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Correlates of Profile Characteristics of Agricultural Labourers with Livelihood Security

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ABSTRACT

The research study was conducted during the year 2018-20 to study the relationship between the profile characteristics and livelihood security of the agricultural labourers in Andhra Pradesh. The study revealed that land holding, occupational status, annual income, savings, expenditure pattern, urban contact, deferred gratification, achievement motivation, economic orientation and level of aspiration had shown a positively significant relationship with livelihood security of agricultural labourers. On the other side age, education, farming experience, credit orientation and self-confidence had shownpositively non-significant relationship with livelihood security and agricultural labourer experience and tenant land holding had shown negative and non-significant relationship with livelihood security of agricultural labourers. The multiple regression analysis revealed that, out of the eighteen variables education, land holding, occupational status, savings and level of aspiration had shown positive significant contribution with the dependent variable livelihood security of agricultural labourers' at 0.05 level.The multiple regression equation with eighteen selected independent variables put together contributed 58.60 per cent to the total variance in the livelihood security, remaining 41.40 per cent was due to the extraneous effects of the variables.

Keywords: *Extraneous Effects, Livelihood Security, Multiple Liner Regression and Profile Characteristics.*

Agriculture is the primary source of livelihood for about 58.00 per cent of India's population. The Gross Value Added by agriculture, fishing and forestry was estimated at Rs. 19.48 lakh crores. Growth in terms of Gross Value Added Productin agriculture and allied sectors stood at 4 per cent in 2020, and was estimated to be 3.00 per cent in the second quarter of Five Year 2021. With 1.3 billion people employed in the sector, agriculture is the second greatest source of employment worldwide after services and it accounts 28.00 per cent of global employment. While more than two-third of the population in poor countries work in agriculture, less than 5.00 per cent of the population does in rich countries. It is predominantly the huge productivity increase that makes this reduction in labor possible. Agriculture is the most important sector of female employment in many countries, especially in Africa and Asia. From the year ending June, 2005 to the year ending June, 2018, the rural male population employed in agriculture seen a decline of 12 per cent (from 67.00 per cent to 55.00 per cent); while the rural male population witnessed a spike in the manufacturing sector by 8 per cent (from 15 per cent to 23.00 per cent). In the tertiary sector as well, rural male employment has increased by 4 per cent from 18.00 per cent to 22.00 per cent (**International Labour Organization, 2019**).

Presently, the agriculture sector employs 80.00 per cent of all economically active women in India, which includes 48.00 per cent of the self-employed farmers and 33.00 per cent of the agriculture labour force. Over the years, rural households' dependency on agriculture has declined to 50.00 per cent as per the latest round of the Periodic Labour Force Survey for 2018-19. In addition, the agriculture sector's contribution to National Gross Domestic Product has declined from 34 per cent in 1983-84 to 16 per cent in 2018-19. Similarly, agriculture sector's contribution to Gross State Domestic Product has

broadly followed the same pattern over the same period**.** As per 2011 census, highest number of agricultural labourers were found in Srikakulam from North Coastal Region, 4,42,295 male and female agricultural labourers, Guntur district from South Costal Region which comprises 1,035,569 male and female agricultural labourers and Kurnool district from Rayalaseema Region consists 8,69,074 male and female agricultural labourers so, these three districts selected from three regions of the state (www.censusindia.co.India). Livelihood is always more than just a matter of making shelter, transacting money and preparing food to put on the exchange in the market place. It is equally a matter of the ownership and exchange of information, the management of social relationships, the affirmation of personal meaning and group identity and the inter relationship of each ofthese tasks to the other. All these productive tasks together constitute a livelihood. Hence the present piece of investigation has been undertaken as one among such studies, focusing on the state of Andhra Pradesh with the given objective.

