**Enhancing ICT Literacy among Rural Women: A Case Study on Capacity Building**

**through Targeted Interventions**

**ABSTRACT:**

Information plays an essential role in improving rural women's decision-making in agriculture and related fields by increasing their understanding of new technologies, inputs, pricing and market demand of various agricultural commodities. Integration of Information Communication Technology (ICT) with agriculture may transform the agricultural industry and enhance the overall economy of the country. The present study involves a multistage random sampling design and a total of 30 numbers of respondents were selected as the respondents for the present study. The study was conducted to assess the impact of the intervention programme on knowledge and practice on use of selected ICT applications among the rural women. Based on the existing knowledge of respondents on ICTs an intervention programme was organized. The intervention programme includes a detailed module related to the use of different ICT tools in a vernacular language so that the respondents can assess the information easily and comfortably at their doorstep. The study reveals that before interventions mean score of their knowledge was 18.4 and after intervention immediate post knowledge scores was 41.26. Further it was found that before interventions mean score of their existing practices was 7.76 and after intervention immediate adoption of practices scores was 13.33. Through this intervention, the rural women become able to gain knowledge and enhance their skills in use of different information through ICT. This knowledge could help them in developing their socio- economic status. Hence the study states that similar type of intervention programmes on ICT applications among the rural women may increase their knowledge and enhance their practice on different aspects related to agriculture and allied areas.

Key words: Rural women, Intervention, ICT.

**INTRODUCTION**

Agriculture plays a very important role in overall development of the nation. It is considered to be the most predominant sector of Indian economy with largest livelihood provider among the rural poor. Women produces over 50.00 per cent of the world’s food (FAO, 2011) and comprise about 43.00 per cent of the agricultural labour force globally in the developing countries (Doss, 2014). Women play an important and significant role in agriculture and allied fields. Information Technology indirectly impacted the rural economy and helping in rural development which is major issue for developing countries like India (Nimodiya and Ajanker, 2021). Information and Communication Technology (ICT) are always necessary in agriculture. ICT perform many different roles in agricultural development starting from decision support system and finally to the marketing of crops. Through ICT rural women can be updated with the recent information about agriculture, weather, new varieties of crops and new ways to increase production and quality control. With the advancements in the technologies the gap between generation and dissemination of information has been reduced drastically by the use of ICTs. ICT holds significant potential for enhancing women's empowerment, the success of these initiatives depends on addressing structural challenges such as gender inequality, social norms, and inadequate infrastructure (Zadeh, 2024). Various reviews of literature have showed that ICT has enhanced the capability of rural women to manage weather risks, technological risks, price risks and many more such risks. Rural women could be empowered through the use of ICT to reduce poverty mainly in social and economic aspects (Andambi and Jebat, 2021). The present study was carried out to study the impact of the intervention programme in terms of change in knowledge and practice in use of selected ICT applications.

**METHODOLOGY**

Selection of sample:

The present study was conducted in the Jorhat district of Assam following a multistage random sampling method for selection of the blocks, villages and respondents. As a part of the intervention programme a list of Whatsapp users with basic knowledge about handling of smartphone was prepared from the already analysed data of the 1st objective of the research study. Altogether 30 rural women were selected randomly for the research study with the following criteria’s:

• Functionally literate

• Having a Smartphone of her own or owned by the family members with internet facilities

• Actively engaged in agriculture and allied activities. Further the researcher has created a Whatsapp group including these 30 rural women for conducting the intervention programme. A module was prepared for the intervention programme. The module contained messages on different common apps in the form of text, pictures, videos and voice messages. Module was prepared in consultation with ICT experts, extension scientists and related review of literatures.

**Programme Structure**: The programme consists of learning modules in vernacular language, including information related to different features of mobile phones and common apps related to agriculture, social networking, health, finance and online shopping.

**Capacity building of the rural women on use of selected ICT applications through intervention**: The intervention programme consisted of series of training programmes which were conducted for 30 rural women regarding use of selected ICT applications by using digital media as a platform. The area for intervention was selected on the basis of the obtained knowledge score and accordingly areas with low knowledge score were included for the intervention. For the intervention programme ‘WhatsApp’, a digital media platform was used for free flow of information's between the rural women and the researcher. WhatsApp is a great multimedia tool for sending and receiving a diversity of media such as texts, photos, videos, documents, location and voice calls etc. Hence Whatsapp was used to transfer some selected technical information in agriculture and allied areas among the rural women.

**Statistical procedure:** The data collected were coded, tabulated and statistically analysed by using different statistical tools such as frequency, percentage, percentile, mean, Standard. Paired t test was applied to measure the pre and post intervention knowledge and use of ICT.

**RESULTS AND DISCUSSIONS:**

**Impact of intervention on use of selected ICT applications**

The impact of the intervention programme was assessed in terms of change in knowledge and practice in use of selected ICT applications.

