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Research Article

A study on Correlation involved in knowledge, adoption and awareness indices of livestock farmers versus independent variables

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Abstract

There exists highly significant and positive correlation between overall knowledge score (knowledge index) of selected five animal husbandry practices and some socio- economic, socio-psychological variables and all the communication variables. Regarding adoption of ten selected animal husbandry practices, there lies the negative and significant correlation between family type, family size, number of family members, with the overall adoption score (adoption index) at 1% level. But variables like family education score was negatively and significantly correlated with adoption index at 5% level. Variables like education, farm power, and economic status were found to be negatively and significantly correlated with the awareness index at 1% level. While in Spearman's correlation, In case of knowledge index, there were positive and significant relationship between knowledge index and independent variables. There exists negative and significant correlation between overall adoption score (adoption index) of selected animal husbandry practices and some socio-economic variables. There were positive and highly significant relationship between overall awareness score (awareness index) and some communication variables.

Keywords: Correlation, Adoption, Knowledge, Awareness.

Introduction

The study of the impact of Institution Village Linkage Programme (IVLP) is concerned with the change of behaviour of the stake holders involved in the programme. The impact of IVLP in coastal agro-eco system of Paschim Medinipore, West Bengal conducted by West Bengal University of Animal and Fishery Sciences (W. B. U. A. F. S.) for last few years may be studied on the basis of adoption behaviour, knowledge and awareness level of the selected respondents engaged only in livestock production system. The Technology Assessment and Refinement Institution Village

Linkage Programme (TAR-IVLP) project was implemented at Barua village which is located at 5 No. Siromoni Grampanchayat under Midnapur Sadar Block. Barua village was selected purposively to fulfill the objectives of the researcher's study.

Materials and Methods

Barua village of Midnapur Sadar Block was purposively selected to fulfill the objectives of the researcher's study. The present study was confined

to only 8 interventions related to livestock. 20% of the IVLP beneficiaries covered under each intervention and thus 139 of respondents were taken as respondents for this study. In the present study livestock owners' adoption, knowledge and awareness behavior about selected animal husbandry practices were the dependent variables. The selected independent variables were - socio-economic, socio-psychological and communication variables.

Correlations involving all socio-economic, socio-psychological and communication source variables with knowledge index, adoption index and awareness index were calculated following Product Moment method (*Pearson's correlation method*) and all correlation coefficient were tested for their significance using usual t-test. Spearman Rank correlation coefficients were also calculated involving all socio-economic, socio-psychological and communication source variables along with knowledge, adoption and awareness indices. Such rank correlation coefficients were also tested for their significance.

Results and Discussion

Correlation involved in knowledge, adoption and awareness indices Vs. independent variables

Simple correlation – The simple correlation between the knowledge, adoption and awareness indices and 24 independent variables (socio-economic, socio-psychological and communication variables) were calculated and the results have been summarized in the table 1.

Table 1 revealed that there existed highly significant and positive correlation between overall knowledge score (knowledge index) of selected five animal husbandry practices and some socio-economic (occupation, education, family education score, family educational status, house, farm power, material possession, economic status), socio-psychological variables (urban contact, economic motivation, innovation proneness, social participation) and all the communication variables. Islam (2005) also suggested that there exists highly significant and positively correlated between overall

knowledge score (Knowledge index) of selected animal husbandry practices and education of respondent, family education status, social participation, mass media and communication sources at 1 percent level of significance. Besides, Table 1 also depicted that land, attitude, risk orientation were positively and significantly correlated with the knowledge index.

Regarding adoption of ten selected animal husbandry practices, there lies the negative and significant correlation between family type, family size, number of family members, with the overall adoption score (adoption index) at 1 percent level. But variables like family education score was negatively and significantly correlated with adoption index at 5 percent level. Material possession, urban contact and communication skill were positively and significantly correlated with adoption index at 5 percent level.

This finding was in line with the findings of Ghosh (2004) who reported that there were positive and significant relationship between adoption of improved animal husbandry practices and independent variables like communication. Dutta (2005) also reported that there was positive and significant relationship between adoption of improved animal husbandry practices and independent variables like material possession, social participation and communication sources. Lawrence (2010) also suggested there were positive and significant relationship between the dependent variable (adoption of selected cattle farming practices) and independent variables like material possession and mass media communication at 1 percent level of significance and urban contact at 5 percent level of significance.

