RELATIONSHIP BETWEEN FARMERS' PROFILE AND THEIR ATTITUDE TOWARD *KISAN SUVIDHA* MOBILE APPLICATION

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ABSTRACT

App is a computer programming design to run on different electronic devices such as smart phone, laptop, tablet and computer. The present study was conducted in Jaipur division of Rajasthan. In Jaipur district Govindgarh and Jhotwara blocks and from Alwar district, Bansur and Mandawar blocks were selected. Out of which 15 respondents from each of the gram panchayats was selected randomly. In this way, a total sample of 300 farmers was selected for the study purpose. It was found that independent variables viz., education, annual income of family, extension contact, mass media exposer, comsopoliteness, extension participation, sources of information utilization, achievement motivation and innovativeness were significantly associated with the attitude of the farmers about Kisan Suvidha app. On the other hand, variables like age, size of land holding, occupation, farming experience, size of family and social participation were not significantly associated with the attitude of the farmers about Kisan Suvidha app.

Keywords: *attitude, correlation, application, mobile*

INTRODUCTION

The growth of mobile communication technology is creating a number of opportunities for social empowerment, and grassroot innovations in developing countries. One of the areas with potential impact is in the contribution of mobile applications to Agricultural and Rural Development (ARD), by providing access to information, markets, and services to rural inhabitants (World Bank, 2012). The introduction of mobile phones has led to the development of new services and applications in agriculture for the benefit of farmers and other stakeholders. Services that started with occasional messages have evolved to multimodal and multimedia delivery of advisory and to m-agriculture applications for smartphones. Access to information on new varieties, inputs such as seed, fertilizers, machinery, price information, weather, pests and diseases, nutrient management at the right time can help farmers get access to crucial information to support activities from production to marketing.

The mobile agricultural apps show significant potential for the modernization of the agricultural sector, in both developed and developing countries. For example, they can contribute to increasing the income of small-scale producers, reducing the transaction costs in supplying and distributing products, improving traceability and quality criteria for consumers, as well as providing new opportunities for financial institutions.

OBJECTIVE

To study the relationship between the selected independent variables with the attitude of the farmers about Kisan Suvidha app

METHODOLOGY

The present study was conducted in Jaipur division of Rajasthan. Jaipur Division comprise of 5 districts (Alwar, Dausa, Jaipur, Sikar and Jhunjhunu), out of which 2 districts, namely: Jaipur and Alwar was selected due to having maximum number of registered farmers of Kisan Suvidha app. Jaipur and Alwar districts comprised of 13 and 14 blocks, respectively. Out of these 2 blocks from each district was selected due to having maximum number of registered farmers of Kisan Suvidha app. In this way from Jaipur district Govindgarh and Jhotwara blocks and from Alwar district, Bansur and Mandawar blocks were selected. From the list so prepared five-gram panchayats from each identified block were selected randomly by using simple random sampling. In this way a total of 20-gram panchayats were selected for the study purpose. From the selected gram panchayats, separate lists of farmers using Kisan Suvidha app was prepared. Out of which 15 respondents from each of the gram panchayats was selected randomly. In this way, a total sample of 300 farmers was selected for the study purpose.

To measure the relationship between personal characteristics like age, education, size of land holding, occupation, farming experience, size of family, annual income of family, social participation, extension contact, mass media exposer, comsopoliteness, extension participation, sources of information utilization, achievement motivation and innovativeness etc. with the attitude of the farmers towards Kisan Suvidha app, different measured personal characteristics of farmers were correlated by using the Karl Pearson correlation coefficient. The calculated correlation coefficient value was compared with the table value of correlation coefficient at 1 per cent and 5 per cent level of significance to draw the inferences.

Correlation coefficient

The correlation coefficient ('r' value) was used to measure the relationship between dependent and independent variables. The correlation coefficient between two groups was calculated by using the following formula.

$$r = \frac{n(\sum xy) - (\sum x)(\sum y)}{\sqrt{[n\sum x^2 - (\sum x)^2][n\sum x^2 - (\sum y)^2]}}$$

Where   r = Correlation coefficient

x = Independent variable

y = Dependent variable

n = Total number of respondents

RESULTS AND DISCUSSION

Relationship between independent variables with attitude of the farmers towards Kisan Suvidha app

The relationship between attitude of the farmers about Kisan Suvidha app and independent variables *viz.*, age, education level, size of land holding, occupation, farming experience, size of family, annual income of family, social participation, extension contact, mass media exposure, comsopoliteness, extension participation, sources of information utilization, achievement motivation and innovativeness and overall attitude index was worked out in term of correlation coefficient ("r"). On the basis of operational measures used for the variables, research hypotheses in null form were derived for testing the relationship and significance on zero order correlation. The zero order correlation (r values) is given in Table 1 and its characteristics wise relationship is described in subsequent pages.

