

### **Knowledge of farmers towards use of ICT for empowerment of rural women in Dehradun district of Uttarakhand**

**Abstract:** The study was conducted in Dehradun district of Uttarakhand to measure the knowledge of farmers towards use of ICT for empowerment of rural women in Dehradun district of Uttarakhand. A total number of 120 respondents were selected purposively from six villages in the Doiwala block based on maximum access and usage of ICT tools among women. The data was collected using the **personal** interview method with a pre-structured interview schedule, and then appropriate statistical analysis was performed to obtain meaningful results. The study's findings revealed that the majority of respondents (54.17%) belonged to the middle aged group, and the majority of respondents (80.83%) belonged to the marginal sized land holding category, i.e. up to 1 ha. It was **found that the** majority of the respondents (64.17%) were educated from primary to high school and **46.67%** of the respondents belonged to the middle category of mass media exposure. The findings also revealed **that the majority** of the respondents (51.67%) **had a medium** level of knowledge towards ICT followed by **25.83%** and **22.50%** of the respondents with high and low **levels** of knowledge respectively.

**Keywords:** *Knowledge, Women Empowerment, ICT*

### **Introduction**

Women's empowerment is defined as the process of improving the social, economic and political position of traditionally underprivileged women in society. It is a constant and dynamic process that allows women to participate in decision-making in all social, financial and political processes in the general public and improves their ability to modify the structures and conditions that keep them disadvantaged. Women's empowerment is a burning topic around the world, especially in India. Women account for about half of the world's population, yet India has a lopsided sex ratio, with females having a lower population than males. In terms of their social standing, they are not treated equally to males in all places. Gender inequalities and prejudice still exist in India today.

In India, which has traditionally been a patriarchal nation, women have a secondary role in every household. However, since independence, issues concerning women's welfare have always been a top priority for policymakers. In the rural regions, women are thought to be the most valuable human infrastructure. Therefore, women's empowerment has been recognised as the most effective way to include women in development, and it is critical for the country's equal socio-economic progress.

On a global scale, information and communication technologies (ICTs) have catalysed communication and networking between and among people. Participation drives empowerment by encouraging people to be actively involved in the development process, contribute ideas, take the initiative to express needs and problems, and assert their autonomy. Women can enrich and improve their quality of life by gaining access to information. While ICT has been recognised as a tool for promoting gender equality and women's empowerment, a "gender divide" has been found, as evidenced by the lower numbers of women accessing and using ICT compared to men (**Sandys, 2005**).

There have been a variety of ICT models used to enhance women's empowerment around the world, and there is evidence that ICTs have increased women's access to information, generated new employment, established a new class of female entrepreneurs, and improved their access to government (**Nath, 2001, IFAD and World Bank 2008**).

Information and communication technologies are for everyone and women must have equal access to the benefits of technology, as well as the goods and processes that result from their use. Women's political, economic, and social empowerment can be aided by information and communication technologies. However, the gender components of the digital gap in terms of access and use, capacity building possibilities, employment, and empowerment potential have been highlighted and must be addressed. ICT is extremely beneficial in achieving the goal of a society where women are well-informed and empowered. In a developing country like India, ICTs are becoming a potent weapon for women's empowerment.

## **Research Methodology**

Descriptive research design was used for the study as it describes the characteristics or phenomena that are being studied. The present study was conducted in Dehradun district of Uttarakhand. Out of 6 blocks in Dehradun district, Doiwala block was selected purposively

based on the maximum access and usage of ICT tools among women. Six villages were chosen randomly from the selected block for the study, for a total of 120 respondents.

### **Objectives of the study**

1. To assess the socio-economic profile of the respondents.
2. To determine the knowledge of the respondents towards the use of ICT for empowerment of the respondents.

### **Method of data collection**

The survey method was used to collect the primary data. A personal interview schedule was used to collect information from the selected respondents. The investigator visited the villages frequently and collected information in order to obtain the information. The investigator worked diligently to gather accurate information. Secondary data was obtained from the library, journals, books, papers, and other study-related materials.

The data was collected was then classified, tabulated, and analysed in light of the study's objectives. The respondents' responses were correctly interpreted, and the results were derived scientifically.

### **Statistical analysis of data**

The entire set of data was converted into a score for tabulation. Mean, Frequency, Percentage and Correlation were used to interpret the results and demonstrate the relationship between the independent and dependent variables.

