychological empowerment refers to psychological process of enhancement in their ability to understand and analyse the

social environment, extent of change from traditional attitude to modern attitude, extent of assurance one possess about one's capabilities and controlling various issues.

1) Critical consciousness

SL. No.	Items	RW	RP	MRS	T-Value
1	Social discrimination	0.87	86.90	4.34	1.92 ^{NS}
2	Access to information	0.85	85.17	4.26	0.77 ^{NS}
3	Role of women in society	0.87	86.90	4.34	1.95 ^{NS}
4	Political participation	0.77	77.24	3.86	2.40*
5	Economic independence	0.86	85.52	4.28	1.08 ^{NS}
6	Role of education	0.85	85.17	4.26	1.50 ^{NS}

2) Transformation in attitudes

SL. No.	Items	RW	RP	MRS	T-Value
1	Superiority of men	0.84	84.48	4.22	2.59**
2	Rights in the parental property	0.86	85.52	4.28	1.08 ^{NS}
3	Adopting family planning by male	0.86	86.21	4.31	0.77 ^{NS}
4	Possessing a male child	0.80	79.66	3.98	3.17**
5	Essentiality of education	0.89	88.62	4.43	1.92 ^{NS}
6	Ability of women in performing male oriented job	0.85	84.83	4.24	0.77 ^{NS}

3) Role perception

SL. No.	Items	RW	RP	MRS	T-Value
1	Performance of farm and entrepreneurial activities	0.86	86.21	4.31	1.97 ^{NS}
2	Economic support by women	0.88	87.59	4.38	1.08 ^{NS}
3	Sharing household work by men	0.86	85.52	4.28	1.59 ^{NS}
4	Financial management	0.86	85.86	4.29	1.16 ^{NS}
5	Managing farm activities	0.87	86.90	4.34	1.50 ^{NS}

4) Self-perception

SL. No.	Items	RW	RP	MRS	T-Value
1	Feeling inferior	0.72	72.07	3.60	2.59**
2	Ability to solve the crisis	0.87	87.24	4.36	1.68 ^{NS}
3	Extent of belief in abilities for achieving success	0.88	87.59	4.38	1.16 ^{NS}
4	Influencing and convincing others easily about ideas	0.84	84.14	4.21	2.26*
5	Ability to speak in public	0.87	86.55	4.33	1.08 ^{NS}

5) Desire for control

SL. No.	Items	RW	RP	MRS	T-Value
1	Right to spend the earnings according to own priorities	0.87	86.55	4.33	1.08 ^{NS}
2	Authority for making decisions	0.87	86.90	4.34	1.08 ^{NS}
3	Resisting the oppression	0.86	86.21	4.31	1.53 ^{NS}
4	Planning developmental activities based on women priorities	0.86	85.52	4.28	1.16 ^{NS}

RW=Relevancy weightage, RP= Relevancy percentage, MRS= Mean Relevancy Score, * Significant at 0.05 level, **Significant at 0.01 level, NS= Non-significant

Selection of judges to test the relevancy of the scale items

After identifying the components of women empowerment it was decided to subject those for judges rating. A total numbers list of agricultural extension experts who had an overview of women empowerment was prepared. After continuous deliberation, it was decided to list those who had experience in the area. Therefore, a list of 110 judges was prepared who fulfilled the above criteria.

Judges rating

The judges rating were primarily used to ascertain the components of empowerment. The selected components of empowerment scale were mailed to 110 experts through self-addressed envelope, which include Directors of Extension, Professors of Agriculture Extension, Associate Professors and Assistant Professors/equivalent cadre working in Agricultural Universities, Research Institutes of Indian Council of Agricultural Research (ICAR) and Indian Agricultural Research Institutes (IARI). The judgment sheets (Appendix I) were prepared with suitable instructions and were requested to indicate their judgment on each of the components sent to them on a five point continuum *viz.*, Most Relevant (MR), Relevant (R), Partially Relevant (PR), Least Relevant (LR) and Not Relevant(NR). A score of 5, 4, 3, 2 and 1 were given for MR, R, PR, LR and NR, respectively. The responses were received from 64 experts of which 6 were rejected being incomplete. Thus the relevancy data furnished by 58 judges were taken into consideration for arriving at the selection of components for the scale.

