

Factors affecting knowledge level of rural women of Bihar about homestead technologies of Rajendra Agricultural University (RAU)

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ABSTRACT

Rural women may be aware of the existence of a technology or a practice but having an in-depth understanding or knowledge of the technology or practice is influenced by many socio-personal, economic, communicational, psychological, situational variables etc. Hence an attempt was made in this study to find out the factors which affect knowledge level of rural women about homestead technologies of RAU. The study was conducted on 225 rural women who were exposed to the nine selected homestead technologies from three districts of Bihar viz. Samastipur, Muzaffarpur and Vaishali. The result showed that the independent variables education, information source utilization, innovativeness, input availability, rural customs, institutional support and market intelligence of the respondents were positively and significantly related to knowledge but age had negative association. Multiple linear regression analysis revealed that the independent variables education, information source utilization, input availability, market intelligence and rural customs were positively and significantly contributing to the knowledge level of the respondents about homestead technologies.

Key words : Knowledge, Rural women, Homestead technologies, Rajendra Agricultural University, Bihar

Introduction

The Home Science colleges in State and Central agricultural universities focus to conduct researches which involve multi-disciplinary knowledge and lead to refining practices of women in home and agriculture by developing scientific and technical skills for self-actualization and betterment of family and community in today's changing world.

Introduction of homestead technologies, including new products and practices, has affected rural women in the Third World. Rural women are more able to adapt to better home and farm technologies

when the information and resources are available to them. It is a proven fact that knowledge and adoption are governed by a number of socio-personal, economic, communicational, psychological and situational variables. These factors have a definite bearing on the knowledge and adoption behaviour of rural women. Hence the study was conducted with the following specific objectives- relationship between independent variables and knowledge level of rural women and relative contribution of independent variables towards knowledge level of the respondents.

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Material and Methods

The study was conducted on a sample of 225 rural women from three randomly selected districts of Bihar viz. Samastipur, Muzaffarpur and Vaishali. One block was randomly selected from each of the districts and three villages were randomly selected from each of the block. Thus 25 respondents who were exposed to all the nine selected homestead technologies of RAU viz. fruit & vegetable preservation, stitching & embroidery, value addition to garments, arts & craft making, value added products from cereals & pulses, mushroom production, value added mushroom products, vermicompost technology and apiculture constituted the sample for study. Knowledge was the dependent variable represented by Y1. Age (X₁), Education (X₂), Family size (X₃), Occupation (X₄), Family income (X₅), Family support (X₆), Information source utilization (X₇), Economic motivation (X₈), Scientific orientation (X₉), Innovativeness (X₁₀), Perceived attributes of homestead technologies (X₁₁), Value orientation (X₁₂), Risk orientation (X₁₃), Input availability (X₁₄), Rural customs (X₁₅), Market intelligence (X₁₆), Institutional support (X₁₇) and Socio-capital aspects (X₁₈) were the independent variables.

In order to assess the extent of relationship between the selected dependent variable and the independent variables, the data was put to correlation analysis. The values of correlation coefficient (r) were computed and tested for their statistical significance.

Multiple linear regression was carried out to find out the contribution of independent variables in predicting the knowledge level of the respondents. The eighteen independent variables were fitted in the regression equation to predict their potency towards the selected dependent variable along with coefficient of determination (R²) and F-value.

Results

The data of the result depicted nature and degree of relationship between the selected dependent variable and the independent variables under study.

Keen perusal of Table 1 revealed that age, education and market intelligence of the respondents was significantly related to knowledge at 5 per cent level of significance but age had negative association while education and market intelligence had positive association with knowledge of rural women.

Table 1. Relationship of independents variables with the dependent variable

Sl. No.	Independents Variables	Coefficient of correlation (r) Dependent variables Knowledge (Y1)
1	Age (X ₁)	-0.14454*
2	Education (X ₂)	0.15213*
3.	Family size (X ₃)	0.09819NS
4	Occupation (X ₄)	0.04142NS
5	Family income (X ₅)	0.04067NS
6	Family support (X ₆)	0.00168NS
7	Information source utilization (X ₇)	0.30152**
8	Economic motivation (X ₈)	0.06259NS
9	Scientific orientation (X ₉)	0.07040NS
10	Innovativeness (X ₁₀)	0.20198**
11	Perceived attributes of Homestead technologies(X ₁₁)	0.04133NS
12	Value orientation (X ₁₂)	0.04857NS
13	Risk orientation (X ₁₃)	0.07962NS
14	Input availability (X ₁₄)	0.19841**
15	Rural customs (X ₁₅)	0.24127**
16	Market intelligence (X ₁₆)	0.14498*
17	Institutional support (X ₁₇)	0.29993**
18	Socio-capital aspects (X ₁₈)	0.03168NS

* - Significant at 5% level of significance

** - Significant at 1% level of significance

NS- Non-significant

Variables such as information source utilization, innovativeness, input availability, rural customs and institutional support were positively and significantly associated with the knowledge level of the respondents at 1 per cent level of significance. Rest of the independent variables viz. occupation, family income, family size, family support, economic motivation, scientific orientation, perceived attributes of homestead technologies, value orientation, risk orientation and socio- capital aspects were non-significantly correlated with knowledge level of the respondents.