## Results and Discussion

Result revealed that majority of the respondents (54.17%) were of middle age, and 45.83% belonged to the General caste (Table 1). The majority of respondents (64.17%) were educated from primary to secondary school, and the majority of the respondents (72.50%) were married (Table 1). The majority of respondents (67.50%) belonged to a nuclear family, and the majority of the respondents (55.83%) belonged to a small family of 1-4 members (Table 1). The majority of respondents (60.84%) had cemented type of house, and the majority of respondents (80.83%) had marginal sized land holdings (Table 1). In terms of annual income the majority of the respondents (57.50%) belonged to medium level of annual income i.e. 50,000 - 1 lakh (Table 1). It was found out that the majority of the (52.50%) had medium level of social participation and the majority of the respondents (55.00%) were in the middle category of source of information utilized (Table 1). The study revealed that 46.67% of the respondents were in the middle category of mass media exposure and 44.17% of the respondents had medium level of scientific orientation. Similar finding was also reported by Vivek and Sahana (2021).

**Table 1- Socio-economic profile of the respondents**

S. No.	Independent variables	Category	Frequency	Percentage
1.	Age	Young (Up to 35 years)	33	27.50
		Middle (36-55 years)	65	54.17
		Old (Above 55 years)	22	18.33
2.	Caste	General	55	45.83
		OBC	21	17.50
		SC & ST	44	36.67
3	Education	Illiterate	17	14.16
		Primary School	18	15.00
		Junior Higher Secondary	33	27.50
		Higher Secondary	26	21.67
		Intermediate	20	16.67
		Graduate & above	06	5.00
4	Marital status	Unmarried	33	27.50
		Married	87	72.50
5	Family type	Nuclear	81	67.50

		Joint	39	32.50
6	Family size	Small (1-4)	67	55.83
		Medium (5-7)	35	29.17
		Large (8 & above)	18	15.00
7	Type of house	Hut (Kaccha)	13	10.83
		Semi-cemented	34	28.33
		Cemented	73	60.84
8	Land holding	Marginal ( up to 1 ha)	97	80.83
		Small + Medium (1.01 to 4 ha)	18	15.00
		Large (More than 4 ha)	5	4.17
9	Annual family income	Low (below 50,000)	32	26.67
		Medium (50,000-1 lakh)	69	57.50
		High (Above 1 lakh)	19	15.83
10	Social participation	Regular	36	30.00
		Occasional	63	52.50
		Never	21	17.50
11	Source of information utilized	Frequently	13	10.83
		Less frequently	66	55.00
		Never	41	34.17
12	Mass media exposure	Always	29	24.16
		Sometimes	56	46.67
		Never	35	29.17
13	Scientific Orientation	Low (7-9)	41	34.16
		Medium (10-11)	53	44.17
		High (12-13)	26	21.67

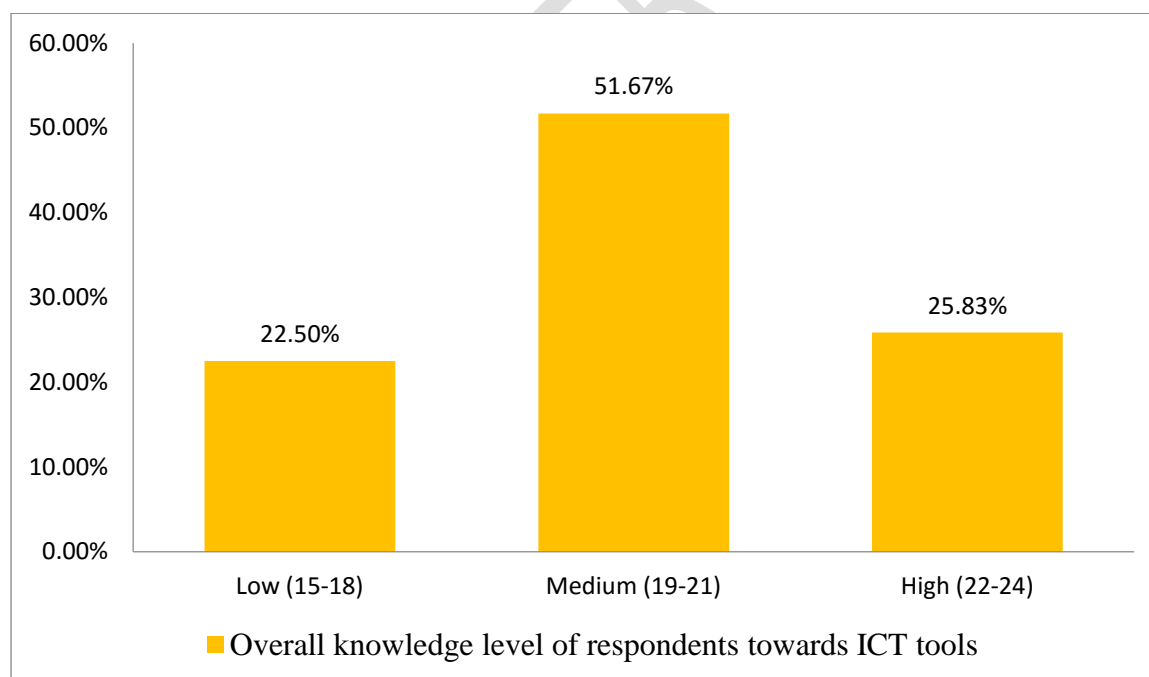
**Table 2 - Knowledge of the respondents towards ICT tools**

