Agriculture



Analysing the correlates associated with the adoption behaviour of the women stakeholders towards sustainable livelihood selected through Self Help Group in West Bengal

KEYWORDS

Adoption behaviour, women stakeholders, self help group, sustainable livelihood, azolla cultivation.

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ABSTRACT Adoption behaviour is the behaviour as shown by the respondents during the adoption process of any technology or practice. Here, in the present study, the respondents were the women stakeholders selected through Self Help Group and attempts have been made to analyse their adoption behaviour towards adopting an innovation for sustainable livelihood. The scientific azolla cultivation has been taken up as the innovation in terms of which the adoption percentage and behaviour was calculated for the present study. The study was conducted in five villages of Coochbehar-II block of Coochbehar district in West Bengal. Purposive as well as multistage and random sampling procedures were followed in the present study. The data were collected with the help of structured schedule through personal interview method. In the present study, it was found that the attributes like knowledge about the technology, attitude towards technology adoption and assessed training need are positively and significantly associated with and the attribute educational aspiration is significantly but negatively associated with the dependent variable, adoption percentage of the stakeholders, women azolla growers. The variable knowledge about the technology is positively and significantly contributing towards characterizing the adoption percentage of the women stakeholders selected by the self help group. The R2 value being 0.564, it is to infer that the sixteen predictor variables put together have explained 56.40% variation embedded with the predicted variable adoption percentage. It is also found that the women stakeholders selected through the self help group. The R2 value being 0.564, it is to infer that the sixteen predictor variables put together have explained 56.40% variation embedded with the predicted variable adoption percentage. It is also found that the women stakeholders selected through the self help group is much more effective than other selection procedures through farmers' club and farm and home visit in case of adoptin

INTRODUCTION:

Since the advent of human civilization the women plays a pivotal role in case of characterizing and giving impetus to the growth and development of agriculture as a vocation. Women are involved in all aspects of agriculture and allied activities from land preparation to making agricultural produces. The social status of farm women reveals that most of them belong to socially backward and economically disadvantaged groups like scheduled castes, scheduled tribes and backward classes. Many households in rural areas are headed by a single parent usually a mother because male migrate with their limited literacy and skill to urban area for secondary jobs living the illiterate women behind with the land and children leading to feminization of agriculture.

Adoption behaviour may be depicted by more than one variable i.e. may be by a discrete variable, whether or not to utilize an innovation, or by a continuous variable that indicates to what extent a divisible innovation is used (Sunding and Zilberman, 2000). When assessing the farmers' technology adoption behaviour, the methodology has to consider a number of inter-related factors. Among them, the critical features are the policy framework for farmers, the availability of technical information and the farmers' perceptions, beliefs and motives (Beedell and Rehman, 2000). Therefore, all agricultural development schemes and interventions programs in the study area should focus more on factors affecting adoption behaviour of farmers in order to encourage adoption and sustain the use of agricultural innovations (Tsado, 2008). There is a need of women-friendly technology for improving the economic status of the rural women. Here, in the present study, azolla cultivation has been taken up as the technology for assessing how easily it can be handled by the women and also its profitability. It has been found from the study by making the rural women adopt scientific azolla cultivation that it is very easy to do and it can be managed by the women themselves. After feeding the cow with azolla, not only the milk production has increased upto 20% but also the profit increased by Rs.570/- per month more than feeding the cow without azolla. Therefore, it is evident from the present study that azolla cultivation can be useful in improving the financial condition of the rural women.

Keeping all these in view, the present study was constructed to analyze the adoption behaviour of the women stakeholders selected through self help group and to identify the factors contributing towards the adoption behaviour for rural women empowerment.

METHODOLOGY

The present study was conducted in five villages namely Jatrapur, Jibdharer Kuthi and Kaminir Ghat in Takargach-Rajarhat Gram Panchayat and Raserkuthi, Khairatibari villages in Dhandhinguri Gram Panchayat under the block Cooch Behar-II of Cooch Behar district in West Bengal.

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Purposive as well as multistage and random sampling procedures were followed for the selection of the respondents. The adoption percentage is considered as the dependent variable and the sixteen other attributes of the women stakeholders were considered as the independent variables for the study. The data were collected with the help of structured interview schedule through personal interview method. The collected data were processed into statistical analyses like co-efficient of correlation and multiple regression. The scientific azolla cultivation was taken as the innovation in terms of which the adoption percentage and behavior was calculated for the present study.

