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RELATIONSHIP BETWEEN PROFILE OF THE YOUNG PRACTICING FARMERS AND THEIR AGRICULTURAL INFORAMTION TECHNOLOGY ASSOCIATION

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ABSTRACT

The study was conducted in Anand, Kheda and Vadodara districts of Middle Gujarat using an Ex-post-Facto research design. Farmers in these districts are known to be innovative and have a keen interest in using Agricultural Information Technology in their daily lives. A total of 225 young practicing farmers were randomly selected from these districts. The study found that independents variables such as education, languages known, social participation, land holding, herd size, parental occupation, annual income, extension contact, source of information about AIT, agricultural mass media, innovative proneness, achievement motivation, credibility towards AIT tools, scientific orientation, economic motivation and risk orientation were positively and significantly associated with the use of Agricultural Information Technology. On the other hand age, experience in farming and family size showed a positive but non-significant relationship with their AIT association.

Keywords: *young practicing farmers, agricultural information technology, relationship*

INTRODUCTION

Agricultural Information Technology, also known as e-agriculture, focuses on improving agricultural and rural development through better information and communication processes. E-agriculture involves coming up with innovative ways to utilize information and communication technologies (ICTs) in rural areas, with a special emphasis on agriculture. Web portals, mobile applications for android phones, SMS and voice messages on basic phones, information kiosks, videos and video conferencing with experts are major tools that many government, semi-government, cooperative, non-government, private firms and business enterprises use in our nation to provide AIT services to farmers. The crucial element in the entire process of providing information to farmers is the involvement of agriculture professionals. The AIT components may provide the farmers with timely access to pertinent, accurate, and customized information. Therefore, AITs offers a platform to easily reach a large audience and give stakeholders easy access to both local and global information. Through AIT, information transmission in agriculture is inexpensive, time-saving, and quick. Most urban and rural residents now prefer mobile telephony over other options. Mobile phones were found as the most widely accessed tool among the farmers for communication and for accessing agriculture-related information; particularly for the marketing of produce mobile phones have been found to be the most popular and easily available AIT tool among farmers.

The youth is the most vibrant and engaged group of people. India has the world's largest young population. According to a study by the Ministry of Health and Family Welfare's Technical Group on Population Projection, young people aged 15 to 29 make up 27.20 per cent of the population in 2021, which is around 345 million people. Young farmers are adept at understanding new agricultural innovations and methods. As a result, every young practicing farmer today must have a positive attitude and be knowledgeable, skilled and exposed to all the components and devices required for utilizing e-extension for agricultural growth.

OBJECTIVE

To study relationship between profile of the young practicing farmers and their AIT association

METHODOLOGY

The study was undertaken on the young practicing farmers of Anand, Kheda and Vadodara districts of Middle Gujarat. From these districts, three talukas were selected randomly, from each district for the study. From each taluka, five villages were selected and again from each village, five young practicing farmers were selected randomly for the study. Hence, a total of 225 young practicing farmers were

selected and interviewed either at their homes or field in light of the objective. An Ex-post-facto research design was used for the study for the measurement of variables. The data were analyzed to find out the relationship between each of the independent variables and dependent variable.

RESULTS AND DISCUSSION

Relationship between profile of the young practicing farmers and their association with Agricultural Information Technology (AIT) were presented in Table 1.

Table 1: Relationship between profile of the young practicing farmers and their AIT association

(n=225)

Sr. No.	Independent variables	AIT association ('r'value)
A	**Personal Variables**	
X_1	Age	0.125
X_2	Education	0.840**
X_3	Languages known	0.642**
X_4	Experience in farming	0.116
B	**Social Variables**	
X_5	Size of family	0.010
X_6	Social participation	0.271**
C	**Economic Variables**	
X_7	Land holding	0.238 **
X_8	Herd size	0.163*
X_9	Parental occupation	0.313**
X_{10}	Annual income	0.298**
D	**Communicational Variables**	
X_{11}	Extension contact	0.570**
X_{12}	Source of information about AIT	0.581**
X_{13}	Agricultural mass media	0.423**
E	**Psychological Variables**	
X_{14}	Innovative proneness	0.537**
X_{15}	Achievement motivation	0.815**
X_{16}	Credibility towards AIT tools	0.797**
X_{17}	Scientific orientation	0.798**
X_{18}	Economic motivation	0.355**
X_{19}	Risk orientation	0.719**

