

Multivariate Analysis of Attitude and Constraints in Adoption of Artificial Insemination Program

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Abstract

An attitude in an emotionalized system of ideas which predisposes us to act in a certain way under certain conditions. Attitude is an important component of behavior as it plays a significant role in forming the overt and covert behavior of a farmer. The study revealed that the age, occupation and knowledge about dairy innovations are the significant contributors towards the dependent variable i.e. attitude. The study also revealed that the repeater/poor conception is most vital constraint in the adoption of artificial insemination program.

Key words : Attitude, Artificial insemination, Constraints, Adoption, Artificial insemination.

India is endowed with livestock resources of considerable genetic diversity to withstand environmental stress and inadequate levels of nutrition and management. India ranks first in the world in terms of milk production with a total of 102 million tons for 2007-08 with per capita milk availability at 246 g per day (Economic Survey 2007-08). India has 185 million cattle, 98 million buffaloes (17th livestock Census, 2005) population, which represents 16 and 57% of the world's cattle and buffaloes population respectively. The rural economy in India is traditionally based on agriculture and animal husbandry and rural people have been engaged in activities related to that sector for income generation of the family. Dairying is usually considered to be a profitable complementary enterprise in agriculture and constitutes an important activity for accelerating the rural economy of the country. The Indian dairy industry established off farm activities of paramount importance providing vast opportunities for employment and income to weaker section of society. Considering the importance of the animal husbandry extension program, artificial insemination has been particularly conceived as the only measure to upgrade the indigenous stock of bovine population and substantial gain through this method has already been established. However, much remains to be done in view of growing population. The attitude of farm youths towards artificial insemina-

tion program will help in bringing further improvement in milk production, because studies have revealed that the attitude and the action are by and large inter-correlated variables. Keeping the aforesaid points in view the present study was planned to examine the association of attitude with different socio-personal factors, and to find out the constraints in successful implementation of AI program.

Methods

The study was conducted in Morsand and Dighra villages of Pusa block of Samastipur district. Purposive sampling method was adopted for selection of area of research, as institutions like dairy cooperative, veterinary hospital, artificial insemination center, milk collection center were located in these villages. These villages are nearer from Pusa block and Rajendra Agricultural University, Pusa, Samastipur as well. As the rural unemployed youths of these villages are engaged in animal husbandry activities, hence the study was confined to these villages. One hundred farm youths, 50 each from both the villages of age ranging from 18 to 35 years were selected randomly which were considered to be the universe for the study. Data were collected with the help of semi-structured schedule consisting of the major items namely, background of the respondent,

Table 1. Multiple regression analysis of attitude with eight independent variables and correlation of attitude with these independent variables. *Significant at 0.05 level of probability. **Significant at 0.01 level of probability.

Variables	Correlation with dependent variable (<i>r</i>)	a	b value	SE	<i>t</i> value	SDR value	<i>R</i> ²
Age (<i>X</i> ₁)	0.8762**		3.9573	0.47952	8.25**	1.88353	
Education (<i>X</i> ₂)	0.7989**		0.3820	1.10902	0.34	0.07541	
Cast (<i>X</i> ₃)	0.5206**		0.3695	0.30402	1.22	0.06553	
Occupation (<i>X</i> ₄)	0.8002**	18.242	-4.6870	1.08736	4.31**	-1.14890	0.8567
Herd-size (<i>X</i> ₅)	0.5194**		0.0580	0.39397	0.15	0.00852	
Membership in Dairy organization (<i>X</i> ₆)	0.6513**		-0.8573	0.87209	0.98	-0.06852	
Credit orientation (<i>X</i> ₇)	0.6218**		-0.1774	0.12134	1.46	-0.09867	
Knowledge about dairy innovation (<i>X</i> ₈)	0.7560**		0.4236	0.16272	2.60*	0.17577	

soci-economic status of the respondent, membership in dairy organization, training, credit orientation, knowledge about dairy innovations and attitude towards AI program.

Variables and Their Measurement

Attitude of farm youths towards artificial insemination program was taken as dependent variable and the other variable were taken as independent variables.

Attitude towards artificial insemination program was measured by the scale developed by Koura and Singh (1), socio-economic and personal variables like, ducation caste, occupation, were measured by SES scale (2), credit orientation was measured by the scale developed by Prakash (3). One score was given for every completed years of age of respondent. For measuring the membership in dairy organization, scoring was done according to following categorization.

