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Relationship between socio-economic aspects of farmers and their awareness & adoption of short agricultural messages telecast on PTV

[1]Rubina Aziz, [2] Badar Naseem Siddiqui, [* 3]Jaffar Ali, [1]Amjad Ali, [4]Shagufta Fahmid, [5]Qamar Raza and [6]Muhammad Atif Ali Akram

[1]Department of Agricultural Extension, Balochistan Agriculture College, Quetta, Pakistan
[2]Department of Agricultural Extension, PMAS Arid Agriculture University, Rawalpindi, Pakistan
[3]Office of Agriculture Extension (Plant Protection), Barkhan, Balochistan, Pakistan
[4]Department of Chemistry, Sardar Bahadur Khan Women's University, Quetta, Pakistan
[5]Department of Statistics, Balochistan Agriculture College, Quetta, Pakistan
[6]Office of Agriculture Extension (Soil Fertility), Barkhan, Balochistan, Pakistan
Corresponding Author: jaffaraj2010@yahoo.com*

Abstract

This empirical study was conducted in Nasirabad district of Balochistan to evaluate the relationship between socio-economic characteristics of the farmers and awareness and adoption of short agricultural messages telecast on Pakistan Television (PTV). The data were collected from 120 respondents with the help of pre-tested interview schedule and statistically analyzed with the help of SPSS. The relationship of some selected socio-economic characteristics like age, education, tenancy status and size of land holding of the respondents with their awareness and adoption level was computed through chi-squire (χ^2) test. The results of the study showed that less than fifty (48.33%) of the respondents belonged to middle aged category (35-50 years) while 55.83% of the respondents were literate in the study area. The data further showed that majority (70.83%) of the respondents were owner cultivator whereas 65.00% of the respondents were small farmer possessing land up to 12.5 acres. The data regarding relationship of age, education, tenancy status and size of landholding of the respondents showed significant relationship with awareness of agricultural short messages telecast on TV by government agencies. The data further showed that education, tenancy status and size of landholding of the respondents showed significant relationship with adoption of agricultural short messages while age of the respondents showed non-significant relationship with adoption of agricultural short messages telecast on TV by government agencies.

Keywords: Television, short agricultural messages, Socio-economic characteristics, relationship, awareness, adoption.

Introduction

Pakistan is essentially an agriculture country and its economy largely depends on bumper harvest. The government is making efforts on multiple dimensions to improve the agricultural sector and bring it at par with the applications of modern techniques and scientific methods to improve the quality and quantity of the yield. Agriculture is performing a double role in Pakistan's development by feeding population and supporting economic growth by restricting imports of food items. On the other hand, agriculture is the major source of foreign exchange earnings for the country. It's a key sector of the economy as it also provides raw materials to main industrial units of the country and major share of our exports also come from agriculture (Govt. of Pak., 2015). It accounts for 19.8% of the Gross Domestic Product (GDP) and it remains by far the largest employer absorbing 42.3% of the country's total labour force (Govt. of Pak., 2016).

In spite of such a great importance, agriculture is developing at a very low speed in Pakistan (Rehman *et al*., 2013 and Ahmed *et al*., 2016) and the yield of our crops is generally low as compared to other countries (Govt. of Pakistan, 2003). Even within the country, there is a big gap between the potential and average yield of different crops, which implies that the available technologies, if properly communicated to and adopted by the farmers, have the potential to enhance agriculture production manifold (Manandhar, 1990, Muhammad *et al*., 2004 and Aziz *et al*., 2015). Creating awareness among farmers about agricultural technologies and stimulating their interest are among the basic essentials of speedy adoption of latest agricultural technologies by the farmers (Muhammad, 2005 and Muhammad *et al*., 2012). This puts a great responsibility on the extension agencies/organizations to communicate the latest agricultural technologies among the ultimate users. Effective communication of improved technologies is one of the most important factors of agricultural development (Manandhar, 1990, Muhammad *et al*., 2004 and Aziz *et al*., 2015).

Agricultural extension is essentially a message delivery system organized to convey the latest findings of agricultural research to farmers. Effective communication is therefore, the prime requirement in extension work (Hussain *et al*., 1997, Memon *et al*., 2014 and Ali *et al*., 2016). The task of extension education is accomplished by different extension methods/media, which may come under individual, group and mass contact. Individual and group contact methods have limited scope in this context while mass contact methods are more effective to disseminate the agricultural information among the farming community (Muhammad, 2005 and Muhammad *et al*., 2012).