* Significant at 0.05 level of probability ** Significant at 0.01 level of probability

(1) Age and AIT association

The data observed in Table 1 reveal that the age of the young practicing farmers had positive and non-significant (0.125) relationship with the AIT association of the young practicing farmers. Hence, the null hypothesis ($H_0$1) that "there is no relationship between age of the young practicing farmers and their AIT association" is accepted and it is concluded that age of the young practicing farmers didn't exert an influence on their AIT association. Similar results have been reported by Kumar (2018).

(2) Education and AIT association

From Table 1, it was observed that education of the young practicing farmers had positive and highly significant (r=0.840**) relationship with the AIT association. Hence, the null hypothesis ($H_0$2) that "there is no relationship between education of the young practicing farmers and their AIT association" is rejected with the conclusion that education is an important variable that influence the AIT association of the young practicing farmers.

Education plays a major role in AIT association of the young practicing farmers. The very fact that humans collect their understanding from the formal schooling system makes an individual greater confident and self-reliant in any decision-making process as well as one's increase in academic qualification increases their academic knowledge, which in turn increases their capacity to understand and use new AIT tools. This finding is in agreement with the findings of Naik (2018) and Kumar *et al.* (2023).

(3) Languages known and AIT association

From Table 1, it was observed that languages known of the young practicing farmers had positive and highly significant (r=0.642**) relationship with the AIT association. Hence, the null hypothesis ($H_0$3) that "there is no relationship between languages known of the young practicing farmers and their AIT association" is rejected with the conclusion that languages plays a major role in AIT association of the young practicing farmers.

It can be said that knowledge of language helps young practicing farmers in clear understanding of AIT tools and services and able to access them without hesitating. The results of this finding not found with any results.

(4) Experience in farming and AIT association

The data observed in Table 1 reveal that the farming experience of the young practicing farmers had positive and non-significant (r=0.116) relationship with the AIT association of the young practicing farmers. Farming experience does not play significant role in changing the AIT association of young practicing farmers. Hence, the

null hypothesis ($H_0$4) that "there is no relationship between farming experience of the young practicing farmers and their AIT association" is accepted. This finding is in similar with the findings reported by Chaudhari (2018), Kumar (2018) and Jha *et al.* (2021)

(5) Size of family and AIT association

From Table 1, it was observed that size of family of the young practicing farmers had positive and non-significant (r=0.010) relationship with the AIT association. Hence, the null hypothesis ($H_0$5) that "there is no relationship between size of family of the young practicing farmers and their AIT association" is accepted with the conclusion that size of family does not play significant role in changing the AIT association of the young practicing farmers. It can be said that larger families might have less access to or usage of AIT tools and services. Thus, it implies that size of family didn't exert an influence with the AIT association of young practicing farmers This finding is in agreement with the findings reported by Kumar (2023).

(6) Social participation and AIT association

It is evident from Table 1 that there was a positive and highly significant correlation (r=0.271**) between social participation and AIT association of the young practicing farmers. Hence, the null hypothesis ($H_0$6) that "there is no relationship between social participation of the young practicing farmers and their AIT association" is rejected. The results reflect that social participation is an important variable which had direct effect on AIT association of the young practicing farmers. It means with increase in social participation, the AIT association also increased.

The reason attributed may be that the young practicing farmers had been members of social organisations. They are actively participated in social matters to do of society have resulted in expanded attention to AIT tools which led to a favourable attitude towards the AIT association. This finding is in line with the findings reported by Naik *et al*. (2020), Bhosale *et al.* (2021) and Das *et al.* (2022).