Table 1 : Relationship between independent variables with attitude of farmers using Kisan Suvidha app   (n=300)

Sr. No.	Variables	Coefficient of correlation (r)		
		Jaipur District	**Alwar District**	**Overall**
X_1	Age	0.057 NS	-0.013 NS	0.0175 NS
X_2	Education	0.6364**	0.521**	0.576**
X_3	Land Holding	0.087 NS	0.027 NS	0.037 NS
X_4	Occupation	-0.018 NS	0.117 NS	0.057 NS
X_5	Farming experience	0.044 NS	0.002 NS	0.019 NS
X_6	Size of family	-0.077 NS	-0.019 NS	-0.043 NS
X_7	Annual Income	0.258**	0.177*	0.233**
X_8	Social participation	-0.020 NS	0.149 NS	0.055 NS
X_9	Extension contact	0.396**	0.193*	0.309**
X_{10}	Cosmopoliteness	0.199*	0.317**	0.267**
X_{11}	Extension participation	0.379**	0.190*	0.283**
X_{12}	Sources of information utilization	0.490**	0.291**	0.381**
X_{18}	Mass media exposure	0.187*	0.246**	0.223**
X_{19}	Achievement motivation	0.516**	0.476**	0.508**
X_{15}	Innovativeness	0.443**	0.266**	0.364**

Age and attitude

The data given in Table 1 shows in favour of null hypothesis and found non-significant relationship age of farmers with the attitude of farmers towards use of Kisan Suvidha app. This indicates that attitude of farmers towards use of Kisan Suvidha app was not influenced by their age. This finding is in conformity with the finding reported by Gawali *et al.* (2019).

**Significant at the 0.01 level, *Significant at the 0.05 level, NS= Non significant

Education and attitude

The data given in Table 1 indicates that the education was also positively and significantly associated with the attitude of farmers towards use of Kisan Suvidha app at 0.01 level of probability. It means education exerted its influence on the attitude of farmers using Kisan Suvidha app**. Education has profound impact on every aspect of life of an individual. It broadens the knowledge base of an individual, this leads to widen the vision of an individual. Educated people have greater inclination of new ideas, thus they are more prone to change, which favors towards the positive attitude. It is therefore indicating that, increase in education, increases the attitude of farmers, due to which there was positive and highly significant relation between education and attitude. This result is supported by Shinde *et al.* (2019).

Land Holding and attitude

It is observed from the data presented in Table 1 that the land holding was also positively and non-significant relationship with the attitude of farmers towards use of Kisan Suvidha app at 0.01 level of probability. It means that there is no relationship between land holding and attitude of farmers using Kisan Suvidha app. The attitude towards use of Kisan Suvidha app might be depends on interest and having knowledge regarding use of Kisan Suvidha app and thus it is indicated that, the land holding does not depend on attitude of the farmers, due to which there was positive and non-significant relation between land holding and attitude. This finding is in line with result reported by Gawali *et al.* (2019).

Occupation and attitude

The data presented in Table 1 shows in favour of null hypothesis and found non-significant relationship between occupation and attitude of farmers towards use of Kisan Suvidha app. This means that the occupation does not depend on the attitude of farmers towards use of Kisan Suvidha app. This finding is in concurrence with the finding reported by Neethi and Sailaja (2018).

Farming experience and attitude

It is evident from the data presented in Table 1 shows in favour of null hypothesis and found non-significant relationship between farming experience and attitude of farmers towards use of Kisan Suvidha app. This means that the farming experience does not depend on the attitude of farmers towards use of Kisan Suvidha app. This finding was in conformity with Shinde *et al.* (2019).