S.No.	Statements	Response					
		Fully Correct		Partially Correct		Not Correct	
		<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
1	ICTs are electronic devices for capturing, processing and transmission of information by electronic means.	33	27.50	47	39.16	40	33.34
2	ICTs tools provide information related to crop production, crop protection and other activities.	32	26.66	49	40.84	39	32.50
3	ICT tools provide you with agriculture marketing and storage related information.	31	25.84	48	40.00	41	34.16
4	ICT is a quick mode of communication process.	68	56.66	33	27.50	19	15.84
5	ICT tools provide information regarding government programmes and policies.	26	21.66	55	45.84	39	32.50
6	Video conferencing is a two way process.	42	35.00	51	42.50	27	22.50
7	Telephone provides agriculture related information.	34	28.33	49	40.84	37	30.83
8	You can get agricultural information on internet.	37	30.83	53	44.17	30	25.00
9	Teleconferencing allows people from around the world to communicate as if they were in the room together.	29	24.17	57	47.50	34	28.33
10	Radio is a modern ICT tool.	71	59.17	35	29.17	14	11.66

The Table 3 below reveals that majority of respondents (51.67%) had medium level of knowledge about ICT tools. Significant percentages of rural women were found to have high (25.83%) and low (22.5%) level of knowledge respectively. Similar finding was also reported by Kumar (2019).

**Table 3 - Distribution of respondents according to their overall knowledge level towards ICT tools**

Knowledge	Frequency	Percentage
Low (15-18)	27	22.5
Medium (19-21)	62	51.67
High (22-24)	31	25.83
<b>Total</b>	<b>120</b>	<b>100.00</b>



**Figure-1 Distribution of respondents based on to their knowledge level towards ICT tools (From the table 3)**

The Table 4 below concluded that the independent variables age, educational qualification, marital status, annual family income, social participation, source of information used, mass media exposure, and scientific orientation were positively and significantly correlated with the knowledge level of rural women towards ICT at 0.01% probability. Caste, family type, family size, land holding were negatively and significantly correlated with the knowledge level of rural women towards ICT at 0.01% probability, whereas type of house was both negatively and non-significantly correlated with rural women's knowledge level of ICT at 0.01% and 0.05% of probability. Similar finding was reported by **Kumar *et al.* (2019)**.

**Table 4 - Association between selected independent variables and respondents' knowledge level of ICT.**

S. No.	Independent variables	Correlation coefficient (r)
1	Age	0.938*
2	Caste	-0.976*
3	Educational qualification	0.999*
4	Marital status	0.882*
5	Family type	-0.125*
6	Family size	-0.275*
7	Type of house	-0.066 NS
8	Land holding	-0.477*
9	Annual family income	0.936*
10	Social participation	0.893*
11	Source of information utilized	0.899*
12	Mass media exposure	0.994*
13	Scientific orientation	0.769*

\*=significant

## Conclusion



It is concluded that the majority of the respondents belonged to the middle-aged group, having medium level education and annual income. Further, the majority of the respondents had marginal sized land holdings up to 1 hectare. Majority of the respondents belonged to the middle category of source of information utilized and had medium level of social participation, mass media exposure, and scientific orientation. It was found out that the independent variables age, educational qualification, marital status, annual family income, social participation, source of information used, mass media exposure, and scientific orientation were positively and significantly correlated with the knowledge level of rural women towards ICT. It is suggested that the government should make ICT tools available to rural women at a lower cost, that the cost of internet services or tariffs be reduced. In addition, the government should provide training programmes for rural women related to use of ICT tools.

### **Consent**

As per international standard or university standard, respondents' written consent has been collected and preserved by the author(s).

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