(7) Land holding and AIT association

The data given in Table 1 reveal that land holding of the young practicing farmers had positive and highly significant correlation (r=0.238**) with their AIT association. Hence, the null hypothesis ($H_0$7) that "there is no relationship between land holding of the young practicing farmers and their AIT association" is rejected.

This is often due to the very fact that size of land holding provides the financial base for farmers to practice new technologies disseminated through AIT tools for reaching high profit. Higher land holding often operates *via* economic condition which enables farmers get right of entry to AIT tools which results in good association towards AIT. Similar results have been reported by Patel (2015), Kumar (2018) and Naik (2018)

(8) Herd size and AIT association

The data observed in Table 1 reveal that the herd size of the young practicing farmers had positive and significant (r=0.163*) relationship with the AIT association of the young practicing farmers at a 0.05 level of probability. Hence, the null hypothesis ($H_0$8) that "there is no relationship between herd size of the young practicing farmers and their AIT association" is rejected.

It can be said that farmers having good herd size may be in touch with AIT-based extension services to plan and make decisions related to animal husbandry. Thus, it implies that herd size plays a significant role with the AIT association of the young practicing farmers. This finding gets support from the findings of Roy *et al.* (2018).

(9) Parental occupation and AIT association

The data depicted in Table 1 reveal that parental occupation had positive and highly significant relationship (r=0.313**) with the AIT association of the young practicing farmers. Hence, the null hypothesis ($H_0$9) that "there is no relationship between parental occupation of the young practicing farmers and their AIT association" is rejected.

It can be said that majority of the parents of young practicing farmers had worked in agriculture or animal husbandry. This might have introduced them to AIT's resources and services for assistance in these fields. This finding is supported by the findings of Patidar (2010) and Kumar *et al*. (2023).

(10) Annual income and AIT association

It is evident from Table 1 that there was a positive and highly significant relationship (r=0.298**) between annual income and AIT association. Hence, the null hypothesis ($H_0$10) that "there is no relationship between annual income of the young practicing farmers and their AIT association" is rejected.

The motive would possibly be that the annual income of the young practicing farmers directly affects the economic viability, stability and rational behaviour of an individual. Therefore, a positive attitude towards AIT technologies is correlated with higher income levels that are linked to easier access to these resources. This finding gets

support with those reported by Patel (2015), Kumar (2018), Naik (2018) and Jha *et al.* (2021).

(11) Extension contact and AIT association

It is apparent from the data presented in Table 1 that extension contact of the young practicing farmers had positive and highly significant (r=0.570**) with AIT association. Hence, the null hypothesis ($H_0$11) that "there is no relationship between extension contact of the young practicing farmers and their AIT association" is rejected with the inference that extension contact is an important variables that influence the AIT association of the young practicing farmers.

It can be said that extension contact exposes farmers to new areas of farming strategies with knowledge and achievement. Also provides the chance to gain knowledge about agricultural innovations. Most of the extension programmes may moreover additionally alternate their way of wondering degree via a range of educational abilities which results in a way of favourable attitude towards AIT tools. Similar results have been reported by Patel (2015), Kumar (2018) and Reddy *et al.* (2020).

(12) Source of information about AIT and AIT association

In Table 1, it was observed that the information source about AIT of the young practicing farmers had a positive and highly significant (r=0.581**) relationship with the AIT association**.** Since information about technology matters most to the young practicing farmers believe that interpersonal sources are still a good source of information because of easily available. This led to the rejection of the null hypothesis ($H_0$12). It depicts that there was a significant relationship between the information source about AIT and their association. This finding is in line with those reported by Reddy *et al.* (2020) and Samadder (2021).

(13) Agricultural mass media and AIT association

The data presented in Table 1 reveal that the agricultural mass media had positive and highly significant (r=0.423**) relationship with AIT association. Hence, the null hypothesis ($H_0$13) that "there is no relationship between agricultural mass media of the young practicing farmers and their AIT association" is rejected.

Naturally, that person who is extremely close with mass media as a communicator will always need useful information on the latest developments. To satisfy such needs he tries to remain in contact with media and other sources of information like mobile phone and other AIT tools. This might be the reason to have a high level of AIT association of the personnel who had a high level of agricultural mass media. The result is in accordance with those reported by Rudroju (2013), Patel (2015) and Bhosale *et al.* (2021).

