PEOPLES' COMPREHENSION TOWARDS SCIENTIFIC TECHNOLOGY IN JABALPUR

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India has made efforts to inculcate scientific out look in the public. The concern of the state is clearly discernible from the fact that there has been an increased investment in the popularization of sciencs in every day. Life is governed and conditioned by the off-shoots of science so much so that it is very difficult to imagine our existence without them. Whatever may be the fate of human beings in time to come, we are today extremely dependent on scientific innovations of the modern world of agriculture, medicine, business, communication, transport, industry, press and various other segments of life are highly indebted to science, which now performs wonders than "flying carpet" "Alladin's lamp". But its wonderful achievements, science has reduced the margin of impossibility. The modern era in largely characterized by scientific achievements. The use of many new technological development has become a routine affair in our day to day life. However, the general attitude of people has not changed in the direction of accepting things in scientific perspective. In such a situation, it is rather more necessary that people should be oriented and educated towards scientific technology for living in a scientific society, Mass media particularly Television and Radio are trying hard to create scientific knowledge and altitude among people, however, their planning is based on their self assumptions. There is significant increase in the science-based programmes of Indian Television and Radio besides privately managed print media. Yet we do not know the status of public understanding of science in India. It is the need of hour to increase awareness towards scientific technology among the people of our country. It is of immense importance to carry out a comparative study so as to get an idea regarding extent of awareness towards scientific technology of rural and urban people. Keeping this in view, the present study was undertaken with the following objectives :

to know the profile of rural and urban respondent of study area, to examine extent of awareness and comprehension regarding knowledge of scientific technology between rural and urban people and to find out relationship if any between independent and dependent variable.

METHODOLOGY :

This study was conducted in Jabalpur district of Madhay Pradesh during the year 1994, and was confined to Ex-Post-Facto research design. A multi stage random sampling techniques was used. At first stage, a block was selected randomly from the total 11 blocks of the district. This bolck had 20 thousand population and is considered urban area. It has high school and college. This block had 560 educated farmers. The list was obtained from block office. Out of these, 60 respondents were selected at random basis which constituted the sample from urban area. In the second stage, 6 villages of same block were selected randomly for selecting rural respondents. In last stage, the list of educated rural respondents of each village was prepared and 10 people were selected randomly from each selected villages. Thus, 60 respondents from rural area and 60 respondents from urban area were selected for the purpose of study.

Scientific knowledge was considered as dependent variable and age, castes education, occupation, land holding, annual income, social participation out side visit, reading habit, political knowledge, attitude and source of information were the independent variables of the study. The

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data were collected through per-tested structured interview schedule. Statistical analysis of the data was carried out into frequency, percentage & average. Coefficient of correlation 'r' and 't' test were applied to ascertain the statistical significance of the results so as to provide a valid and reliable answer to the results.

RESULTS & DISCUSSION :

The data in table 1 indicates attributes of rural and urban respondents. It reveals that a higher percentage of rural people were of old age group, belonged to SC & ST Categories, had primary to middle class education and were having agriculture as a main occupation. They had medium size of land holding and low income. About 66 per cent respondents had no membership in any roganization. A higher percentage of respondents used to go outside visit once in a month. About 48 per cent respondent had low reading habit and also had low political knowledge. There were 51·67 per cent rural respondents who were having negative attitude towards scientific technology. Only 58·33 per cent had radio and 28·33 per cent had television as a sources of information.

Table 1. Personal Psychological, Socio-economic and Communication Attributes of Rural and Urban Respondents

Sl. No.	Attributes	Categories	Rural Respondents		Urban Respondents	
			Frequency	Percentage	Frequency	Percentage
1.	Age	Young	14	23·33	23	38·33
		Middle	19	31·67	27	45·00
		Old	27	45·00	10	16·67
2.	Caste	General	11	18·33	26	43·33
		Backward	21	35·00	24	40·00
		SC & ST	28	46·67	10	16·67
3.	Education	Primary to middle class	29	48·33	11	18·33
		Intermediate & Above	24	40·00	28	46·67
		Intermediate class	7	11·67	21	35·00
4.	Occupation	Agriculture	41	68·33	15	25·0ᴜ
		Agril. + Business	11	18·33	21	35·00
		Agril + Service	8	13·30	24	40·00
5.	Land Holding	Small	19	31·67	33	55·00
		Medium	28	46·67	19	31·67
		Large	13	21·66	8	13·33
6.	Annual Income	Low	26	43·33	12	20·00
		Medium	23	28·34	31	51·67
		High	11	18·33	17	28·33
7.	Social participation	No membership	40	66·67	12	20·00
		Membership	14	23·33	22	36·67
		Position	6	10·00	26	43·33
8.	Outside visit	Regularly	10	16·67	22	36·67
		Weekly	17	28·33	32	53·33
		Monthly	33	55·00	6	10·00
9.	Reading habit	Low	29	48·33	8	13·33
		Medium	20	33·33	24	40·00
		High	11	18·34	28	46·67
10.	Political Knowledge	Low	29	48·33	6	10·00
		Medium	21	35·00	28	46·67
		High	10	16·67	26	43·33
11.	Attitude	Negative	31	51·67	7	11·67
		Neutral	23	38·33	31	51·67
		Positive	6	10·00	22	36·66
12.	Source of information	Radio	35	58·33	15	25·00
		Television	17	28·33	29	48·33
		Radio Television	8	13·34	16	26·67