1) To study the relationship between the profile characters of agricultural labourers with livelihood security

MATERIALS AND METHODS

An *Ex post facto* research design was followed for the study. The state of Andhra Pradesh was selected purposively for the study as the investigator hails from the state. Three districts from the three Regions of Andhra Pradesh, Srikakulam district from North Coastal region, Guntur district from Coastal South region and Kurnool district from Rayalaseema region of the Andhra Pradesh state were purposively selected based on the highest number of agricultural labourers in the Region. Two mandals from each district were selected based upon simple random sampling method.From each of the selected mandal, four villages selected by using simple random sampling procedure thus coming to a total of 24 villages. From each of the selected village, ten respondents wereselected by using simple random sampling procedure thus coming to a total of 240 respondents.The relationship between the profile characteristics and livelihood security of the agricultural labourers was computed by co-efficient of correlation and multiple linear regression analysis.

Co-efficient of Correlation (r)

This measure was used to find out the relationship between the scores on profile characters and Livelihood Security of agricultural labourers and attitude of agricultural labourers towards their livelihood. The computed 'r' values were then compared with the table values of coefficient of correlation at 0.05 and 0.01 per cent level of significance.

The formula is as follows:

$$r = \frac{\sum xy - \frac{(\sum x)(\sum y)}{n}}{\sqrt{\sum x^2 - \frac{(\sum x)^2}{n}}\ \sqrt{\sum y^2 - \frac{(\sum y)^2}{n}}}$$

Where

r = Co-efficient of correlation between x and y

$\sum x$ = Sum of independent variable x

$\sum y$ = Sum of dependent variable y

$\sum x^2$ = Sum of squares of x variable

$\sum y^2$ = Sum of squares of y variable

n = Size of the sample

Multiple Linear Regression Analysis

Multiple linear regression provides amount of relation among two or more predicted variables and the single criterion variable. The regression coefficient may be interpreted as the change in Y corresponding to a unit increase in X_1 when all the other variables are held constant. The Multiple Linear coefficient 'R' is the highest possible constant between least squares of the independent variables and the squares of the independent variables and the observed dependent variable and R^2 is the portion of the variation on the criterion variable.

The regression equation may be written as:

$$Y=a+b_1x_1+b_2x_2+b_3x_3\ldots\ldots b_kx_k$$

Where,

a = Intercept

b = The partial regression coefficient representing the amount of change in y

that can be associated with a unit change in x_1 the remaining independent variables held constant.

x_1 = i^{th} independent variable for I =1,2,3…k

Results and Discussion

Relationship between the profile characteristics of agricultural labourers with their livelihood security

In order to study the nature of relationship between eighteen independent variables with livelihood security of the agricultural labourers, correlation coefficient (r) was computed and the values are presented in Table 1.The values of correlation coefficients (r) was then tested for their statistical significance.

Table.1 Relationship between the profile characteristics of Agricultural labourers with their livelihood security

S. No.	Profile Characteristics	"r" value
1.	Age	0.120^{NS}
2.	Education	0.059^{NS}
3.	Family Size	-0.065^{NS}
4.	Agricultural Labourer Experience	-0.028^{NS}
5.	Farming Experience	0.034^{NS}
6.	Land Holding	0.318**
7.	Tenant Land Holding	-0.014^{NS}
8.	Occupation Status	0.247**
9.	Annual Income	0.132*
10.	Savings	0.216**
11.	Expenditure pattern	0.127*
12.	Urban Contact	0.158*
13.	Deferred Gratification	0.140*
14.	Credit Orientation	0.084^{NS}
15.	Achievement Motivation	0.363**
16.	Economic Orientation	0.150*
17.	Self Confidence	0.084^{NS}
18.	Level of Aspiration	0.373**
NS -Non significant ** - Significant at 0.01 level * -Significant at		

The profile characteristics such as land holding, annual income, occupation status, savings, expenditure pattern, urban contact, deferred gratification, achievement motivation,economic orientation and level of aspiration were found to have positive and significant relationship with attitude of agricultural labourers towards their livelihood security.

1. Age Vs Livelihood Security

It could be concluded from the Table 1that there was positive and non-significantrelationship between age and livelihood security of agricultural labourers. Age might be influential for the level of responsibility rather than level of security. It canalso be interpreted that young age of agricultural labourers

might be having enough education qualifications and utilizing the available education facilities than the old age agricultural labourers.Similar findings reported by Ramya *et al*. (2017) and Harshitha *et al*.(2018).