Mass media offer powerful channels for communicating agricultural messages and related information which can enhance the capacity building of farmers (Nazari & Hassan, 2011 and Chhachhar *et al*., 2012). Mass media such as radio, TV and printed materials are used to reach large number of people quickly. These methods are particularly useful in making large number of people aware of new ideas and practices, or alerting them to sudden emergencies (Irfan *et al*., 2006). Television is one of the powerful channels of the mass media, which transmit information very fast about agricultural technology among the farmers community. It can be said that most important communication tools presented today is mass media through use of this technology and agriculture related information can be transferred easily to the farmers (Irfan, *et al*., 2006, Chhachrar *et al*., 2012 and Aziz *et al*., 2016).

In Pakistan radio and TV have played a significant role in bringing awareness and technological change to the rural masses through the introduction of special programs (Ahmad *et al*., 2007). Various daily and weekly agricultural programmes are telecast on behalf of both public and private "sectors. These programs include Kisan Time" & "Haryali". In addition to these programmes, short messages are also important forms of agricultural TV telecasts which provide brief and comprehensive information to farmers. Advertisements relevant to agriculture are for the promotion of their products (seed, fertilizer, pesticides etc.) and at the same time act as source of agricultural information for the intended audience (Khan *et al*., 2010). In Balochistan, these programs (Kisan Time & Haryali), advertisements delivered by the private agencies and the timely short messages telecast on TV by Government of the Balochistan. In fact a huge amount of money is being spent on these programs to achieve the purpose of educating and equipping farmers with latest production technologies and techniques.

Awareness regarding latest agricultural technologies facilitates the adoption of an innovation (Evenson, 1997 and Khan *et al*., 2013). Lack of awareness can hinder the adoption of latest technologies (Siddiqui, 2006 and Khan *et al*., 2013). Socio economic aspects also have an impact on awareness and adoption of technology and success of technology depends on its

dissemination among the potential users, which ultimately is measured by the level of adoption of that technology (Reddy & Reddy, 2002 and Ashraf *et al*., 2015). Thus there exists a dire need to critically evaluate the relationship between socio-economic characteristics of the farmers and awareness and adoption of short agricultural messages telecast on PTV. The results of this study would be helpful to identify the strengths and weaknesses of TV as a communication medium and to suggest measures for its improvement.

Materials and Methods

This study was conducted in Nasirabad district of Balochistan province (Pakistan). Out of twenty four union councils, five were selected randomly and from each selected union council two villages were selected at random. From each sample village twelve farmers (having their own TV sets) were taken through simple random sampling technique, thus forming a sample of 120 respondents. The data were collected with the help of pre-tested interview schedule and statistically analyzed with the help of SPSS and thus drawn conclusions.

Results and Discussion

Socio-economic aspects

Socio-economic aspects like age, education, size of land holding and tenureship status pay significant role in the adoption of innovations (Munir, 1988). Keeping these factors in view the data were collected and are presented in the subsequent Tables.

Age

As the time passes an individual starts getting more mature in understanding the situations and circumstances. Increase in age leads to maturity and rationality. Age casts great impact upon the sociological behavior of the individuals. Specific age category of one individual affects the activities of other individuals. Socio-economic characteristics of a person i.e. age education, size of land holding and social status play a vital role in the adoption of modern/latest technologies (Javaid, 1983). Keeping in view the importance of this factor, the respondents were asked about their age. The data in this regard are presented in **Table 1.**

Table 1: Distribution of the respondents according to their age

Age (Years)	Frequency	%
Young (up to 35)	22	18.33
Middle (35-50)	58	48.33
Old (above 50)	40	33.33
Total	**120**	**100.00**

Table 1 reveals that slightly less than fifty (48.33%) of the respondents belonged to middle aged category (35-50 years). About one-fourth (33.33%) of the respondents belonged to old age category (above 50 years) and 18.33% of the respondents were young (up to 35 years).

Educational qualification

Education is a process, which brings desirable changes in the behavior of the people. An educated person tends to keep himself equipped with the latest knowledge about the change taking place in his surroundings. Thus as educated farmer is, therefore, considered to be more vigilant about agricultural innovations and he tends to be more scientific in his approach towards farm practices. He may use all possible information sources to keep himself aware of the latest information. . educated people are expected to have more favorable attitude towards agricultural innovations and plant protection measures as compared to uneducated one (Hassan,1991) . Considering the importance of this factor, the respondents were asked about their educational level. The data in this regard are presented in **Table 2.**

Table 2: Distribution of the respondents according to their educational level

Education	Frequency	%
Illiterate	53	44.17
Up to primary	10	8.33
Primary-middle	22	18.33
Middle-matric	27	22.50
Above matric	08	6.67
Total	**120**	**100.00**

The data presented in **Table 2** shows that a about 56% of the respondents were literate and 44.17% of the respondents were illiterate. Furthermore, among literate 22.50% attained education level up to middle-matric and 18.33% got education up to primary-middle. Only 8.33 and 6.67% of the respondents had education up to primary and above matric level respectively.

