



Research Article

Functional analysis of rural youth's participation in paddy farming

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SUMMARY : Present study was conducted in twelve villages of Tarapur Taluka of Anand district as it has major paddy growing area as compared to other Talukas of Anand district, 10 respondents from each village having minimum three years of experience were selected at random, making the sample of 120 respondents. The findings of this study indicate that except size of family and type of family, all the variables included in the study had significant association with their level of participation. Six variables viz., decision making ability, knowledge, scientific orientation, type of family, occupation and education together contributed 92.90 per cent variation for determining extent of participation. As far as direct, indirect and substantial effect of rural youth's trait is concerned. Decision making ability was the key variable in exerting considerable direct and substantial effect on participation in relation to paddy cultivation technology. Knowledge and economic motivation were the major factor in determining the level of participation through positive indirect effect.

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KEY WORDS:

Rural youth,
Participation, Paddy
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BACKGROUND AND OBJECTIVES

Undeniably, the youth constitute a vast reservoir of energy especially in under developed countries including India. The participation of rural youth in paddy farming make more important because it solves the problems of unemployment and another is the youth farmers are more innovative and accept new farm technology earlier than old once (Nale, 2003). Gujarat is mainly industry based state and more employment is provided by industries to youth including agriculture sector. The participation of rural youth in agriculture sector in general and paddy farming in particular leads to increase area, production and productivity of paddy to meet demand of fast growing population as rice is one of the main staple food of the state and problem of unemployment of rural youth in industrial sector caused by worldwide recession. Understanding the basic need of a day a study on functional analysis of rural youth's participation in paddy farming was carried out with following specific objectives, to study the influence of personal socio-economical and psychological traits of rural

youth on their extent of participation in paddy farming, to study the relative contribution of the personal- socio-economical and psychological factors in determining the rural youth's participation in paddy farming and to study the direct and indirect effect of profiles of rural youth on their extent of participation.

RESOURCES AND METHODS

Tarapur taluka of Anand district was purposively selected, because the taluka had more paddy growing area and majority of youth paddy growers resides in the taluka. Ten paddy growing villages were randomly selected from Tarapur taluka. For this study 120 rural youth who had minimum 3 years of experience in paddy cultivation were selected randomly and they were considered as a sample and also as respondents. Then the data were collected with the help of well-structured, pre-tested, interview scheduled through personal contact and data were compiled, tabulated, analyzed and interpreted to draw valid conclusion. Statistical tools like correlation coefficient, multiple and stepwise regression and

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path analysis were used.

OBSERVATIONS AND ANALYSIS

In order to find out the relationship between the personal, socio-economic and psychological characteristics of the rural youth and extent of their participation in paddy farming, correlation co-efficient was worked out. The data in this regard are presented in Table 1

Table 1: Relationship between characteristics of the rural youth and extent of their participation in paddy farming

Sr. No.	Independent variables	Correlation co-efficient ('r' value)
Personal		
X ₁	Age	--0.230*
X ₂	Education	0.345**
X ₃	Farming experience	0.418**
Socio-economical		
X ₄	Size of family	0.056
X ₅	Type of family	0.049
X ₆	Social participation	0.455**
X ₇	Occupation	0.310**
X ₈	Land holding	0.225*
X ₉	Extension contact	0.304**
X ₁₀	Mass media exposure	0.361**
Psychological		
X ₁₁	Scientific orientation	0.362**
X ₁₂	Economic motivation	0.427**
X ₁₃	Risk orientation	0.259**
X ₁₄	Knowledge	0.776**
X ₁₅	Decision making	0.949**

* and ** indicate significance of values at P=0.05 and 0.01, respectively
NS = Non-significant

From Table 1 it can be seen that the independent variables studies viz., education, farming experience, social participation, land holding, occupation, extension contact, mass media exposure, scientific orientation, economic motivation, risk orientation, knowledge and decision making had positive and highly significant correlation with participation of rural youth,

whereas age of rural youth had negative and significant correlation with participation. The remaining traits like type of family and size of family exerted no relationship with the participation of rural youth in paddy farming.