RESULTS AND DISCUSSION

Table 1 presents the distribution of the women stakeholders selected through self help groups in Terai region of West Bengal according to their selected attributes. The results show that the age of the respondents ranges from 22-52 years. The mean score of the total distribution, age is 33.39 and standard deviation of the distribution is 7.58. The coefficient of variation value within the distribution 22.70% signifies the high consistency level of the distribution for the variable 'age'. The education of the respondents ranges from class one to class three. The mean score of the total distribution, education is 1.79 and standard deviation of the distribution is 0.57. The coefficient of variation value within the distribution 31.84% signifies the high consistency level of the distribution for the variable 'education'. The variable caste of the respondent ranges from scores 2-4 means the caste schedule caste, other backward caste and general caste. The mean score of the total distribution, caste is 2.64 and standard deviation of the distribution is 0.83. The coefficient of variation value within the distribution 31.44% signifies the high consistency level of the distribution for the variable 'caste'. The variable family size of the respondent ranges from scores 3-12 means the three members family to twelve members family. The mean score of the total distribution, family size is 4.82 and standard deviation of the distribution is 1.81. The coefficient of variation value within the distribution 37.55% signifies the high consistency level of the distribution for the variable 'family size'. The variable educational aspiration of the respondent ranges from scores 3-10. The mean score of the total distribution, educational aspiration is 5.71 and standard deviation of the distribution is 2.51. The coefficient of variation value within the distribution 43.96% signifies the high consistency level of the distribution for the variable 'educational aspiration'. The variable farm size of the respondent ranges from scores 0.15-3.5 means almost landless to 3.50 bighas of land. The mean score of the total distribution, farm size is 0.80 and standard deviation of the distribution is 0.92. The coefficient of variation value within the distribution 115.00% signifies the very poor consistency level of the distribution for the variable 'farm size'. The variable annual income of the respondent ranges from scores 12-144 means Rs. 12000 to Rs 144000. The mean score of the total distribution, annual income is 54.86 and standard deviation of the distribution is 40.26. The coefficient of variation value within the distribution 73.39% signifies the medium consistency level of the distribution for the variable 'annual income'. The animal size of the respondents ranges from score 1-8 means one number to eight numbers of animal. The mean score of the total distribution, animal size is 1.79 and standard deviation of the distribution is 1.59. The coefficient of variation value within the distribution 88.83% signifies the medium consistency level of the distribution for the variable 'animal size'. The expenditure of the respondents ranges from score 1.20 to 48 means Rs. 1200 to Rs 48000. The mean score of the

total distribution, expenditure is 5.28 and standard deviation of the distribution is 9.27. The coefficient of variation value within the distribution 175.57% signifies the very poor consistency level of the distribution for the variable 'expenditure'. The risk orientation of the respondents ranges from score 22 to 42 means low risk orientation to medium risk orientation. The mean score of the total distribution, risk orientation is 36.32 and standard deviation of the distribution is 4.99. The coefficient of variation value within the distribution 13.74% signifies the very high consistency level of the distribution for the variable 'risk orientation'. The knowledge about the technology of the respondents ranges from score 7-14 means low knowledge to medium knowledge. The mean score of the total distribution, knowledge is 11.11 and standard deviation of the distribution is 1.45. The coefficient of variation value within the distribution 13.05% signifies the very high consistency level of the distribution for the variable 'knowledge'. The attitude towards the technology adoption of the respondents ranges from score 41-45 means medium level positive attitude towards adoption. The mean score of the total distribution, attitude is 43.14 and standard deviation of the distribution is 1.21. The coefficient of variation value within the distribution 2.80% signifies the very high consistency level of the distribution for the variable 'attitude'. The assessed training need of the respondents ranges from score 2-7 means four numbers to seven numbers of training need. The mean score of the total distribution, assessed training need is 5.57 and standard deviation of the distribution is 1.32. The coefficient of variation value within the distribution 23.70% signifies the high consistency level of the distribution for the variable 'assessed training need'. The adoption percentage of the respondents ranges from score 60-100 means from medium to very high level of technology adoption. The mean score of the total distribution, adoption is 80.54 and standard deviation of the distribution is 9.75. The coefficient of variation value within the distribution 12.11% signifies the medium consistency level of the distribution for the variable 'adoption percentage'.

Table 2 presents the Pearson's co-efficient of correlation among the adoption percentage of the women stakeholders selected by self help group with sixteen causal variables. The result shows that the variable knowledge about the technology is positively and significantly associated with the adoption percentage at 5% level of significance.

Knowledge of the technology and adoption percentage Adoption being basically a psychological process rightly banked upon cognitive components for being tuned with acceptance and acclimatization of innovation towards generating rather new life styles. Cognitive elements helped in accessing and applying information while attitudinal components made an organized as well as accentuated movement for accomplishing the goal. Knowledge about the technology helps an individual in developing a logical concept about the application, management and 'benefits' of a technology. And such knowledge accrued, helped in rejecting the use of anything perceived as deleterious, detrimental and damaging both in ecological and economic dimension and accepting the use of resilient, advantageous technology. That is why the variable knowledge about the technology has gone significantly and positively correlated with the adoption percentage.

Table 3 reflects the multiple regression analysis of the predicted variable i.e. adoption percentage with sixteen predictor variables of the women stakeholders selected by the self help group. From the table it is observable that the

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variable knowledge about the technology is positively and significantly contributing towards characterizing the adoption percentage at 1% level of significance and the variable family size is negatively and significantly contributing towards characterizing the adoption percentage at 13% level of significance.