Tenancy status

The concept of tenureship means the manners and conditions of land holding and property rights of the individual to the land (Munir, 1988). In our country mostly the types of land tenures are owner, owner-cum tenants and tenants. It is assumed that owner cultivators are always better than tenants and owner-cum tenants. So data were collected regarding tenancy status of respondents, which are presented in **Table 3.**

Table 3: Distribution of the respondents according to type of tenure

Tenancy status	Frequency	%
Owner	85	70.83
Owner-cum-tenant	03	2.50
Tenant	32	26.67
Total	**120**	**100.00**

The data presented in **Table 3** clearly indicates that a fair majority (70.83%) of the respondents were owner cultivator followed by tenant (26.67%) cultivators. It can be concluded that owner cultivators were more likely to be the TV set holders than other categories.

Size of land holding

Size of land holding refers to the piece of land cultivated by a farmer or his family (Nawaz, 1989) argued that larger the size of land holding greater the adoption of agricultural innovations. Therefore, it was deemed necessary to collect the necessary information about the size of land holding of the respondents, which is given in **Table 4.**

Table 4: Distribution of the respondents according to size of land holding

Land holding (Acres)	Frequency	%
Small (up to 12.5)	78	65.00
Medium (12.5-25)	28	23.33
Large (above 25)	14	11.67
Total	**120**	**100.00**

Table 4 reflects that a fair majority (65.00%) of the respondents was small farmer possessing land up to 12.5 acres, while 23.33% were the medium farmers having land between 12.5-25 acres. Only (11.67%) of the respondents were large farmers holding land more than 25 acres.

Relationship of socio-economic status of respondents with awareness and adoption of short agricultural messages telecast on TV by the government agencies

Keeping in view the specific objectives of the study, the data regarding awareness and adoption by the respondents of short agricultural messages telecast on TV by government agencies were collected. The relationship of some selected socio-economic characteristics (age, education, tenancy status and size of land holding) of the respondents with their awareness and adoption level was computed through chi-squire (χ^2) test.

Relationship between socio-economic status with awareness

The relationship of awareness of short agricultural messages telecast on TV by government agencies with socio-economic status of the respondent was tested and presented in **Tables 5-8.**

Table 5: Relationship between age and awareness of the respondents

Age	Awareness			Total
	Low	Medium	High	
Young	7 31.82%	12 54.55%	3 13.64%	**22**
Middle	9 15.52%	24 41.38%	25 43.10%	**58**
Old	14 35.00%	20 50.00%	6 15.00%	**40**
Total	**30**	**56**	**34**	**120**

χ^2 tab = 9.48 χ^2 cal = 13.48* df = 4

Table 6: Relationship between education and awareness of the respondents

Education	Awareness			Total
	Low	Medium	High	
Illiterate	18 34.0%	23 43.4%	12 22.6%	**53**
Up to middle	9 28.1%	16 50.0%	7 21.9%	**32**
Matric and above	3 8.6%	17 48.6%	15 42.9%	**35**
Total	**30**	**56**	**34**	**120**

χ^2 tab = 9.48 χ^2 cal = 9.51* df = 4

Table 7: Relationship between tenancy status and awareness of the respondents

Tenancy status	Awareness			Total
	Low	Medium	High	
Owner	19 22.35%	49 57.65%	17 20.00%	**85**
Owner-cun-tenant	1 33.33%	1 33.33%	1 33.33%	**03**
Tenant	10 31.25%	6 18.75%	16 50.00%	**32**
Total	**30**	**56**	**34**	**120**

χ^2 tab = 9.48 χ^2 cal = 15.89* df = 4

Table 8: Relationship between size of landholding and awareness of the respondents

land holding (acres)	Awareness			Total
	Low	Medium	High	
Small (up to 12.5)	20 25.64%	43 55.13%	15 19.23%	**78**
Medium (12.5-25)	7 25.00%	9 32.14%	12 42.86%	**28**
Large (above 25)	3 21.43%	4 28.57%	7 50.00%	**14**
Total	**30**	**56**	**34**	**120**

χ^2 tab = 9.48 χ^2 cal = 10.21* df = 4

The data shows significant relationship between age of the respondents with awareness of short agricultural messages telecast on TV by government agencies (**Table 5**). It may imply that with that age had some influence on awareness. These results are in line with those of Ashraf (2001) who indicated highly significant relationship of age with awareness. However, Butt (2002) negated these results by indicated a non-significant relationship of age with awareness.