A perusal of table 1 indicated that variables like education, farm power, and economic status were found to be negatively and significantly correlated with the awareness index at 1 percent level. Communication sources (personal cosmopolite, personal localite, communication source) were found to be positively and highly significantly correlated with the awareness index. It was also found that family type, family size, number of

Table 1. Correlation involving knowledge, adoption and awareness indices Vs Independent variables

	Simple Correlations				Spearman's Correlations		
	KN_INDEX	AD_INDEX	AW_INDEX		KN_INDEX	AD_INDEX	AW_INDEX
AGE	0.038	0.018	-0.069	AGE	0.006	0.034	-0.074
OCCU	0.288**	-0.033	-0.131	OCCU	0.262**	-0.037	-0.14
EDU	0.364**	-0.084	-0.28**	EDU	0.374**	-0.085	-0.292**
F_TYPE	0.079	-0.255**	-0.193*	F_TYPE	0.095	-0.252**	-0.207*
F_SIZE	0.118	-0.219**	-0.213*	F_SIZE	0.138	-0.232**	-0.217*
NUMBER	0.106	-0.26**	-0.205*	NUMBER	0.124	-0.28**	-0.213*
Fedu score	0.365**	-0.171*	-0.146	Fedu score	0.32**	-0.191*	-0.153
FEDU_STA	0.346**	-0.058	-0.053	FEDU_STA	0.246**	-0.058	-0.01
LAND	0.217*	0.026	0.014	LAND	0.157	-0.024	-0.003
HOUSE	0.363**	0.023	-0.149	HOUSE	0.294**	0.011	-0.158
F_POWER	0.278**	0.074	-0.325**	F_POWER	0.297**	0.089	-0.33**
M_POSS	0.533**	0.194*	-0.176*	M_POSS	0.413**	0.161	-0.184*
ECO_STAT	0.489**	0.121	-0.235**	ECO_STAT	0.39**	0.1	-0.206*
U_CONT	0.249**	0.167*	-0.051	U_CONT	0.205*	0.166	-0.069
ECO_MOTI	0.31**	0.033	-0.045	ECO_MOTI	0.285**	0.105	-0.175*
inno prone	0.585**	0.152	-0.18*	inno prone	0.313**	0.053	-0.162
ATTITUDE	0.207*	0.051	0.057	ATTITUDE	0.15	0.106	0.095
RISK_ORI	0.167*	-0.074	0.064	RISK_ORI	0.143	-0.069	0.086
S_PARTI	0.349**	0.125	0.001	S_PARTI	0.283**	0.12	-0.043
MASS_MED	0.55**	0.161	0.099	MASS_MED	0.222**	-0.003	0.121
P_COS	0.345**	0.069	0.305**	P_COS	0.089	0.04	0.307**
P_LOC	0.318**	-0.035	0.299**	P_LOC	-0.016	-0.083	0.259**
COM_SOUR	0.464**	0.081	0.258**	COM_SOUR	0.096	-0.011	0.295**
com skill	0.593**	0.202*	0.076	com skill	0.332**	0.078	0.064

Note: * P<0.05 ** P<0.01

family members, material possession and innovation proneness were all negatively and significantly correlated with the overall awareness score at 5 percent level.

Spearman's correlation

The Spearman's correlation between the knowledge, adoption and awareness indices and 24 independent variables (socio-economic, socio-psychological and communication variables) were calculated and the results have been summarized in the table 1.

Table 1 depicted that in case of knowledge index, there were positive and significant relationship between knowledge index and independent variables like occupation, education, family education score, family educational status, house, farm power, material possession, economic status (socio-economic variables), economic motivation, social participation (socio-psychological variables) and mass media, communication skill at 1 percent level and urban contact (socio-psychological variable) at 5 percent level. These findings were also in line with the findings of Islam (2005) who reported that Spearman's Correlation was highly significant with the education of respondent, family education status and mass media at 1 percent level of significance.

On the other hand, table 1 indicated that there exists negative and significant correlation between overall adoption score (adoption index) of selected animal husbandry practices and some socio-economic variables (family type, family size and number of family members) of the livestock farmers at 1 percent level of significance. Spearman's correlation was negative and significant with the family educational score (socio-economic variable) at 5 percent level. Dutta (2005) also observed that family education had significant association with the adoption of improved animal husbandry practices (Spearman's Correlation). Sarkar (2005) also reported findings in similar line. Age had no significant association with adoption of improved cattle farming practices. Sarkar (2005) who reported that age was not a significant factor in the adoption

of dairy innovations. Ghosh (2004) found that Adoption of deworming and Adoption of Vaccination against contagious diseases were negatively and significantly associated with family type. The adoption of Vaccination against contagious diseases of the dairy farmers was not significantly correlated with occupation, caste and land.

Table 1 Indicated that there were positive and highly significant relationship between overall awareness score (awareness index) and some communication variables (personal cosmopolite, personal localite, communication source) at 1 percent level. Srivastava (1999) pointed out that source of information (personal cosmopolite, personal localite, and mass media) had significant relation with the awareness level. But it was found that education of the respondent, farm power (socio-economic variable) was negatively and highly significantly correlated with awareness index at 1 percent level. In case of family type, family size, number of family members, farm power, economic status (socio-economic variables) and economic motivation (socio-psychological variable) there exists negative and significant correlation with the awareness index.

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