No membership, general member, office hearer (local committee) general member (district level co-operative), office bearer (district level co-operative), were scored 0, 1, 2, 3 and 4 respectively. Each animal possessed by farm youth family was given one score. For measuring the knowledge gained by the respondent a knowledge test about the dairy innovation was developed. The data so obtained were quantified and put to statistical analysis for drawing meaningful conclusions. The important statistical methods used for analysis of data were correlation, multiple regression and *t* test.

Results and Discussion

Although it is difficult to give a scientific and precise definition of attitude. An attitude is an emotionalized system of ideas which predisposes us to act in a certain way under certain conditions. Attitude is an important component of behavior as it plays a significant role in forming the overt and covert behavior of a farmer. In the present study out of 100 form youths,83 were found possessing favorable attitude where eight had highly favorable attitude towards AI program. Nine respondents had unfavorable attitude towards this program.

Table 1 reveals the correlation coefficient value of different independent variables along with the dependent variables. With regard to farm youth's attitude towards artificial insemination the correlation value of the age variable was found to be highest i.e. 0.8762. It is also highly significant indicating the strong association of the age component. Since sample of the study was taken from rural youth group, therefore, it was obvious to have the strong association of age variable. The next associated variable was regarded as occupation, indicates the *r* value 0.8002. It revealed that occupation is the main area of the association related with the dependent variable. The farm youths, who were holding agriculture as their occupation, they were having favourable attitude towards artificial insemination. After occupation education and knowledge about dairy innovations were having consistent association with the dependent variable indicating their *r* value 0.7989 and 0.7560 respectively. It

Table 2. Constraints in successful implementation of AI program (pooled sample basis).

Constraints	Percentage and frequency	Rank
1 Repeater/poor conception	60	I
2 Easy availability of facilities for natural service	54	II
3 Unsuitable to buffaloes	48	III
4 Limited hours of AI services in the veterinary hospital	42	IV
5 Lack of veterinary doctors, technical experts, lack of training programs	41	V
6 Semen tank not accessible in proper time and in proper condition	40	VI

was obvious that education and knowledge are the main variables creating their association with the dependent variable. The other variables like credit orientation and membership in dairy organization were also having consistent association along with the attitude of farm youth towards artificial insemination. The variable like herd-size and caste did not depict much strong association with the attitude of farm youth towards artificial insemination.

Thus out of eight independent variables age, occupation and knowledge about dairy innovations emerged as the significant contributor towards the dependent variable, because the *t* values were found to be significant in these three cases only. The corresponding SDR values for these three variables were also quite high. This by inference suggests that to create favorable attitude towards the AI program, these three variables can be profitably manipulated. In the case of remaining variables, the *b* coefficient were found non-significant and their corresponding SDR values were low which signifies that these variables have almost no contribution in creating favorable attitude of respondents towards AI program. All the variables taken together 85.67% variability towards the dependent variable. The finding are in line with those reported by Chaudhary (4), Nataraju and Channegowda (5).

Thus the repeater/poor conception is most vital constraint in the adoption of artificial insemination program. This was expressed by 60% respondents on the pooled sample basis. Easy availability of facilities for natural service came in the way as the second important constraint in the AI program. It was viewed

as second important constraint by 54% of respondents. The constraints like unsuitable to buffaloes, limited hours of AI services in the veterinary hospital, lack of veterinary doctors, technical experts, lack of training program, semen tank not accessible in proper time and in proper condition were other major constraints in the successful implementation of AI program.

Conclusion

For the success of artificial insemination program it is essential that the farm youths should have right type of attitude. As no two individuals are alike, their attitudes may also differ depending upon a number of factors. It is, therefore, necessary that the extension personnel should identify the attitude of farm youths before formulating any project for them. It is evident from the study that the age, occupation and knowledge about dairy innovation are the most potent factors contributing to the attitude of farm youths. These factors may be potentially utilized in preparing sound youth development strategy along with animal husbandry development in the state of Bihar. Identification of attitude would also be of tremendous use in behavior modification of the farm youths in desired direction which would in turn accelerate the pace of animal husbandry development. Constraints analysis in successful implementation of artificial insemination revealed that poor conception has been viewed as the most serious constraint.

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