Knowledge of the technology and adoption percentage

The discriminating, rationalizing and deciding on the best of alternatives with a vision, derived from observation and alternatives by rejecting the conventional, cost involving package of practices and adopting the modern cost effective package of practices are very much important for the resource poor women stakeholders. Adoption being basically a psychological process rightly banked upon cognitive components for being tuned with acceptance and acclimatization of innovation towards generating rather new life styles. One unit change of the variable knowledge about the technology is delineating the 7.06 unit change in the predicted variable, decision making ability.

Family size and adoption percentage

Family size performed the role of analyzing a situation more critically through the vision of the family members. As a result more number of family members logically and realistically analyse the situation and creates conflict in decision making. Due to this, the variable family size is negatively and significantly contributing in case of characterizing the adoption percentage. One unit change of the variable family size is delineating the 3.09 unit change in the predicted variable, decision making ability.

The R^2 value being 0.564, it is to infer that the sixteen predictor variables put together have explained 56.40% variation embedded with the predicted variable adoption percentage. Still 44.60% variations embedded with predicted one are unexplained. Thus it would be suggested that inclusion of some more contextual variables possessing direct bearing on the decision making ability could have increased the level of explicability.

CONCLUSION

Today women are the worst sufferers in the society due to drudgery, ill health, illiteracy, deprivation and humiliation. Backwardness of women is a sign of poverty and women are the worst sufferers during the period of scarcity and calamity. No wonder, India hosts over one-third of the poor in the world, as lack of empowerment of women is a significant cause of poverty. The changed global scenario arouses the ultimate requirement for fulfilling the need of grown up women empowerment strategy demand. This realization paves the way of appropriate selection of women beneficiaries for women development and empowerment as the traditional beneficiary selection method for any development activity is through panchayat, the local self government. In this direction, it is of prime importance to know the adoption behaviour of the rural women before taking any new agricultural technology or innovation to them with an intention to empower them by providing opportunities for sustainable livelihood. This can only be achieved by finding out the factors influencing their adoption behaviour. The present study has attempted to assess the determinants of the adoption behaviour of the rural women stakeholders.

Table 1 Distribution of the women stakeholders selected through Self Help Groups according to their attributes

Variables	Range	Mean	SD	CV(%)

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Age	22-52	33.39	7.58	22.70
Education	1-3	1.79	0.57	31.84
Caste	2-4	2.64	0.83	31.44
Primary occupation	1-4	2.54	1.29	50.79
Family Size	3-12	4.82	1.81	37.55
Educational aspiration	3-10	5.71	2.51	43.96
Farm size	0.15-3.50	0.80	0.92	115
Annul Income	12-144	54.86	40.26	73.39
House Type	1-3	1.54	0.69	44.81
Material Possession	1-8	3.71	2.32	62.53
Animal Size	1-8	1.79	1.59	88.83
Expenditure	1.20-48	5.28	9.27	175.57
Risk Orientation	22-42	36.32	4.99	13.74
Knowledge about the Technology	7-14	11.11	1.45	13.05
Attitude towards tech- nology adoption	41-45	43.14	1.21	2.80
Training need assessed	2-7	5.57	1.32	23.70
Adoption percentage	60-100	80.54	9.75	12.11

Table 2 Correlation Coefficientof adoption with sixteen independent attributes of women stakeholders selected by Self help group

Variables	Coefficient of correlation (r)
Age	-0.25
Education	0.05
Caste	0.07
Occupation	0.18
Family Size	-0.08
Educational aspiration	0.09
Farm size	0.09
Annul Income	0.02
House Type	-0.10
Material Possession	-0.03
Animal Size	0.03
Expenditure	-0.04
Risk Orientation	-0.05
Knowledge about	
the Technology	0.43*
Attitude towards technology adoption	0.18
Training need assessed	0.03

*Significant at 5% level of significance

Table	3	Multiple	regression	analysis	in	case	of	women
stakeł	nol	ders sele	cted by Sel	f help gr	ou	С		

Variables	Regression Coefficient	S.E.	t value
Age	0.18843	0.39835	0.47
Education	-0.31584	7.69292	-0.04
Caste	3.34184	4.13090	0.81
Occupation	2.49614	2.40805	1.04
Family Size	-3.09585	1.86038	-1.66\$
Educational aspiration	-0.98950	1.29874	-0.76
Farm size	1.91863	3.41531	0.56
Annul Income	-0.19078	0.14279	-1.34
House Type	-8.82072	5.42071	-1.63\$
Material Possession	2.04651	2.53257	0.81
Animal Size	1.24754	2.90526	0.43
Expenditure	0.12304	0.42366	0.29
Risk Orientation	0.32556	0.68454	0.48
Knowledge about the Technology	7.06378	2.41259	2.93**
Attitude towards technol- ogy adoption	0.44525	2.51774	0.18
Training need assessed	-0.22277	2.28668	-0.10

Significant at 13 % level of significance $R^2 = 0.564$

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