The data also indicates a significant relationship of education with awareness (**Table 6**). It can be concluded that awareness was increased with the increase of education of the respondents. Similar results were achieved by Butt (2002) who reported significant relationship of awareness with education.

Furthermore, tenancy status (**Table 7**) and size of landholding of the respondents showed significant relationship with awareness of agricultural short messages (**Table 8**). This means that those having owner faring and larger landholding had higher awareness of the short agricultural messages telecasted on TV by government agencies. Butt (2002) reported the non-significant relationship of awareness with landholdings of the respondents.

Relationship between socio-economic status with adoption

The relationship of adoption of short agricultural messages telecast on TV by government agencies with socio-economic status of the respondent was tested and presented in **Tables 9-12.**

Table 9: Relationship between age and adoption of the respondents

Age	Awareness			Total
	Low	Medium	High	
Young	3 13.64%	13 59.09%	6 27.27%	**22**
Middle	12 20.69%	35 60.34%	11 18.97%	**58**
Old	11 27.50%	15 37.50%	14 35.00%	**40**
Total	**26**	**63**	**31**	**120**

χ^2 tab = 9.48 χ^2cal = 6.26^{NS} df = 4

Table 10: Relationship between education and adoption of the respondents

Education	Awareness			Total
	Low	Medium	High	
Illiterate	15 28.30%	28 52.83%	10 18.87%	**53**
Up to middle	9 28.13%	17 51.43%	6 18.75%	**32**
Matric and above	2 5.71%	18 51.43%	15 42.86%	**35**
Total	**26**	**63**	**31**	**120**

χ^2 tab = 9.48 χ^2 cal = 11.36* df = 4

Table 11: Relationship between tenancy status and adoption of the respondents

Tenancy status	Awareness			Total
	Low	Medium	High	
Owner	14 16.47%	54 63.53%	17 20.00%	**85**
Owner-cun-tenant	2 66.67%	0 00.00%	1 33.33%	**03**
Tenant	10 31.25%	9 28.31%	13 40.63%	**32**
Total	**26**	**63**	**31**	**120**

χ^2 tab = 9.48 χ^2 cal = 16.28* df = 4

Table 12: Relationship between size of landholding and awareness of the respondents

land holding (acres)	Awareness			Total
	Low	Medium	High	
Small (up to 12.5)	19 24.36%	46 58.97%	13 16.67%	**78**
Medium (12.5-25)	5 17.86%	14 50.00%	9 32.14%	**28**
Large (above 25)	2 14.29%	3 21.43%	9 64.29%	**14**
Total	**26**	**63**	**31**	**120**

χ^2 tab = 9.48 χ^2 cal = 15.01** df = 4

The data showed a significant relationship of adoption of short agricultural messages telecast on TV by government agencies with education of the respondents (**Table 10**). It can be concluded that with the increase in education of the respondents there will be an increase in adoption than those having little or no education. These results are in line with those of Hayat (1982), Malik *et al* (1992), Hassan *et al*. (2002), Butt (2002) and Siddiqui (2006) who reported significant relationship of education with adoption. Furthermore, there was a significant relationship of tenancy status (**Table 11**) and landholding of the respondents with the adoption of short agricultural message (**Table 12**). It may imply that adoption was also influenced by size of landholding. These results are supported by Butt (2002). However, these results are negated by Malik *et al*. (1993) and Kotile & Matins (2000) who reported highly significant positive relationship between landholding and adoption of disease resistant varieties. Data also depict a non-significant relationship of adoption with age of the respondents (**Table 9**).

Conclusion

Keeping in view the above facts, it is concluded that majority of the respondents belonged to middle aged category while more than half of the respondents was literate and less than one-fourth of respondents attained education level up to middle-matric. Majority of the respondents were owner cultivator whereas only 11.67% of the respondents were large farmers holding land more than 25 acres in the study area. A significant relationship of awareness of short agricultural messages telecast on TV by government agencies with age, education, tenancy status, and size of land holding was found. It is further concluded that significant relationship of adoption of short agricultural messages telecast on TV by government agencies with education, tenancy status, and size of land holding was found. Data also depict a non-significant relationship of adoption of short agricultural messages with age of the respondents

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