



ISSN (E): 2277- 7695
ISSN (P): 2349-8242
NAAS Rating: 5.23
TPI 2021; 10(12): 1131-1133
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www.thepharmajournal.com
Received: 04-10-2021
Accepted: 09-11-2021

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Attitude of the farmers towards mobile phone based agro-advisories in cotton cultivation

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Abstract

The main focus of this study was on the attitude of farmers towards mobile phone based agro-advisories (MBAs) on cotton crop in three agro-climatic zones of Telangana state. Simple random sampling technique was used in the selection of 240 cotton growing farmers as a sample of the study. The data were collected by using semi structured interview schedule and analysed data by using appropriate statistical tools. It was observed from the study that, majority of the respondents (52.10%) had favourable attitude towards mobile phone based agro-advisories (MBAs) might be due to the fact that mobile phone based agro-advisory service (e-Kapas network) provided timely information which coincide with the crop growth was helped to take up farming operations at right time. Obviously timeliness of messages will enhance the credibility of the information among the farmers. This might be the one of the major reasons for favourable attitude.

Keywords: Attitude, mobile phone, mobile phone based agro-advisories (MBAs)

Introduction

Among the various ICT tools, majority of the Indian farmers own mobile phones. A mobile phone is an Information Communication Technology (ICT) tool used for two-way communication. Mobile phone is becoming one of the basic necessities now days for all types of rural and urban people. The mobile phone has become more useful in the modern days and agriculture is one of the sectors that benefited from it (Samah *et al.*, 2009) [4]. In recent years, there has been a rapid growth of Mobile Phone Based Agro-advisory Services (MPBAS). Hence, the study has been planned with the objective to find out the attitude of the farmers towards Mobile Phone Based Agro-advisories (MBAs) on cotton crop. For this purpose attitude scale was developed with the help of method of summated rating scale developed by Likert's (1932) [3].

Edward (1957) [1] defined attitude as the "degree of positive or negative affect associated with some psychological object".

Attitude in this study was operationalised as the degree of positive or negative feelings of cotton farmers towards Mobile Phone Based Agro-advisories (MBAs) on cotton crop. Samatha (2011) reported that a majority i.e. 71.67 per cent of the respondents had moderately favourable attitude towards ICTs use, followed by less favourable (15.00%) and highly favourable (13.33%) attitude. Shankaraiah and Narayanaswamy (2012) revealed that both 40.00 per cent farmers and 45.00 per cent scientists had favourable attitude about Mobile Message Service (MMS) network. However, 32.50 per cent of farmers had most favourable attitude followed by 27.50 per cent had least favourable attitude towards Mobile Message Service (MMS) network. Jayanthi (2016) [5] reported that nearly three-fourths i.e. 73.33 per cent of the respondents possessed a moderately favourable attitude towards ICT enabled agricultural extension services followed by 14.17 per cent of the respondents had highly favourable attitude towards ICT enabled agricultural extension services. Only 12.50 per cent of the respondents were found to hold a less favourable attitude towards ICT enabled agricultural extension services.

Materials and Methods

The present study was carried out in all three agro-climatic zones (Southern, Central and Northern Telangana Zones) of Telangana state as the cotton is one of the important commercial crops in all three zones. One district was selected purposively from each zone thus constituting three districts for the study as cotton crop was cultivated extensively in these three districts.

From each district 80 cotton farmers who have mobile phones and willing to get mobile phone based agro-advisories on cotton cultivation were selected randomly for the study thus constituting a total of 240 respondents as sample for the study. Experimental research design and simple random sampling was adopted for research purpose. Keeping in the view the objectives of the study a semi structured interview schedule was prepared. The data were collected by using semi structured interview schedule and analysed data by using appropriate statistical tools.

Results and Discussions

Attitude of the farmers towards Mobile Phone Based Agro-advisories (MBAs)

The results observed from Table 1 revealed that majority of the respondents i.e. 52.10 per cent had favourable attitude towards mobile phone based agro-advisories followed by 20.40 per cent, 13.30 per cent, 8.30 per cent and 5.80 per cent with highly favourable, neutral, unfavourable and highly unfavourable attitude, respectively towards mobile phone based agro-advisories.

Table 1: Distribution of respondents based on their attitude towards mobile phone based agro-advisories on cotton cultivation n=240

S. No.	Category	Class Interval	F	%
1	Highly Unfavourable	32-40	14	5.80
2	Unfavourable	40-48	20	8.30
3	Neutral	48-56	32	13.30
4	Favourable	56-64	125	52.10
5	Highly Favourable	64-72	49	20.40
Total			240	100.00

The reason for favorable attitude followed by highly favorable attitude of the respondents towards mobile phone based agro-advisories (MBAs) might be due to the fact that mobile phone based agro-advisory service (e-Kapas network) provided timely information which coincide with the crop growth was helped to take up farming operations at right time. Obviously timeliness of messages will enhance the credibility of the information among the farmers. This might be the one of the major reasons for favourable attitude. A good quality voice message gives clear understanding of the technology, which creates positive attitude towards MBAs. Mobile phone based agro-advisories provided accurate information which met the location specific needs of the farmers lead to favourable attitude. The other reasons were MBAs saved travel time and transaction cost of the farmers by acting as alternative to the present communication system, MBAs improved the knowledge level of the farmers and have positive effect on farm productivity. Further, the adoption of recommended cotton technologies by the respondents in their field situation provided positive results might be the reason for favourable attitude.

Analysis of individual attitude statement of the respondents on mobile phone based agro-advisories on cotton crop

An attempt has been made to find out the response of the respondents towards the set of statements of attitude in varying degrees of positive and negative impressions. Related data were furnished accordingly on the nature and magnitude of the attitude statements in Table 2.

