Unearth the Association Between Profile with Knowledge and Opinion of Beneficiaries under Pradhan Mantri Fasal Bima Yojana

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Abstract: *Warming of climate is the major set - back to the farmers, and it leads to change in cropping pattern in the agriculture. To standardize the farm income the farmer has to avail the crop insurance. The Pradhan Mantri Fasal Bima Yojana was help to guard the farmers from crop loss due to unexpected movements and alleviate the heavy weight of financial risk on farmers and stabilize their farm income. The beneficiaries of the sample of 120 farmers in the Srikakulam district of Andhra Pradesh. In srikakulam ten farmers from each village were randomly selected namely Muddada, Ponnada, Ibrahimbad, Konagaram from Etcherla Mandal; Gara, Korlam, Korni, Kothurusyrigam from Gara Mandal; Telukunchi, Tulasigam, Paitharikeerthipuram, Haripuram from Ichchpuram mandal were selected for the study. Thus a total of twelve (12) villages were chosen for the study. The ex - post facto Research design was used for this study. Pearson's Correlation Coefficient (r) and Multiple Linear Regression (MLR) are some statistical tools used in this study. Independent variables studied landholding, extension contact, disaster occurrence pattern, mass media utilization, training undergone, scientific orientation, risk orientation are positively and significantly correlated with the knowledge level of beneficiaries of PMFBY at one per cent level of significance. Further the correlation coefficient (r) values of material possession, crop loan availed are positively and significantly correlated with the knowledge level of beneficiaries of PMFBY at five per cent level of significance. The remaining independent variables education, farming experience, annual income are positively and non - significant in their relationship with the knowledge about PMFBY. It observed that the 'r' values of disaster occurrence pattern, extension contact, training undergone, scientific orientation, risk orientation, crop loan availed are positively and significantly correlated at one per cent level of significance with the opinion. The variables as education, annual income, farming experience, material possession are positively.*

Keywords: knowledge, opinion, correlation coefficient

1. Introduction

Crop cultivation is highly depend on monsoons. Agriculture in India is proverbially called a **"Gamble on the Monsoon".** But the increase the mercury in atmosphere the change in Climate is a big blow to farming community and its allied sectors. As agriculture is highly dependent on weather, even if small changes occur in any stage of the crop it could affect crop growth and consequence changes occur in the livelihood farmers. Not only environmental effect, but also pests and diseases it effect the crop growth and yield. Agricultural production and farm incomes in India are frequently affected by natural disasters, Susceptibility of agriculture to these disasters is compounded by the outbreak of epidemics and manmade disasters such as fire, sale of spurious seeds, fertilizers and pesticides, price crashes. Agricultural insurance is considered as one of the important mechanism to effectively address the risks to farm production and income resulting from various natural and manmade events. One of the populistic game - changer insurance schemes brought out by the government of India is Pradhan Mantri Fasal Bima Yojana (PMFBY) which not only provides insurance coverage to farmers against natural calamities and pests, but also encourages them to adopt innovative modern agricultural practices. The aim of new scheme is to cover 50 per cent of total crop area i. e.19.40 million hectare and use of digital technology to improve yield data and automate claims (Goel, 2016).
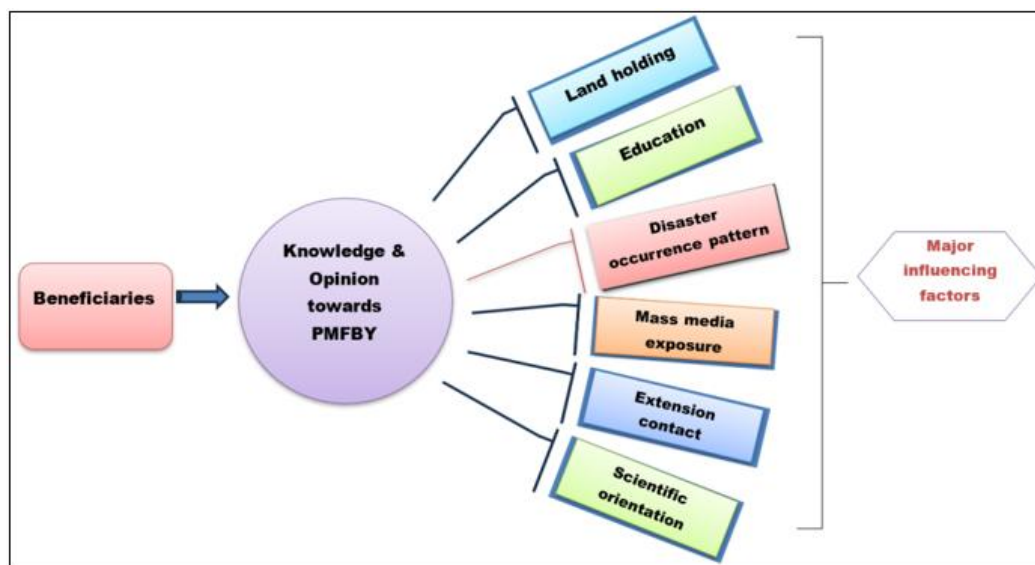
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Highlights