Relative contribution of independent variables towards knowledge level of the respondents

The result of regression analysis showing prediction potency of the selected independent variables towards knowledge level of the respondents appeared in Table 2.

It is evident from this table that t-value of partial regression coefficient of independent variables of education and rural customs were statistically significant at 5 per cent level of significance and were positively contributing to the knowledge level of the

Table 2. Relative contribution of independent variables towards knowledge level of the respondents

Sl. No. Independent variables	b Values	Standard error	t-value
1. Age	-0.0420	1.4967	0.547NS
2. Education	0.1890	0.4991	2.103*
3. Family size	0.1216	0.9811	1.814NS
4. Occupation	-0.0638	0.7103	0.852NS
5. Family income	-0.0615	1.5242	0.801NS
6. Family support	0.0030	0.1909	0.037NS
7. Information source utilization	0.3002	0.0583	2.689**
8. Economic motivation	-0.0362	0.5201	0.512NS
9. Scientific orientation	-0.0690	0.4637	0.672NS
10. Innovativeness	-0.0982	0.3315	0.949 NS
11. Perceived attributes of Homestead technologies	-0.0192	0.1996	0.228 NS
12. Value orientation	-0.0027	0.4474	0.030 NS
13. Risk orientation	-0.0597	0.2303	0.633 NS
14. Input availability	0.2763	0.2216	3.739**
15. Rural customs	0.1651	0.2040	2.097*
16. Market intelligence	0.2342	0.3341	2.786**
17. Institutional support	0.0464	0.4198	0.697NS
18. Socio-capital aspects	0.0106	0.2680	0.144NS

R²= 0.4597 F calculated Value= 6.690

* - Significant at 5% level of significance ** - Significant at 1% level of significance

NS - Non -significant

respondents. The independent variables such as information source utilization, input availability and market intelligence were found to be positively significant at 1 per cent level of significance. The remaining thirteen variables under study could not emerge as significant predictors. All the variables collectively explained 45.97 per cent variability towards knowledge level of the respondents as is evident from the R² value.

The F- calculated value (6.690) also stood out to be significant which supports that R² is significant.

Positive coefficient values of the independent variables education, information source utilization, input availability, rural customs and market intelligence implies that with every unit increase in the value of these variables (independent), there will be corresponding unit increase in the knowledge level of rural women.

Discussion

It can be inferred from the result of table 1 that knowledge level of the respondents decreased with increase in age. It meant that younger respondents had higher level of knowledge about homestead technologies than respondents who were older in age.

Respondents who were more educated possessed more knowledge than respondents who were comparatively less educated. Market intelligence enhanced the knowledge level of the respondents about Homestead technologies. Information source utilization by the respondents was highly significant with their knowledge level as is evident from its high correlation coefficient value (r). It suggests that with increased utilization of various information sources by the respondents, there was associated an increase in knowledge level of the respondents.

Respondents who were more innovative had higher level of knowledge and vice versa. Input availability was also positively correlated with the respondents' knowledge level. It meant that with better and easy access to input availability, the knowledge level of the respondents also increased.

Rural customs had positive association with the knowledge level of the respondents. When rural customs are flexible it facilitates for more knowledge acquisition by the respondents and hence their knowledge level improved.

Respondents who had more support of the institutions like University, KVK, NGOs, etc. had higher level of knowledge than respondents who had less institutional support.

The study of Sreenivasulu (2011) also revealed

that age was negatively associated with knowledge level of FFS farmers while the variables education, information source utilization and innovativeness were positively correlated with knowledge level of FFS farmers on cotton IPM practices.

Madhavalatha (2002) reported that there was a positive and significant relationship between innovativeness and knowledge level of the trained farmers.

Isreal (2003) reported that scientific orientation of the respondents exhibited positive and significant relationship with knowledge at 0.01 level of probability.

Young women are more inclined towards knowledge acquisition than older women and availability of inputs definitely improves their knowledge so that they can adopt it as an enterprise.

It can be inferred from the result of Table 2 that out of the eighteen selected independent variables, only five of them were significantly contributing to the knowledge level of the respondents. It means that there are some other extraneous variables that are contributing to the knowledge level of rural women and these variables should be taken into account in future research studies and while planning any strategies or programs relating to the knowledge of rural women.

The study of Sreenivasulu (2011) also revealed that the variables education and information source utilization were positively correlated with knowledge level of FFS farmers on cotton IPM practices.

Conclusion

The findings of the study revealed that some of the selected independent variables viz. age, education, information source utilization, innovativeness, input availability, rural customs, market intelligence and institutional support had influenced knowledge level of rural women but there are still other variables that might affect knowledge level of rural women as is evident from the R^2 value (0.4597). Hence further study needs to be taken up focussing on the unattended variables so that we can get a better picture of the phenomena. This would greatly help research scientists and extension personnel in designing any program concerned with the knowledge behaviour of rural women and formulating strategies to improve the knowledge level of rural women about the developed and disseminated technologies.

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