Table 2: Distribution of respondents based on the degree of agreement with attitude statements (frequency & percentage) on mobile phone based agro-advisories on cotton cultivation n= 240

S. No.	Statements	Frequency (%)				
		SA	A	UD	DA	SDA
1	Mobile Based Agro-advisories (MBAs) will provide timely information to the farmers	210(87.50)	25(10.42)	3(1.25)	2(0.83)	0(0)
2	MBAs will never influence farmers' decision making capability	5(2.09)	5(2.09)	291(2.08)	40(16.66)	161(67.08)
3	MBAs will provide quality information to the farmers	110(45.83)	55(22.92)	52(21.67)	13(5.42)	10(4.16)
4	The advises received through Mobile Phone Based Agro-Advisory System is of no use	16(6.67)	24(10.00)	68(28.33)	32(13.33)	100(41.67)
5	MBAs cannot meet location specific needs of the farmers	5(2.09)	15(6.25)	58(24.16)	30(12.50)	132(55.00)
6	MBAs on pest/disease outbreak warning facilitate farmers to take plant protection measures effectively	154(64.17)	45(18.75)	25(10.41)	16(6.67)	0(0)
7	MBAs will give accurate information to the farmers	124(51.67)	55(22.92)	43(17.92)	10(4.16)	8(3.33)
8	MBAs will reduce the transaction cost to the farmers	204(85.00)	18(7.50)	13(5.41)	5(2.09)	0(0)
9	MBAs improves the knowledge level of the farmers on cotton cultivation practices	142(59.17)	60(25.00)	10(4.16)	23(9.58)	5(2.09)
10	I don't like to use any MBAs in cotton cultivation	30(12.50)	40(16.66)	48(20.00)	28(11.67)	94(39.17)
11	Mobile handsets facilitate low cost access to information	160(66.67)	32(13.33)	20(8.34)	18(7.50)	10(4.16)
12	MBAs save travel time of the farmers	180(75.00)	35(14.58)	20(8.33)	5(2.09)	0(0)
13	The farmers market information needs cannot be satisfied with a MBAs	0(0)	5(2.09)	30(12.50)	25(10.41)	180(75.00)
14	MBAs have positive effect on farm productivity	90(37.50)	70(29.17)	65(27.08)	10(4.16)	5(2.09)
15	MBAs are alternative to the present communication system	84(35.00)	46(19.17)	60(25.00)	42(17.50)	8(3.33)

SA: Strongly Agree; A: Agree; UD: Undecided;

DA: Disagree; SDA: Strongly Disagree;

It was clear from the Table 2 that majority of the respondents strongly agreed that 'the Mobile Phone Based Agro-advisories (MBAs) will provide timely information to the farmers' (87.50%) followed by 'MBAs will reduce the transaction cost to the farmers' (85.00%), 'MBAs save travel time of the farmers' (75.00%), 'Mobile handsets facilitate low cost access to information' (66.67%), 'MBAs on pest/disease outbreak warning facilitate farmers to take plant protection measures effectively' (64.17%). Further, more than 50.00 per cent of the respondents strongly agreed that 'MBAs improves

the knowledge level of the farmers on cotton cultivation practices' (59.17%) and 'MBAs will give accurate information to the farmers' (51.67%).

The findings from Table 2 revealed that the mobile phone based agro-advisories were highly useful and quick for diffusion of new technologies among farmers. This indicates that Mobile phone based agro-advisory services were strong medium for quick dissemination of farm information in the form of voice messages. Respondents felt that MBAs encourage adopting new practices and bringing desirable

behavioural changes among cotton farmers.

From the Table 2, it was clear that respondents were neutral to the attitude statements on mobile phone based agro-advisories because for the first time they were exposed to mobile phone based agro-advisory services. Statement No. 13, 'the farmers market information needs cannot be satisfied with MBAs was disagreed by 75.00 per cent because the MBAs were met with the needs of the farmers', followed by Statement No. 2 (67.08%), 'MBAs will never influence farmers' decision making capability', Statement No. 5 (55.00%), 'MBAs cannot meet location specific needs of the farmers', Statement No.4 (41.67%), 'the advises received through Mobile Phone Based Agro-Advisory System is of no use', Statement No.10 (39.17%), 'I don't like to use any MBAs in cotton cultivation', Statement No.14 (29.17%), 'MBAs have positive effect on farm productivity' was agreed by 29.17 per cent and undecided by 27.08 per cent.

The reasons for unfavourable statements might be due to first time exposure to MBAs, not knowing much about the mobile phone based agro-advisory services. And felt that they were very useful but they could not critically place themselves and comment them. This needs continuous exposure to MBAs and capacity to evaluate them. However, an overview definitely gives a clue that cotton farmers attitude was quite unfavourable towards MBAs on cotton cultivation. This might be due to the farmers, who received advisories might not be able to apply the same in the field and impact have developed unfavourable attitude. Further, few farmers might have received the advisories untimely and hence developed unfavourable attitude towards MBAs. Nevertheless for all possible statements the 'strongly disagree' and 'disagree' responses were very low.

An overview of the above findings clearly indicated that majority of the respondents had favourable to highly favourable attitude towards the MBAs in tune with the set statements.

Conclusion

In total, half of the respondents i.e. 52.10 per cent had favourable attitude towards mobile phone based agro-advisories Majority of the farmers developed favourable to highly favourable attitude towards MBAs due to timeliness, relevant and understandable form in vernacular languages. If the mobile phone based agro-advisory services with voice messages along with text messages should definitely create highly favourable attitude of the farmers towards MBAs.

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