2. Education Vs Livelihood Security

It could be concluded from the Table 1that there was positive and non-significant relationship between educationand livelihood security of agricultural labourers.Education is the base for better standard of living and opens wider doors of employment opportunities, which results in increased income of the family thus improving the secured livelihood. The finding of the present study was similar to that of Makwan *et al. (2012)* and Harshitha*et al*. (2018).

3. Family Size Vs Livelihood Security

It could be concluded from the Table1that there was negative and non-significant relationship betweenfamily sizeand livelihood security of agricultural labourers.The finding of the present study was similar to that of Mahadik *et al*. (2012).

4. Agricultural Labourer Experience Vs Livelihood Security

It could be concluded from the Table 1 that there was negative and non-significant relationship betweenagricultural labourer experience and livelihood security of agricultural labourers.Hence null hypothesis was accepted by rejecting empirical hypothesis.This findings was new.

5. Farming Experience Vs Livelihood Security

It could be concluded from the Table 1 that there was positive and non-significant relationship between farming experienceand livelihood security of agricultural labourers. Hence null hypothesis was accepted by rejecting empirical hypothesis.This findings is disagreement with the findings of Ramya *et al*. (2017).

6. LandHolding Vs Livelihood Security

It could be concluded from the Table 1that there was positive and significant relationship between landholdingand livelihood security of agricultural labourers.High landholding might have shown positive significant relationship with livelihood security. Possession of land is the mark of independence. The agricultural labourers might be cultivating different crops in their available land and generating income for their livelihood. In the absence of land, they might be in search of animal husbandrybased activities and other avenues which might not have given enough income to lead their family. This finding was similar to that of Ramya *et al*. (2017) andHarshitha*et al*. (2018).

7. Tenant LandHolding Vs Livelihood Security

It could be concluded from the Table 1 that there was negative and non-significant relationship between tenant land holdingand livelihood security of agricultural labourers. This finding was new.

8. Occupation Status Vs Livelihood Security

It could be concluded from the Table1 that there was positive and significant relationship between occupation status and livelihood security of agricultural labourers. The practice of different occupations like agriculture, livestock, horticulture, Poultry etc., has lead to increased income to the households. This findings was similar to the findings of Mahadik et al. (2012) and Bharti (2018).

9. Annual income Vs Livelihood Security

It could be concluded from the Table 1that there was positive and significant relationship between annual income and livelihood security of agricultural labourers. Income is the ultimate standard to measure the livelihood security. The generation of income reflects not only relative wealthyness but also involves intellectual potential of the person to generate enough annual income. Hence high level of annual income not only contributes for meeting the day to day requirements but also widens the scope for exploiting the creative ways for generating further more income and also the sense of saving. It also might have motivated the agricultural labourers to take care of food and nutrition, assets, habitat, education, health, , transportation, information etc. on the other side some agricultural labourers with large family in spite of having enough land holding, might be going for migration.This findings was similar to the findings of Dhanasree *et al*. (2014), Ramya *et al*.(2017) and Harshitha *et al*.(2018).

10. Savings Vs Livelihood Security

It could be concluded from the Table 1 that there was positive and significant relationship betweensavings and attitude of agricultural labourers. Savings provides security to spend on other requirements of the family also to face crisis situations. This finding was new.

11. Expenditure Pattern Vs Livelihood Security

It could be concluded from the Table 1that there was positive and significant relationship between expenditure pattern and livelihood security of agricultural labourers. The reason might be increase the expenditure leads to increase in assest security that ultimately leads to better standard of living. This finding was new.

12. Urban Contact Vs Livelihood Security

It could be concluded from the Table 1that there was positive and significant relationship between urban contactand livelihood security of agricultural labourers. They directly acquired materials from urban so their standard of living increased. This finding was new.

