Measure Constraints Faced by Farm Women Using ICT Tools by Garett Ranking Method

Abstract

Traditionally the extension services have focussed on male farmers. In the last few decades the concern regarding farm women have been raised globally. There is immediate need to equip these farm women with relevant knowledge and skill. It is only possible if appropriate and relevant ICT tools are made available to farm women to get information related to agriculture. The present study was conducted in the Udham Singh Nagar district of Uttarakhand state to identify the constraints faced by farm women while using ICT tools. Garrett ranking was used. For this study, respondents were selected by using a Probability proportional to size (PPS) sampling method. To derive the inferences of the study, two blocks were selected for the present study. The study covered four villages & it covered 120 farm women in the selected villages. Data collected for the study about the period 2019-20. Primary data was collected from farm women through personal interview method with the help of a pretested schedule. The main personal constraints noticed were lack of preference in using ICT, lack of training, lack of confidence, lack of motivation and lack of time to utilize ICT etc. The main technological constraints were language problem to use ICT, complex nature of ICT, restricted availability and restricted accessibility to ICT tools etc. The main cultural constraints were lack of faith in ICT tools, traditional belief in the existing system, discouragement from the family and society. The main infrastructural barriers were poor electricity services and poor network connectivity.

Keywords- Constraints, farm women, ICT, lack of training and poor network.

Introduction

Agriculture is the base of Indian economy. About 70 percent population lives in village out of which primarily 47 percent workforce is in agriculture (FAO 2011). Mishra and Sundaram (1970) said that agriculture is the largest livelihood provider in community life and occupationally it is highly dependent on various cropping system, animal husbandry and allied sectors. Lele *et al.* (2010) reported that agriculture in India is facing severe challenges like

limited land and water availability, which is further exacerbated by degradation of natural resources, climate change, changes in demand and consumption patterns, moving toward high value agriculture, increasing population pressure and liberalization of trade. The agriculture sector in several developing countries is underperforming, partially as a result of lack of accessibility of proper resources to farm women. They are considered as less productive; and the reason of less productivity of women farmers is often attributed to lack of access to resources as well as land, finance and technology. They represent a vital resource in agriculture through their multiple roles as farmers, labourers and entrepreneur. Farm women perform several activities like producing agricultural crops, tending animals, cooking food, working for wages in agricultural or different rural enterprises, collection of fuel and water, selling agriculture produce and caring for members of the family and maintaining their homes.

ICT tools aims to improve the lives of farm household especially in the rural areas by providing them the appropriate and relevant information. Traditionally the extension services have focussed on male farmers. In the last few decades the concern regarding farm women have been raised globally. There is immediate need to equip these farm women with relevant knowledge and skill. It is only possible if appropriate and relevant ICT tools are made available to farm women to get information related to agriculture. Information and Communication Technology (ICT) is for everyone and women have to be an equal beneficiary to the advantages offered by the technology, and the products and processes, which emerge from its use. The benefits of the information provided by ICT tools, need not be restricted to the upper strata of the society but have to freely flow to all segments of the society. ICT tools have the potential to reach those women who have not been reached by any other media, thereby empowering them to participate in economic and social progress, and make informed decision. It's necessary to begin utilization of ICT tools in dissemination of information to distantly situated farm women.

Materials and Methods

The current study is based on an examination of primary data collected in Udham Singh Nagar District in Uttarakhand. For this investigation, the two blocks were chosen. In the selected communities, the study covered 4 villages and 120 farm women. Data for the study was gathered for the years 2019-20. Primary data was gathered from farm women using a personal interview

method and pre-tested schedules to obtain information on Constraints while using ICT tools. The obtained data was compiled, collated, and analysed to achieve the study aim. A schedule was created in accordance with the existing literature in order to analyse the limits. As a result, restrictions were discovered and subdivided into personal, technological, infrastructure and cultural constraints, following which the sample farm womens' responses were recorded. Simple statistical tools like Garrett's Ranking Technique were used to analyse the data.

Garett ranking technique

Constraints were identified by studying previous research studies. Garrett's Ranking Technique provides the change of orders of constraints into numerical scores. The prime advantage of this technique over simple frequency distribution is that the constraints are arranged based on their severity from the point of view of respondents. Hence, the same number of respondents on two or more constraints may have been given different rank.

Garrett's formula for converting ranks into percent is:

Percent position = 100 * (Rij–0.5)/Nj

Where

Rij = rank given for ith constraint by jth individual;

Nj= number of constraint ranked by jth individual.

The per cent position of each rank will be converted into scores referring to the table given by Garrett and Woodworth (1969).