Extent of participation in paddy farming was observed significantly higher among those youth who had young in age, highly educated, more years of experience of paddy cultivation, better social participation, involvement in more occupations, large size of land holding, elevated extension contact, better scientific orientation, economic motivation, risk orientation, knowledge of paddy cultivation and better decision making ability.

Relative contribution of the personal- socio-economical and psychological factors in determining the rural youth's participation in paddy farming:

Generally, in behavioral science no dependent variable can influence by any single independent variable. As such extent of participation in reality, not influenced by any of the independent variable singly. It is found to be influence by more than one of these independent attributes jointly through their reciprocal and interactive relationship in order to assess the contribution of each independent variable to the dependent variable, the effect of others were held constant. Stepwise regression is one such method which has been widely adopted in multiple regression analysis. It has got the added advantage that at each stage of analysis every variable is subjected to an examination for its predictive value. The stepwise regression was carried out with the help of computer. The results are presented in Table 2.

It can be observed from Table 2 that out of fifteen traits of rural youth only six were acquainting influence on participation in relation to paddy cultivation technology. All the six variables together were contributing 92.90 per cent variation as indicated by (R²) value for the extent of participation pertaining to paddy cultivation technology. Further it can be inferred that 90.00 per cent variation in extent of participation is contributed by decision making ability of rural youth. However, decision making ability + knowledge accounted for 91.70 per cent, decision making ability + knowledge + scientific orientation for 92.90 per cent.

Table 2 : Stepwise multiple regression analysis of participation level of rural youth in relation to paddy cultivation technology

Sr. No	Independent variable	Multiple co-relation co-efficient (R)	Co-efficient of determination (R ²)	'F' values	Partial regression co-efficient (b)	'T' value	Standard partial regression co-efficient (SPRC)	Rank
1.	Decision making ability	0.949	0.90 (90.00)	1058.52	0.769	21.91	0.854	I
2.	Knowledge	0.957	0.917 (91.70)	642.27	0.189	4.59	0.174	II
3.	Scientific orientation	0.959	0.920 (92.00)	443.20	0.273	2.69	0.074	III
4.	Type of family	0.961	0.923 (92.30)	346.50	--1.304	2.69	--0.069	IV
5.	Occupation	0.962	0.926 (92.60)	288.26	--0.858	2.23	--0.061	V
6.	Education	0.964	0.929 (92.90)	246.21	--0.556	2.08	--0.058	VI

knowledge + scientific orientation + type of family were contributing 92.30 per cent, decision making ability + knowledge + scientific orientation + type of family+ occupation accounted for 92.60 per cent and decision making ability + knowledge + scientific orientation + type of family occupation+ education were contributing 92.90 per cent. The R² values at each stage of step up regression were found to be significant at 0.05 level of probability.

The partial 'b' values of these six variables were converted into standard partial 'b' values which were 0.854 for decision making ability (I), 0.174 for knowledge (II), 0.074 for scientific orientation (III), 0.069 for type of family (IV), 0.061 for occupation (V) and -0.058 for education (VI). The 't' value or partial 'b' were significant in case of all the six variables. Thus, the findings are suggestive of the fact that for increasing the participation of rural youth in paddy cultivation technology, such variables should be reckoned and concentrated efforts should be made to mobilize such variables. The findings of the present study are similar to those of Khule *et al.* (2009).

Direct and indirect effect of profiles of rural youth on their extent of participation:

The correlation co-efficient values (r) were found to be significant in case of 13 variables. The data thus indicate that observed relationship between the variables was partly absolute and partly relative. Moreover, partial relationship was a contribution made by other variables exercising their influence jointly. It is therefore, necessary to study the influence of one variable on other variables both directly as well as through other variables presented in the situation. Hence the variables were subjected to path analysis is

presented in Table 3.