- The research is to ray of hope for concerned farmers.
- Indemnity in the form Insurance to crops may adapt the better decision - making.
- The study acts as a steering the agrarians to prevent crop damage.
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2. Methodology

The present study was conducted in Srikakulam district of Andhra Pradesh State during the year 2018 - 2019. The *ex - post facto* Research design was used forth is study. Srikakulam district was purposively chosen for the study as it is having highest number of farmers enrolment and highest number farmers of beneficiaries of PMFBY in the North Coastal zone of Andhra pradesh State. In srikakulam ten farmers from each village randomly selected namely Muddada, Ponnada, Ibrahimbad, Konagaram from Etcherla mandal; Gara, Korlam, Korni, Kothurusyrigam from Gara mandal; Telukunchi, Tulasigam, Paitharikeerthipuram, Haripuram from Ichchpuram mandal were selected for the study. Thus a total of twelve (12) villages were selected in this study. Pearson's correlation coefficient (r) and Multiple Linear Regression (MLR) are some statistical tools used in this study. The data were collected from 120 respondents the through personal interview method by using the random sampling technique and with a well structured interview schedule. Respondents were asked to express problems faced by them during the implementation of PMFBY.
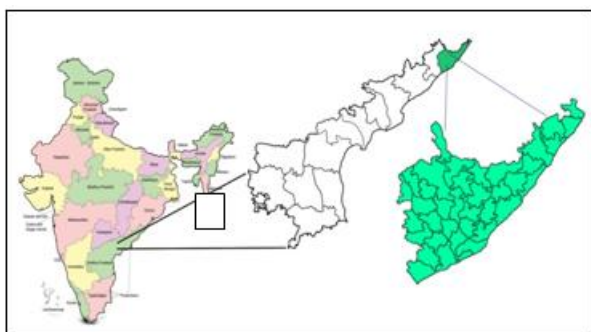
3. Results

Relationship of Selected Profile Characteristics of Beneficiaries with their Level of Knowledge
An attempt has been made to find out if there exists any relationship between the profile characteristics of farmers viz., age, education, land holding, farming experience, annual income, material possession, extension contact, disaster occurrence pattern, mass media exposure, training undergone, crop loan availed, scientific orientation, risk orientation with their level of knowledge.

Table 1: Correlation coefficient between profile characteristics of beneficiaries with their level of knowledge (n=120)

S. No.	Independent variable	'r' value
1	Age	- 0.063^{NS}
2	Education	0.023^{NS}
3	Land holding	0.413**
4	Farming experience	0.142^{NS}
5	Annual income	0.154^{NS}
6	Material possession	0.188*
7	Extension contact	0.333**
8	Disaster occurrence pattern	0.713**
9	Mass media exposure	0.443**
10	Training undergone	0.312**
11	Crop loan availed	0.224*
12	Scientific orientation	0.491**
13	Risk orientation	0.376**

NS=Non - Significant ******Significant at 0.01 level of probability
* Significant at 0.05 level of probability

The relationship between the selected profile characteristics and the knowledge level of beneficiaries of PMFBY were tested by null hypothesis and empirical hypothesis.

The results in the Table 1. exhibits that out of thirteen independent variables studied landholding, extension contact, disaster occurrence pattern, mass media utilization, training undergone, scientific orientation, risk orientation are positively and significantly correlated with the knowledge level of beneficiaries of PMFBY at one per cent level of significance.

It is evident from the Table 4.23. that computed correlation coefficient (r) values of material possession, crop loan availed are positively and significantly correlated with the knowledge level of beneficiaries of PMFBY at five per cent level of significance. The remaining independent variables education, farming experience, annual income are positively and non - significant in their relationship with the knowledge about PMFBY.

The variable age had showed a negative and non - significant relationship with the knowledge level of beneficiaries of PMFBY.

Multiple linear regression analysis of selected independent variables with their knowledge level
An attempt has been made to find out the amount of contribution made by the profile characteristics in explaining the variation in the dependent variable i. e., knowledge of farmers towards beneficiaries of PMFBY. The results were presented in Table 4.24.