Table 1: Percentage Positions and their corresponding Garett Table values

Rank	Percentage position		Garett table
1	100(1-0.5)/120	2.272727	88
2	100(2-0.5)/120	6.818182	79
3	100(3-0.5)/120	11.36364	74
4	100(4-0.5)/120	15.90909	70
5	100(5-0.5)/120	20.45455	66

6	100(6-0.5)/120	25	63
7	100(7-0.5)/120	29.54545	60
8	100(8-0.5)/120	34.09091	58
9	100(9-0.5)/120	38.63636	56
10	100(10-0.5)/120	43.18182	53
11	100(11-0.5)/120	47.72727	51
12	100(12-0.5)/120	52.27273	49
13	100(13-0.5)/120	56.81818	47
14	100(14-0.5)/120	61.36364	44
15	100(15-0.5)/120	65.90909	42
16	100(16-0.5)/120	70.45455	39
17	100(17-0.5)/120	75	36
18	100(18-0.5)/120	79.54545	34
19	100(19-0.5)/120	84.09091	30
20	100(20-0.5)/120	88.63636	26
21	100(21-0.5)/120	93.18182	20
22	100(22-0.5)/120	97.72727	13

The respondents were asked to rank the 22 constraints identified for the purpose of this studies as 1, 2, 3, 4 and upto 22 in order to know their preference in the selection of constraint. The calculated percentage position for the rank 1, 2, 3, 4 and upto 22 and their correspondent Garrett table as show in Table, For factors, the total score is calculated by multiplying the number of respondents ranking that factor as 1, 2, 3 and upto 22. For each factors, the scores of individual respondents were added together and divided by the total number of the respondents for whom scores were added. Average score/Mean score was calculated by dividing total score

by number of respondents. These mean scores for all the constraints were arranged in descending order; the constraints were accordingly ranked.

Results and Discussion

Table 2: Constraints perceived by farm women in utilization of ICTs

S.No	Constraints	Total score	Mean score	Rank
Personal barrier				
1	Lack of confidence in using ICT	6762	56.35	7
2	Fear of technology	6686	55.71667	9
3	Lack of training about how to use ICT	6568	54.73333	8
4	Age factor	6660	55.5	10
5	Financial problem	6000	50	11
6	Inability to update the ICT expertise regularly	5639	46.99167	14
7	Lack of preference in using ICT	6990	58.25	3
8	Lack of motivation to use ICT	6784	56.53333	6
9	Lack of time to utilize the ICT	6936	57.8	5
10	Lack of expertise to use ICT	6958	57.98333	4
Technological Barrier				
11	Restricted availability to ICT tools	5904	49.2	13
12	Restricted accessibility to ICT tools	5982	49.85	12

13	Irrelevancy of the content with individual need	4992	41.6	19
14	Language problem to use ICT	4725	39.375	20
15	Complex nature of ICT	7470	62.25	1
16	Fast updating/upgrading of technology	7044	58.7	2
Cultural Barriers				
17	Lack of faith in ICT tools	5268	43.9	16
18	Traditional belief in the existing system	5208	43.4	17
19	Discouragement from the family to use ICT	5274	43.95	15
20	Discouragement from the society to use ICT	4650	38.75	21
Infrastructural barriers				
21	Poor electricity services	5208	43.4	18
22	Poor network connectivity in rural areas	4542	37.85	22

According to Table 2 Different constraints are ranked by respondents on the basis of their severity of influencing by using Garrett Ranking Technique. The results revealed that that Technology barrier-Complex nature of ICT with mean score 62.25 is ranked 1, Technology barrier-Fast updating/upgrading of technology with mean score 58.7 is ranked 2, Personal barrier-Lack of preference in using ICT with mean score 58.25 is ranked 3, Personal barrier-Lack of expertise to use ICT with mean score 57.98333 is ranked 4, Personal barrier-Lack of time to utilize the ICT with mean score 57.8 is ranked 5, Personal barrier-Lack of motivation to use ICT with mean score 56.53333 is ranked 6, Personal barrier-Lack of confidence in using ICT with mean score 56.35 is ranked 7, Personal barrier-Lack of training about how to use ICT with mean score 54.73333 is ranked 8, Personal barrier -Fear of technology with mean score 55.71667 is ranked 9, Personal barrier- 4 with mean score 55.5 is ranked 10, Personal barrier-Age factor with mean score 50 is ranked 11, Technology barrier-Restricted accessibility to ICT tools with mean

score 49.85 is ranked 12, Technology barrier-Restricted availability to ICT tools with mean score 49.2 is ranked 13, Personal barrier- Inability to update the ICT expertise regularly with mean score 46.99167 is ranked 14, Cultural barrier-Discouragement from the family to use ICT with mean score 43.95 is ranked 15, Cultural barrier- Lack of faith in ICT tools with mean score 43.9 is ranked 16, Cultural barrier- Traditional belief in the existing system with mean score 43.4 is ranked 17, Institutional barrier- Poor electricity services with mean score 43.4 is ranked 18, Technology barrier- Irrelevancy of the content with individual need with mean score 41.6 is ranked 19, Institutional barrier- Language problem to use ICT with mean score 39.375 is ranked 20, Cultural barrier – Discouragement from the society to use ICT with mean score 38.75 is ranked 21 and Institutional barrier- Poor network connectivity in rural areas with mean score 37.85 is ranked 22.

The reason for such findings could be that the respondents may not aware about the use of ICT tools and further language was a big barrier. Further use of ICT requires special skills and respondents may not be having required skills to use ICTs tools that's why respondents have no confidence in operating ICTs, and also respondents might be busy in agriculture and animal husbandry activities so have little or no time to use ICTs.

Conclusion

The major problems faced by most of the farm women were- Complex nature of ICT, lack of motivation to use ICT, lack of technical knowledge to operate ICTs, inadequate literacy skills to use ICTs, lack of confidence, lack of own ICTs, financial problem, problem in understanding language, lack of electricity and others. Respondents may not aware about the use of ICT tools and further language was a big barrier.

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