The results of path analysis presented in Table 3 indicate that, out of fifteen variables, eight variables had exerted positive direct effect and rest seven had exerted negative direct effect. Decision making ability of rural youth had exerted highest positive direct effect (0.8463) followed by knowledge (0.1731), scientific orientation (0.0754), occupation (0.0438), mass media exposure (0.0333), social participation (0.0313), risk orientation (0.0121) and size of family (0.0047).

As far as negative direct effect is concerned, type of family (-0.0756) had exerted maximum negative direct effect followed by education (-0.0443), extension contact (0.0422), land holding (-0.0405), farming experience (0.0183), economic motivation (0.0091) and age (-0.0049). Similar type of investigation were carried out by Manjunath *et al.* (2011) and Singh (2005).

Total indirect effect:

So far, total indirect effect is concerned knowledge (0.6029) expected maximum positive indirect effect followed by economic motivation (0.4361), social participation (0.4347), farming experience (0.4293), education (0.3893), extension contact (0.3462), mass media exposure (0.3277), scientific orientation (0.2866), occupation (0.2662), land holding (0.2655), risk orientation (0.2469), type of family (0.1246), decision making ability (0.1027) and size of family (0.0513). It was further noticed that only age exercise the negative indirect effect on participation.

Substantial indirect effect:

It was further revealed that out of 30 substantial indirect effects, fifteen routed through decision making ability of rural

Table 3 : Path analysis of participation of rural youth in paddy farming

Sr. No.	Variable	Direct effect	Total indirect effect	Substantial indirect effect	
				I	II
1.	Age	-0.0049	-0.2251	-0.1978(x15)	0.0197(x14)
2.	Education	-0.0443	0.3893	0.3324(x15)	0.0635(x14)
3.	Farming experience	-0.0113	0.4293	0.3653(x15)	0.0777(x14)
4.	Size of family	-0.0756	0.1246	0.0853(x15)	0.0155(x14)
5.	Type of family	0.0047	0.0513	0.0838(x15)	-0.043(x14)
6.	Social participation	0.0313	0.4347	0.3868(x15)	0.0591(x14)
7.	Land holding	-0.0405	0.2655	0.2218(x15)	0.0375(x14)
8.	Occupation	0.0438	0.2662	0.3178(x15)	0.0429(x14)
9.	Extension contact	-0.0422	0.3462	0.3065(x15)	0.0430(x14)
10.	Mass media exposure	0.0333	0.3277	0.2975(x15)	0.0516(x14)
11.	Economic motivation	-0.0091	0.4361	0.3480(x15)	0.0655(x14)
12.	Scientific orientation	0.0754	0.2866	0.2500(x15)	0.0754(x14)
13.	Risk orientation	0.0121	0.2469	0.2126(x15)	0.0453(x14)
14.	Knowledge	0.1731	0.6029	0.6122(x15)	0.6122(x14)
15.	Participation in decision making	0.8463	0.1027	0.1253(x14)	0.0222(x12)

youth, twelve through knowledge about paddy cultivation technology, two through scientific orientation and one through type of family.

With regard to substantial indirect effect, the first substantial positive indirect effect on participation of rural youth was put forth by knowledge via decision making ability followed by social participation (0.3838), experience (0.3653), economic motivation (0.3440) and education (0.3374).

It can be concluded that decision making ability of rural youth was the key variable in exerting considerable direct and substantial effect on participation in paddy cultivation. Knowledge and economic motivation were the major facts in determining level of participation through positive indirect effect.

Conclusion:

From ongoing discussion we can say that the independent variables studies *viz.*, education, farming experience, social participation, land holding, occupation, extension contact, mass media exposure, scientific orientation, economic motivation, risk orientation, knowledge and decision making had positive and highly significant correlation with participation of rural youth. And six variables *viz.*, decision making ability, knowledge, scientific orientation, type of family, occupation and education together contributed 92.90 per cent variation for determining extent of participation. As far as direct, indirect and substantial effect of rural youth's trait is concerned, decision making ability was the key variable in exerting considerable direct and substantial effect on participation in relation to paddy cultivation technology. Knowledge and economic motivation were the major factor in determining the

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