In case of urban respondents, quite a high percentage of respondents were of middle age group, belonged to general caste and had intermediate and above education, 35 per cent were doing agriculture & business and 40 per cent agriculture & service respectively. 55 per cent respondents had small size of land holding, and more then 50 per cent belonged to medium income group. 43 per cent respondent were holding position in some organizations. 53 per cent respondents used to go out side weekly and 36 per cent regularly. They had high reading habit and also had medium to high political knowledge. About 36 per cent respondents reported positive sttitude towards scientific technology and 51 per cent were neutral. 48 per cent respondents were having only television and 26·67 per cent were having radio + television as a source of information.

The data in Table 2. show the distribution of rural and urban respondents according to their extent of scientific knowledge. It is clear from the data in table that of the total rural respondents, 40 per cent were having low scientific knowledge followed by 41·67 per cent were having medium scientific knowledge and 18·33 per cent high scientific knowledge respectively. In case of urban respondents. 13·33 per cent had low scientific knowledge followed by 48·34 and 38·33 per cent were having medium and high level of scientific knowledge accordingly.

Table 2. Distribution of Rural and Urban Respondents according to Extent of awareness and comprehension of scientific technology

Extent of awareness and comprehension of Scientific technology	Rural Respondents		Urban Respondents	
	No.	Percentage	No.	Percentage
Low (Up to 71 Scores)	24	40·00	8	13·33
Medium (71-92 Scores)	25	41·67	29	48·34
High (92-113 Scores)	11	18·33	23	38·33
Total	**60**	**100·00**	**60**	**100·00**

The data given in table 3 show that the mean knowledge score of urban respondents was 87-51 per cent then rural respondents (77·80%) regarding knowledge of scientific technology. The table indicated that urban respondents possessed high scientific knowledge than rural people. The '*t*' test also showed significant difference in the knowledge of rural and urban respondents towards scientific technology.

Table 3. Showing the difference between rural and urban respondents regarding knowledge of scientific technology

	Extent of knowledge of scientific technology		"Z" test
	Rural respondents	Urban respondents	
Mean (X)	77·18	87·51	4·27**
Standard Deviation (SD)	13·75	12·78	–
Coefficient of variance	17·81	14·60	–

** Highly significant at 0·01 level of Probability.

The data presented in table 4 reveal that the education, social participation, reading habit, political knowledge, attitude and source of information utilized were positively and significantly related with the extent of scientific knowledge of rural and urban respondents at 1 per cent level of probability. Only occupation and outside visit were positively and significantly related at 0·005 per cent level of probability with the extent of scientific knowledge of rural respondents but it was positively and significantly related with 1 per cent of probability with the extent of scientific knowledge of urban respondents. The correlation between age and size of land holding with extent of scientific knowledge of rural and urban respondents was found to be non-significant. It is inferred that these eight variables significantly exert their influence in the scientific knowledge level of rural and urban respondents toward scientific technology.

Table 4. Relationship between comprehension of scientific knowledge and attributes of the rural & urban respondents

Sl. No.	Independent variables	Zero order correlation 'r'	
		Rural	Urban
1.	Age	0· 097	0·104
2.	Caste	0· 292*	0·170
3.	Education	0· 753**	0·645**
4.	Occupation	0· 339*	0·550**
5.	Land holding	0· 087	0·130
6.	Annual income	0· 304*	0·103
7.	Social participation	0· 505**	0·665**
8.	Outside visit	0· 321*	0·342**
9.	Reading habit	0· 517**	0·563**
10.	Political knowledge	0· 767**	0·470**
11.	Attitude	0· 478**	0·523**
12.	Source of informations	0· 984**	0·561**

* Significant at 0·05 level of probability ** Significant at 0·01 level of probability

CONCLUSION :

It can be concluded from the study that a high percentage of rural respondents were of middle and older age group, belonged to SC and ST caste category, having primary to middle class education, agriculture as main occupation, had medium size of land holding, low annual income, no membership in any social organization, monthly visit to out side, low reading habit, low political knowledge, negative attitude towards scientific technology and higher percentage of rural respondents had radio and some had TV as a source of information. Whereas, in case of urban respondents, the higher percentage of respondents were of middle and young age group, belonged to general & OBC caste category, had intermediate & above education, had agriculture, business and service as the main occupation, had small and medium size of land holding, having medium annual income, having position in some social organizations, weekly visit to out side, high reading habit, medium to high political knowledge, having neutral and positive attitude towards scientific technology and also were having T.V. and some had radio + T.V. as a source of information. It was observed that higher percentage of rural respondents had lower to medium scientific knowledge whereas urban respondents had medium to high level of knowledge regarding scientific technology. A significant difference was observed between the scientific knowledge of rural and urban respondents. Among the socio-economic characteristic, age and land holding of rural and urban respondents was not related with their level of scientific knowledge while education, occupation, social participation, outside visit, reading habit, political knowledge, attitude of rural and urban respondents were positively and significantly correlated with the knowledge of scientific technology.

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