In the scale 86 statements were retained out of 121 statements (Appendix-I), since more than 80 per cent of the judges rated them as relevant. It means all those components, which had equal to or greater than 0.80 per cent of relevancy weightage, were selected to measure the extent of empowerment. By this procedure, incidentally 35 components were eliminated. No new component was fit to include in the scale as very negligible number of judges had suggested new component. Relevancy weightage is defined as the ratio of actual score obtained by an item to the maximum possible score of that item. The following procedure was followed for calculating relevancy weightage. The response to each item was considered as a rating score and the score were summed up for all components. The relevancy test (RT) was carried out using the formula.

$$RT = \frac{\{[MRx5] + [Rx4] + [PRx3] + [LRx2] + [NRx1]\}}{58 \times 5}$$

PR=Partially Relevant

LR=Least Relevant

NR=Not Relevant

Where

MR= Most Relevant

R= Relevant

Appendix-II**The final scale items to measure empowerment of farm women****I. Economic empowerment****1. Decisions taken related to house hold expenditure**

SL. No.	Type of expenditure	RW	RP	MRS	T-Value
1	Day to day family expenditure	0.87	86.90	4.34	0.71 ^{NS}
2	Expenditure related to food	0.86	85.52	4.28	1.16 ^{NS}
3	Agriculture expenditure	0.86	85.86	4.29	1.47 ^{NS}
4	Children's health	0.87	86.90	4.34	0.71 ^{NS}

2. Control over economic resources

SL. No.	Economic sources	RW	RP	MRS	T-Value
1	Control over income from agriculture	0.85	85.17	4.26	1.53 ^{NS}
2	Control over own savings	0.86	85.52	4.28	1.53 ^{NS}
3	Control over loans to be repaid	0.86	86.21	4.31	1.47 ^{NS}

3. Contribution to the family support

SL. No.	Type of contribution	RW	RP	MRS	T-Value
1	Labour	0.86	85.52	4.28	1.08 ^{NS}
2	Savings	0.86	86.21	4.31	1.53 ^{NS}
3	Subsidiary activities like poultry, fishery, dairy	0.86	85.52	4.28	1.08 ^{NS}

4. Involvement in banking activity

SL. No.	Activities	RW	RP	MRS	T-Value
1	Operating the bank account	0.86	85.52	4.28	1.08 ^{NS}
2	Communicating with the bank officials	0.86	85.52	4.28	1.08 ^{NS}

II. Social Empowerment**1. Physical mobility**

SL. No.	Places	RW	RP	MRS	T-Value
1	Visit nearby market to purchase the household items	0.87	86.90	4.24	1.59 ^{NS}
2	Visit nearby market to sell the produce	0.88	87.59	4.38	1.26 ^{NS}
3	Visit relatives house to attend family function	0.88	87.93	4.40	1.08 ^{NS}
4	Visit to the hospital to get the health service	0.89	89.31	4.47	1.53 ^{NS}
5	Visit to the bank for financial transactions	0.86	85.86	4.29	1.59 ^{NS}
6	Visit to the Self Help Groups	0.87	87.24	4.36	1.26 ^{NS}

2. Participation in programmes organized by the social organizations

SL. No.	Activities	RW	RP	MRS	T-Value
1	Participation in Self Help Group activities	0.89	88.62	4.43	1.08 ^{NS}
2	Participation in Government department activities	0.88	87.59	4.38	1.50 ^{NS}
3	Participation in Cooperative activities	0.86	86.21	4.31	0.97 ^{NS}