(14) Innovative proneness and AIT association

It is apparent from Table 1 that the innovative proneness of the young practicing farmers had a positive and highly significant (r=0.537**) relationship with the AIT association. This led to rejection of the null hypothesis ($H_0$14).

It can be said that innovative proneness is that the individuals who are prone to innovation, usually it'll have a greater orientation towards technology and usage, these factors do naturally have an impact on the AIT association. This might be the reason to have a high level of AIT association. Similar finding have been reported by Rudroju (2013), Kumar (2018), Naik (2018) and Das *et al.* (2022).

(15) Achievement motivation and AIT association

The data from Table 1 revealed that achievement motivation had a positive and highly significant (r=0.815**) relationship with the AIT association of the young practicing farmers. Hence, the null hypothesis ($H_0$15) that "there is no relationship between achievement motivation of the young practicing farmers and their AIT association" is rejected.

It means that greater achievement in the past motivated the young farmers to develop a positive attitude towards the AIT association. Similar finding have been reported by Patel (2015), Kumar (2018) and Chandra *et.al.* (2023).

(16) Credibility towards AIT tools and AIT association

It was evident from Table 1 that there was a positive and highly significant (r=0.797**) relationship between credibility towards AIT tools and their association with AIT. Hence, the null hypothesis ($H_0$16) is rejected.

It can be said that now-a-days various AIT tools are available to the farmers. Mobile phones, Radio and Television were used by the majority of the farmers for 1 to 2 hours per day. Other ICT tools were also used by the farmers for getting information. This might be the reason to have a high level of AIT association. This finding gets support with those reported by Vijay (2009).

(17) Scientific orientation and AIT association

It was evident from Table 1 that there was a positive and highly significant (r=0.798**) relationship between scientific orientation and the AIT association of the young practicing farmers. Hence, the null hypothesis ($H_0$17) that

"there is no relationship between scientific orientation of the young practicing farmers and their AIT association" is rejected.

It was logical thinking which helped the individual to apprehend the object thoroughly and formulate a more favourable attitude towards the scientific method of usage of AIT tools. Similar finding have been reported by Kumar (2018).

(18) Economic motivation and AIT association

Data shown in Table 1 indicated that there was a positive and highly significant (r=0.355**) relationship between the economic motivation of the young practicing farmers with AIT association. Hence, the null hypothesis ($H_0$18) is rejected.

This can be because that training will help them to reinforce in terms of their know-how, attitude and skills in the way of their income-generating things to do which results in excessive financial gains. This may lead them to a favourable positive attitude towards AIT association. The result is in accordance with those reported by Patel (2015), Naik (2018) and Kumar *et al.* (2023).

(19) Risk orientation and AIT association

The data depicted in Table 1 indicate that the risk orientation of young practicing farmers had a positive and highly significant (r=0.719**) relationship with the AIT association. Hence, the null hypothesis ($H_0$19) that "there is no relationship between risk orientation of the young practicing farmers and their AIT association" is rejected.

This might be because young farmers are very enthusiastic and do not hesitate to take any risk regarding any new AIT-related tools or services. This might lead them to significant influence with AIT.

Similar finding have been reported by Das *et al.* (2022), Mahammad et al. (2023), Usadadiya et al. (2023), Akbari et al. (2023), Desai et al. (2024), Dadheech et al. (2024), Patel et al. (2024), Choudhary et al. (2024).

CONCLUSION

Independents variables such as education, languages known, social participation, land holding, herd size, parental occupation, annual income, extension contact, source of information about AIT, agricultural mass media, innovative proneness, achievement motivation, credibility towards AIT tools, scientific orientation, economic motivation and risk orientation were positively and significantly associated with the use of Agricultural Information Technology. Meanwhile, age, experience in farming and family size showed a positive and non-significant relationship with their AIT association.

CONFLICT OF INTEREST

All authors declare that they have no conflict of interest

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