1. **Change in knowledge**:

Change in knowledge was measured in terms of gain in knowledge and retention of knowledge regarding use of selected ICT applications by the respondents due to intervention programme and is presented in the Table 1. The data reflected that there was an increase in knowledge after the intervention programme. The pre knowledge mean score was 18.4 and the immediate post exposure score was 41.26, which indicated increase in knowledge score with 22.86 as per mean score. Further the study shows slight decrease in the knowledge score at 15 days (36.06) and 30 days (33.56) as the gap increased but overall gain in knowledge was there and average gain in knowledge was found to be 18.56. On the other hand, the retention of knowledge was measured at an interval of 15 and 30 days with mean score was 12.46 and 7.46, respectively. Similar finding was reported by ‘Annual report of All India Coordinated Research Project on Home Science, Extension Component (2019).

Table 1. Distribution of respondents according to mean score of retention of knowledge

n=30

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sl. No.** | **Period of knowledge test for gain in and retention of knowledge** | **Mean score** | **Gain in knowledge** | **Reduction of knowledge** | **Retention of knowledge** |
| 1. | Pre knowledge | 18.4 |  |  |  |
| 2. | Immediate knowledge | 41.26 | 22.86 |  |  |
| 3. | At 15 days | 36.06 | 17.66 | 5.2 | 12.46 |
| 4. | At 30 days | 33.56 | 15.16 | 7.7 | 7.46 |

Further, to establish the gain in knowledge at all stages paired‘t’ test was applied taking the pre knowledge test score and post knowledge test score at all three phases of time i.e. immediate post, at 15 days and at 30 days and data is presented in Table 2.

Table 2. Comparison of knowledge score of the rural women before and after intervention

n=30

|  |  |  |  |
| --- | --- | --- | --- |
| **Pair** | **Mean** |  | **t value** |
| Pre knowledge score | 18.4 |  |  |
|  |  |  | 19.57\* |
| Post immediate | 41.26 |  |  |
|  |  |  |  |
| Pre knowledge score- | 18.4 |  |  |
|  |  |  | 23.41\* |
| Post 15 days | 36.06 |  |  |
|  |  |  |  |
| Pre knowledge score- | 18.4 |  |  |
|  |  |  | 22.03\* |
| Post 30 days | 33.56 |  |  |

\* Significant at 0.05 level probability

Thus, the findings revealed that intervention is effective in promoting the knowledge of rural women in use of selected ICT applications.

**2. Practice in use of selected ICT applications**

Practice in use of selected ICT applications by the respondents after intervention programme was assessed in terms of adoption of practices and vertical and horizontal sharing of information of the selected ICT applications. The data in the Table 3. reflects the existing practices (Pre exposure to intervention programme) and adoption of practices immediate after intervention and at 15 days and 30 days of intervention programme. It is evident from the data that there was an increase in the practice level after conducting the intervention programme among the respondents. The mean score of existing practices before the intervention programme was 7.76 and mean score immediate after intervention was 18.56 and at 15 days it was 11.06 and 9.36 at 30 days respectively. The findings show increase in the mean score immediate after intervention which slightly decreased at 15 days and 30 days of intervention programme. During the first fifteen days respondents developed their interest and inquisitiveness to see what new information can be obtained from the selected apps thus have just learnt and later with passage of time they just practice the use of the apps which were found to be necessary and essential as well and hence score on adoption of practice at 30 days decreased then the first 15 days score. Findings further show 5.13 percentage increases in adoption of practices. This means that respondents have adopted some of the practices on use of selected ICT apps which were disseminated through the intervention programme. Messages and practices on Whatsapp and Facebook were shared among the family members. Hence similar intervention programme in future will be beneficial for the rural women as the practice has been adopted thus leading to promotion in use of ICTs in agriculture and allied areas.

Table 3. Distribution of respondents according to practices adopted on use of selected ICT applications

n=30

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sl. No.** | **Stages of adoption of practices** | **Mean score** | **Adoption of practice** | **% increase in adoption of practice** |
| 1. | Existing practices (Pre - exposure to intervention programme) | 7.76 |  |  |
| 2. | Adoption of practices (immediate after the intervention) | 13.33 | 5.57 | 18.56 |
| 3. | Adoption of practices (after 15 days) | 11.06 | 3.3 | 11 |
| 4. | Adoption of practices (after 30 days) | 9.63 | 1.54 | 5.13 |

**Conclusion:**

Impact of the intervention programme was found to be significant in terms of gain in knowledge and adoption of practices thus, leading to capacity building of the rural women. ICTs not only help to disseminate information rather it also improves the rural women knowledge base, increase their participation and share the knowledge amongst other rural women. The findings show a greater need of similar intervention programmes in the field of agriculture and allied areas. Similar programs may be adapted in other regions or countries for upliftment of the rural women. The proper use of ICT helps to overcome the time, space, language and illiteracy barriers effectively.

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