3. Interaction with the persons other than family members

SL. No.	Persons other than family members	RW	RP	MRS	T-Value
1	Interaction with the neighbors	0.87	86.90	4.34	1.26 ^{NS}
2	Interaction with the village leaders	0.86	85.86	4.29	1.50 ^{NS}
3	Interaction with the village level workers	0.86	86.21	4.31	1.50 ^{NS}

4. Personal freedom in decision making

SL. No.	Activities	RW	RP	MRS	T-Value
1	Opting higher education	0.87	87.24	4.36	1.08 ^{NS}
2	Say in spouse selection	0.87	86.55	4.33	1.53 ^{NS}
3	Decision related to job selection	0.88	88.28	4.41	1.50 ^{NS}
4	Decision related to practicing rituals	0.87	86.55	4.33	1.26 ^{NS}
5	Decision related to way of dressing	0.88	87.59	4.38	1.50 ^{NS}

5. Exhibition of leadership quality

SL. No.	Activities	RW	RP	MRS	T-Value
1	Ability to lead the group	0.88	87.93	4.40	1.26 ^{NS}
2	Encouraging the team work	0.88	88.28	4.41	1.92 ^{NS}
3	Inspiring others to join the group	0.88	88.28	4.41	1.59 ^{NS}
4	Ability to form the group for any social cause	0.88	87.59	4.38	1.50 ^{NS}
5	Ability to sort the issue among the group	0.87	87.24	4.36	1.97 ^{NS}
6	Ability to influence the members of the group to move in one direction	0.87	86.90	4.34	1.26 ^{NS}

III. Health Empowerment

1. Accessibility to nutritious food

SL. No.	Activities	RW	RP	MRS	T-Value
1	Intake of pulse	0.87	87.24	4.36	1.59 ^{NS}
2	Intake of vegetables	0.89	88.97	4.45	0.97 ^{NS}
3	Intake of fruits	0.88	87.59	4.38	1.26 ^{NS}
4	Intake of milk	0.88	87.59	4.38	1.97 ^{NS}
5	Intake of egg	0.86	86.21	4.31	1.08 ^{NS}
6	Intake of meat	0.86	86.21	4.31	1.26 ^{NS}

2. Decision making related to personal health

SL. No.	Activities	RW	RP	MRS	T-Value
1	Decision related to family planning	0.89	88.62	4.43	1.16 ^{NS}
2	Decision related to number of children to have	0.87	87.24	4.36	1.26 ^{NS}
3	Decision related to vaccinating the child	0.88	87.93	4.40	1.92 ^{NS}
4	Decision related to the use of contraceptives	0.86	85.86	4.29	1.50 ^{NS}

3. Access to modern health service

Sl. No.	Services	RW	RP	MRS	T-Value
1	Access to clean water	0.87	86.90	4.34	1.50 ^{NS}
2	Presence of modern toilets in the house	0.86	85.86	4.29	1.26 ^{NS}
3	Protective measures to avoid mosquito bite	0.87	86.90	4.34	1.26 ^{NS}
4	Utilizing the services of ASHA volunteer	0.85	85.17	4.26	1.97 ^{NS}
5	Presence of skilled attendant during child birth	0.86	86.21	4.31	1.08 ^{NS}
6.	Accessibility to Primary Health Centre	0.90	90.00	4.50	1.59 ^{NS}

IV. Political Empowerment

1. Political participation

SL. No.	Activities	RW	RP	MRS	T-Value
1	Participation in voting	0.87	87.24	4.36	1.08 ^{NS}
2	Ability to contact politician for solving the problems	0.85	85.17	4.17	0.71 ^{NS}
3	Participation in political programmes like campaigns, political march, protests, meetings etc	0.87	87.24	4.36	1.08 ^{NS}
4	Participation in election as a volunteer	0.85	85.17	4.26	1.59 ^{NS}
5	Promoting other persons to join the party	0.88	88.28	4.41	1.16 ^{NS}