Size of family and attitude

It is clear from the correlation values from Table 1 shows in favour of null hypothesis and found non-significant relationship between size of family and attitude of farmers towards use of Kisan Suvidha app. It indicates that, the size of family does not depend on attitude of the farmers, due to which there was negative and non significant relation between size of family and attitude. Similar finding had been reported by Gawali *et al.* (2019).

Annual income and attitude

The data given in table 1 indicate that the annual income was also positively and significantly associated with the attitude of farmers towards use of Kisan Suvidha app at 0.05 level of probability. This means if the respondent's family has high income then they are able to purchase own smart phone and internet facility. Thus, it is indicated that, increase in annual income, increases the attitude of farmers, due to which there was positive and significant relation between annual income and attitude. This finding was in line with Salunkhe and Pandya (2017).

Social participation and attitude

The data given in Table 1 shows in favour of null hypothesis and found non-significant relationship between social participation with the attitude of farmers towards use of Kisan Suvidha app. It indicates that, the social participation does not depend on attitude of the farmers, due to which there was non-significant relation between social participation and attitude. This finding was supported by the findings of Salunkhe and Pandya (2017)

Extension contact and attitude

The data presented in Table 1 shows that the extension contact was also positively and significantly associated with the attitude of farmers towards use of Kisan Suvidha app at 0.05 level of probability. It means extension contact exerted its influence on the attitude of farmers using Kisan Suvidha app**. This finding is in conformity with the finding reported by Gawali *et al.* (2019).

Cosmopoliteness and attitude

It is evident from the data given in Table 1 shows that the cosmopoliteness was also positively and significantly associated with the attitude of farmers towards use of Kisan Suvidha app at 0.05 level of probability. Thus, it is indicated that, increase in cosmopoliteness, increases the attitude of farmers, due to which there was positive and significant relation between cosmopoliteness and attitude. This finding was in conformity with Shinde *et al.* (2019).

Extension participation and attitude

It is apparent from the data presented in Table 1 shows that the extension participation was also positively and significantly associated with the attitude of farmers towards use of Kisan Suvidha app at 0.05 level of probability. Thus, it is indicated that, increase in extension participation, increases the attitude of farmers, due to which there was positive and significant relation between extension participation and attitude.

Sources of information utilization and attitude

It is clear from the correlation values from Table 1 depicts that the positive and significant association was found between sources of information utilization and the attitude of farmers towards use of Kisan Suvidha app at one per cent level of significance. This finding was in line with Salunkhe and Pandya (2017).

Mass media exposure and attitude

The data incorporated in Table 1 depicts that the positive and significant association was found between mass media exposure and the attitude of farmers using Kisan Suvidha app at 5 per cent level of significance. The attribute reason might be that, exposure to different mass media sources like newspaper, farm magazines, radio and television might have helped the respondents to gain recent information. The advent of mass media provided enormous opportunities for repeated exposure of farmer to new technology motivating them to take further interest to learn about them. Hence it is indicated that, increase in mass media exposure, increases the attitude of farmers, due to which there was positive and significant relation between mass media exposure and attitude. Similar finding had been reported by Shinde et al. (2019).

Achievement motivation and attitude

It is clear from the correlation values from Table 1 the positive and significant association was found between achievement motivation and the attitude of farmers using Kisan Suvidha app at one per cent level of significance. This finding was supported by the findings of Neethi and Sailaja (2018).

Innovativeness and attitude

It is evident from the data given in Table 1 that innovativeness was positively and significantly associated with the attitude of farmers towards use of Kisan Suvidha app at 1 per cent level of significance. It could be inferred from the findings that increase in innovativeness may also increases the attitude of farmers using Kisan Suvidha app. This finding was in conformity with Gawali *et al.* (2019).

CONCLUSION

From the above results it can be concluded that independent variables viz., education, annual income of family, extension contact, mass media exposer, comsopoliteness, extension participation, sources of information utilization, achievement motivation and innovativeness were significantly associated with the attitude of the farmers about Kisan Suvidha app. On the other hand, variables like age, size of land holding, occupation, farming experience, size of family and social participation were not significantly associated with the attitude of the farmers about Kisan Suvidha app.

POLICY IMPLICATION

The usage pattern of the mobile phones and mobile apps has to be considered while developing the mobile apps in order to satisfy the end users. The different modes of presentation of information like text, audio, video, multimedia, animations could be used for value addition to the information provided on the mobile apps so that the farmers could easily understand.

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