Table 2: Multiple linear regression analysis of selected independent variables with knowledge of PMFBY beneficiaries

S. No.	Independent variable	Regression coefficient	Standard error	't' value
1	Age	- 0.009	0.049	- 0.189[NS]
2	Education	0.180	0.163	1.103[NS]
3	Land holding	0.052	0.158	0.326[NS]
4	Farming experience	0.007	0.035	0.191[NS]
5	Annual income	5.019	0.000	0.731[NS]
6	Material possession	0.043	0.025	1.73[NS]
7	Extension contact	- 0.068	0.163	0.417[NS]
8	Disaster occurrence pattern	0.878	0.157	5.587**
9	Mass media exposure	- 0.133	0.142	- 0.935[NS]
10	Training undergone	0.279	0.203	1.376[NS]
11	Crop loan availed	0.547	0.400	1.368[NS]
12	Scientific orientation	0.168	0.108	1.551[NS]
13	Risk orientation	0.133	0.107	1.247[NS]

a= - 5.362 R^2=0.564 NS = Non - Significant
**Significant at 0.01 Level of probability * Significant at 0.05 Level of probability

Table 2. revealed that the coefficient of determination "R^2" value was significant, as the value of "a" was found significant. The "R^2" value of 0.564 indicated that all the selected thirteen profile characteristics of beneficiaries put together, explained about 56.40 per cent of variation in the knowledge about PMFBY. Remaining 43.60 per cent is due to the extraneous effects of the variables. Hence, it could be stated that the variables selected to a large extent explained the variation in knowledge level of the beneficiaries of PMFBY.

Relationship of the profile characteristics of beneficiaries of PMFBY with their opinion

Table 3: Correlation coefficient between profile characteristics of beneficiaries with their opinion

S. No.	Independent variable	'r' value
1	Age	- 0.069[NS]
2	Education	- 0.040[NS]
3	Land holding	0.390**
4	Farming experience	0.140[NS]
5	Annual income	0.127[NS]
6	Material possession	0.094[NS]
7	Extension contact	0.347**
8	Disaster occurrence pattern	0.625**
9	Mass media exposure	0.419**
10	Training undergone	0.301**
11	Crop loan availed	0.294**
12	Scientific orientation	0.429**
13	Risk orientation	0.378**

NS= Non - Significant **Significant at 0.01 Level of probability
*Significant at 0.05 Level of probability

The regression coefficient given in Table 3. Further revealed that the profile characteristics namely disaster occurrence pattern were found to be positively significant at 1 per cent level of probability. The other variables viz., training undergone, scientific orientation, risk orientation, education, land holding, farming experience, annual income, material possession, mass media exposure, extension contact, crop loan availed were non - significant in their relationship. The variable age is negatively and non - significant in their relationship.

This implies that disaster occurrence pattern, training undergone, scientific orientation and risk orientation were contributed significantly to the prediction of the variation in the level of knowledge of the beneficiaries of PMFBY.

Table 4: Multiple linear regression analysis of selected independent variables with opinion about PMFBY beneficiaries

S. No	Independent variable	Regression coefficient	Standard error	't' value
1	Age	- 0.027	0.039	- 0.703[NS]
2	Education	0.052	0.129	0.401[NS]
3	Land holding	0.066	0.125	0.528[NS]
4	Farming experience	0.019	0.028	0.670[NS]
5	Farming experience	2.585	0.000	0.476[NS]
6	Material possession	0.015	0.020	0.731[NS]
7	Extension contact	0.042	0.129	0.327[NS]
8	Disaster occurrence pattern	0.455	0.125	3.652**
9	Mass media exposure	- 0.062	0.112	- 0.548[NS]
10	Training undergone	0.172	0.161	1.069[NS]
11	Crop loan availed	0.649	0.317	2.051*
12	Scientific orientation	0.073	0.086	0.856[NS]
13	Risk orientation	0.134	0.084	1.590[NS]

a= - 0.373 R^2= 0.456 NS = Non - Significant
**Significant at 0.01 Level of probability * Significant at 0.05 Level of probability

It observed that the coefficient of determination "R^2" value was significant, as the value of "a" was found significant. The "R^2" value of 0.456 indicated that all the selected

fourteen profile characteristics of beneficiaries put together, explained about45.60 per cent variation in the opinion of PMFBY. Remaining 55.40 per cent is due to the extraneous

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effects of the variables. Hence, it could be stated that the variables selected to a large extent explained the variation in selected profile characteristics of beneficiaries, opinion of PMFBY.

An attempt has been made to find out the amount of contribution made by the profile characteristics in explaining the variation in the dependent variable i. e. opinion of the beneficiaries to this version.

Further revealed that the selected profile characteristics namely disaster occurrence pattern, were found to be positively significant at one per cent level of probability and crop loan availed were found to be positively significant at five per cent level of probability. Remaining selected profile characteristics education, land holding, farming experience, annual income, material possession, mass media exposure, extension contact, training undergone, scientific orientation and risk orientation are non - significant in this analysis. The variable age is negatively and non - significant in their relationship.

4. Conclusion

The oblige of the government, extension agency and research institutions are to minimize the vacuum in opinion of beneficiaries of Pradhan Mantri Fasal Bema Yojana for getting more benefits from PMFBY. The indemnity is given to farmers by the companies to be credited at right time.

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