2. Political commitment

SL. No.	Commitment	RW	RP	MRS	T-Value
1	Commitment to work for social justice	0.88	88.28	4.41	1.26 ^{NS}
2	Commitment to work for alleviating poverty	0.88	87.93	4.40	1.08 ^{NS}
3	Commitment to work for improving livelihood status	0.88	87.93	4.40	1.97 ^{NS}
4	Commitment to work for attaining economic equality	0.87	86.90	4.34	1.50 ^{NS}

V. Legal empowerment

1. Awareness of the law

SL. No.	Items	RW	RP	MRS	T-Value
1	Aware of equal right to women in parental property	0.87	86.55	4.33	0.71 ^{NS}
2	Aware of dowry act	0.87	87.24	4.36	1.08 ^{NS}
3	Aware of act against domestic violence	0.87	86.55	4.33	1.08 ^{NS}
4	Aware of right to education act	0.86	85.52	4.28	1.50 ^{NS}
5	Utilization of MGNREGA	0.86	85.86	4.29	1.59 ^{NS}
6	Aware of child marriage act	0.88	87.93	4.40	0.71 ^{NS}

VI. Psychological empowerment

1. Critical consciousness

SL. No.	Items	RW	RP	MRS	T-Value
1	Social discrimination	0.87	86.90	4.34	1.92 ^{NS}
2	Access to information	0.85	85.17	4.26	0.77 ^{NS}
3	Role of women in society	0.87	86.90	4.34	1.95 ^{NS}
4	Economic independence	0.86	85.52	4.28	1.08 ^{NS}
5	Role of education	0.85	85.17	4.26	1.50 ^{NS}

2. Transformation in attitudes

SL. No.	Items	RW	RP	MRS	T-Value
1	Rights in the parental property	0.86	85.52	4.28	1.08 ^{NS}
2	Adopting family planning by male	0.86	86.21	4.31	0.77 ^{NS}
3	Essentiality of education	0.89	88.62	4.43	1.92 ^{NS}

3. Role perception

SL. No.	Items	RW	RP	MRS	T-Value
1	Performance of farm and entrepreneurial activities	0.86	86.21	4.31	1.97 ^{NS}
2	Economic support by women	0.88	87.59	4.38	1.08 ^{NS}
3	Sharing household work by men	0.86	85.52	4.28	1.59 ^{NS}
4	Financial management	0.86	85.86	4.29	1.16 ^{NS}
5	Managing farm activities	0.87	86.90	4.34	1.50 ^{NS}

4. Self-perception

SL. No.	Items	RW	RP	MRS	T-Value
1	Ability to solve the crisis	0.87	87.24	4.36	1.68 ^{NS}
2	Extent of belief in abilities for achieving success	0.88	87.59	4.38	1.16 ^{NS}
3	Ability to speak in public	0.87	86.55	4.33	1.08 ^{NS}

5. Desire for control

SL. No.	Items	RW	RP	MRS	T-Value
1	Right to spend the earnings according to own priorities	0.87	86.55	4.33	1.08 ^{NS}
2	Authority for making decisions	0.87	86.90	4.34	1.08 ^{NS}
3	Resisting the oppression	0.86	86.21	4.31	1.53 ^{NS}
4	Planning developmental activities based on women priorities	0.86	85.52	4.28	1.16 ^{NS}

RW=Relevancy weightage, RP= Relevancy percentage, MRS= Mean Relevancy Score, * Significant at 0.05 level, **Significant at 0.01 level, NS= Non-significant

Reliability of the scale

Reliability refers to the extent to which repeated measurement produce the same results. Any newly constructed scale has to be tested for its reliability before it is used. In the present study reliability of empowerment scale was determined by two methods, namely, test retest method and Brown Prophesy Formula, which is otherwise called as Split-half method.