13. Deferred gratification Vs Livelihood Security

It could be concluded from the Table 1that there was positive and significant relationship between deferred gratification and livelihood security of agricultural labourers. The delay of un necessary luxury expenditures by the agricultural labourers helps to maintain the economic stability, which in turn has influence the livelihood security of agricultural labourers. This finding was in accordance with the finding of Harshitha *et al.* (2018).

14. Credit OrientationVsLivelihood Security

It could be concluded from the Table 1that there was positive and non-significant relationship between credit orientation andlivelihood security of agricultural labourers. This findings was similar to the findings of Harshitha *et al*. (2018).

15. Achievement Motivation Vs Livelihood Security

It could be concluded from the Table1 that there was positive and significant relationship between achievement motivation and livelihood security of agricultural labourers. Which indicated higher the achievement motivation higher would be the livelihood security.This finding was new.

16. Economic Orientation Vs Livelihood Security

It could be concluded from the Table1 that there was positive and significant relationship between economic orientation and livelihood security. It could be due to the fact that economic orientation increases agricultural labourers attached greater importance to profit maximization thereby secured livelihood can be achieved. Similar typeof findings identified by Mamathalakshmi *et al*.(2022) and Ramya *et al*. (2018)

17. Self-Confidence Vs Livelihood Security

Table 1 showed that there was positive and non-significant relationship between self-confidence and livelihood security of agricultural labourers. This findings was new.

18. Level of Aspiration Vs Livelihood Security

It could be concluded from the Table 1that there waspositive and significant relationship between level of aspiration and livelihood security of agricultural labourers. Higher the level of aspiration greater the scopefor working towards set goals. Agricultural labourers might be directing towards their activities in varying degrees based on their level of aspiration. This variation leads to difference in their extent of utilization of resources that reflects their livelihood security. The level of aspiration of agricultural labourers might be less focused on habitat and transportation securities. Similar findings identified by Ramya *et al*. (2017).

It is evident from the Table 2 that though all the independent variables contributed to the total variation and were significantly contributed towards attitude at 0.01 per cent level of probability and at 0.05 per cent level of probability. The MLR equation is as follow

From the above table the MLR equation can be fit as

$$Y= 9.47+0.057\ x1+0.560\ x2+0.323x3 - 0.387x4 +0.427x5 + 0.599x6-0.654\ x7+ 2.050\ x8 + 0.00023x9 +0.0017\ x10 -0.00022x11 + 0.161x12+0.190x13+0.282x14+0.259\ x15+ 0.318x16+0.106x17 + 0.366x18$$

From the Table 2 it could be inferred that the multiple regression equation with eighteen selected independent variables put together contributed 58.60 per cent to the total variance in the livelihood security; remaining 41.40 per cent was due to the extraneous effects of the variables.

Table 2 Multiple Liner Regression Analysis between the profile characteristics of agricultural labourers with Livelihood security

S. No.	Profile Characteristics	Regression Coefficient	Standard Error	t value
1.	Age	0.057	0.071	0.81^{NS}
2.	Education	0.56	0.341	3.04*
3.	Family Size	0.323	0.955	0.34^{NS}
4.	Agricultural Labourer Experience	-0.387	0.749	-0.52^{NS}
5.	Farm Experience	0.427	0.515	0.83^{NS}
6.	Land Holding	0.599	0.361	2.81*
7.	Tenant Land Holding	-0.654	0.456	-0.54^{NS}
8.	Occupation Status	2.05	0.738	2.78*
9.	Annual Income	0.00023	0.00039	1.66*
10.	Savings	0.0017	0.0012	2.98*
11.	Expenditure pattern	-0.00022	0.00045	-0.50^{NS}
12.	Urban Contact	0.161	0.234	0.69^{NS}
13.	Deferred Gratification	0.19	0.128	1.49^{NS}
14.	Credit Orientation	0.282	0.262	1.08^{NS}
15.	Achievement Motivation	0.259	0.175	1.48^{NS}
16.	Economic Orientation	0.318	0.233	1.36^{NS}
17.	Self Confidence	0.106	0.358	0.30^{NS}
18.	Level of Aspiration	0.366	0.133	2.76*

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