Test retest reliability

Scale consistency was measured by employing test-retest method. The test conducted on 30 farm women from 3 villages in Ramanagar taluk of Ramanagar district with five point continuum *viz.*, Strongly agree (SA), Agree (A), Undecided (U), Disagree (D), Strongly Disagree (SD). After 15 days retest was conducted on same respondents. This

yields two independent sets of responses and the score of each respondent was calculated with a scoring pattern of 5, 4, 3, 2 and 1 for positive statements and for negative statements scores were reversed. The correlation between the two sets of scores was calculated by using Pearson-product moment correlation coefficient. The 'r' value of 0.829 was found to be significant at 0.01 level of probability indicating high degree of evidence of reliability.

Split-half reliability

It is used to measure the internal consistency of the scale. Items in whole test are divided into two halves that are odd numbered items and even numbered items. Scores were found out for individual statements of each half and scores of two halves were correlated. The co-efficient of correlation between two sets of score was 0.755. The Pearson-product moment correlation coefficient formula was employed to find out the Split-half reliability for total length of scale. The reliability value was found to be significant at 0.01 level of probability indicating high reliability of the scale.

Validity of the scale

Validity of the scale is the property, which ensures that the test scores obtained measure variable they are suppose to measure. Content validity and criterion validity are the methods generally followed to know the validity of the scale.

Content validity

According to Kerlinger (1966) [3], it is the representativeness or sampling adequacy of the contents, the substance, the matter and the topic of a measuring instrument. He further stated that, content validation consists essentially in judgement alone or with others; one judges the representiveness of item. The content validity indicates how adequate the content of the scale is. It was established in two ways; firstly, the items selected for inclusion in the scale were based on extensive review of literature. Secondly, the opinion of the panel of judges, discussion with experts and resource personnel was done to find whether the statements suggested were suitable for inclusion in the scale or not. Thus, validity of the present scale is established.

Administering the Empowerment scale

The scale was administered based on Edwards (1957) [4] procedure. Each item was provided with a five point continuum and the response categories were Strongly Agree (SA), Agree (A), Undecided (U), Disagree (D), and Strongly Disagree (SD). The considered item was scored in the above said pattern, which received 5, 4, 3, 2 and 1 score, respectively. The cumulative score of each respondent for all the statements was considered as Extent of Empowerment of farm women score for that individual. The minimum possible score was 86 whereas the maximum possible score was 430. The finalised scale items and measurement pattern is depicted in Appendix-II.

The respondents were grouped into three categories based on the mean and standard deviations measure of check.

Category	Criteria
Low	< (Mean - ½ SD)
Medium	(Mean ± ½ SD)
High	> (Mean + ½ SD)

Conclusion

In the present study reliability of empowerment scale was determined by two methods, namely, test retest method and Brown Prophecy Formula, which is otherwise called as Split-half method.

The correlation between the two sets of scores was calculated by using Pearson-product moment correlation coefficient. The 'r' value of 0.829 was found to be significant at 0.01 level of probability indicating high degree of evidence of reliability. The co-efficient of correlation between two sets of score was 0.755. The Pearson-product moment correlation coefficient formula was employed to find out the Split-half reliability for total length of scale. The reliability value was found to be significant at 0.01 level of probability indicating high reliability of the scale. The content validity indicates how adequate the content of the scale is. It was established in two ways; firstly, the items selected for inclusion in the scale were based on extensive review of literature. Secondly, the opinion of the panel of judges, discussion with experts and resource personnel was done to find whether the statements suggested were suitable for inclusion in the scale or not. Thus, validity of the present scale is established. The scale consists of item was provided with a five point continuum and the response categories were Strongly Agree (SA), Agree (A), Undecided (U), Disagree (D), Strongly Disagree (SD). The considered item was scored in the above said pattern, which received 5, 4, 3, 2 and 1 score, respectively. The cumulative score of each respondent for all the statements was considered as Extent of Empowerment of farm women score for that individual. The minimum possible score was 86 where as the maximum possible score was 430.

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