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Factors responsible for livelihood security among agricultural labourers in Karnataka: An analysis

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Abstract
Agricultural labourers constitute by far the largest segment in the unorganized sector. The efforts made by government have not adequately protected the interests of agricultural labourers. The study was carried out with the objectives of comparing the livelihood security status of agricultural labourers in different agricultural situation, to know the extent of influence of independent variables on livelihood security status of agricultural labourers and to identify the discriminating factors influencing livelihood security status of agricultural labourers. The results indicated a significant difference (F-value 21.86*, $p<0.05$) in livelihood security status among agricultural labourers in different agricultural situation. The R^2 value pointed out that all the 29 independent variables had contributed to the tune of 81.40 per cent of variation in livelihood security. The study clearly indicated that land holding, farming system practiced, training received, self-confidence, scientific orientation, achievement motivation and management orientation were the most influencing characteristics of livelihood security status among agricultural labourers. Therefore, government assistance in providing land is necessary along with promotion of integrated farming system with better management practices. Further, there is a need for specialized training programmes in order to increase the confidence level, skill and endeavor to excel in their life.

Keywords: Agricultural labourers, irrigated situation, livelihood security, plantation situation, rainfed situation

Introduction

Agricultural labourers constitute by far the largest segment in the unorganized sector. The avenues of stable and durable employment for them have been limited leading to inter-district and inter-state migration in search of better avenues of employment and wages. As per 2001 survey in India, in the total work force 27.50 per cent are male and 43.40 per cent are female agricultural labourers (33.2% by persons). In Karnataka, there were 23.70 per cent of male and 50.40 per cent of female agricultural labourers (34.4% by persons). Men had a greater degree of occupational livelihood diversification than women (Smith *et al.* 2001) [18]. Agricultural and allied sectors accounted for about 52.1 per cent of the total workforce in 2009-10. Several measures have been taken to protect the interests of the working class and uplift the condition of agricultural labourers. The very first legislation, the Minimum Wages Act (1948) was applied to the agricultural sector also. Many other existing labour laws are applicable and have direct bearing on agricultural labourers. The problems of agricultural labourers have been sought to be tackled through multi-dimensional course of action viz., improvement of infrastructural facilities, diversification to non-farm activities (60.00 per cent diversifiers had medium level of livelihood diversification index, Biswarup Saha and Ram Bahal, 2010) [3], skill improvement programmes, financial assistance to promote self-employment, optimizing the use of land resources etc., through a variety of rural development, employment generation (Basavaraj Biradar, 2008 [2] reported that livelihood status was increased from 22.67 per cent to 60.50 per cent after undertaking income generating activities) and poverty alleviation programmes. All these efforts have not adequately protected the interests of agricultural labourers. Keeping in view of these facts, the present study is planned with the specific objectives *viz.*,

i) To compare the livelihood security status of agricultural labourers in different agricultural situations.
ii) To know the extent of influence of independent variables on livelihood security status of agricultural labourers.
iii) To identify the discriminating factors influencing livelihood security status of agricultural labourers.

By reviewing above studies, the hypotheses framed for the present study.

H₀(1): There is no difference in the livelihood security status among agricultural labourers in different agricultural situations.

H₀(2): There is no relationship between independent variables and dependent variable.

H₀(3): There is no influence of independent variables on dependent variable.

Methodology

The research design adopted for the study was ex-post-facto design, since the phenomenon has already occurred. For the study six districts from three regions viz., Kolar, Chikkaballapur (Rainfed region), Mandya, Mysore (Irrigated region), Coorg and Chikmagalur (Plantation region) were selected, as these districts represent different agricultural situations which is intended for making comparison. Thirty five agricultural labourers were selected from each district making total 210 respondents (Rainfed-70, Irrigated-70, Plantation situation-70). The method suggested by the Likert (1932) [13] in developing summated rating scale was used to develop livelihood security scale for the study and applied to quantify dependent variable (livelihood security). Twenty nine independent variables selected for the study was quantified by using structured schedule and standardized scales. Simple random technique was employed to collect the data personally.

To analyze the data appropriate statistical tests were applied such as correlation co-efficient test (r) was used to calculate r-value, which facilitated to know the relationship between dependent variable and independent variables. Multiple linear regression co-efficient (R^2) test was carried out to determine the combined contribution of all independent variables on dependent variable by subjecting the variables into multiple linear analysis.

Results and Discussion

Table 1: Mean livelihood security status among agricultural labourers in different agricultural situations

Situation	Sample size	Livelihood security status		'F' Value
		Mean	SD	
Rainfed	n₁=70	135.14ᵃ	17.46	
Irrigated	n₂=70	143.71ᵇ	8.95	21.86*
Plantation	n₃=70	151.70ᶜ	16.54	
Pooled	n=210	143.52	16.23	

Note: Common letters indicate non-significant.
Sem± = 1.773 CD at 5% = 4.915.
* Significant at 0.05 probability level.

As data was subjected to its significance by F-test (Table 1), the results showed that there was a significant difference (F-value 21.86*, $p<0.05$) in livelihood security status among agricultural labourers in rainfed, irrigated, plantation situations and also in pooled situations. The probable reasons for the above trend could be discrepancy in production circumstances and agro climatic variations. The results are similar to the results from other studies Anand Rathod (2007) [1], Basavaraj Biradar (2008) [2], Chandrani Saha (2008) [4], Biswarup Saha and Ram Bahal (2010) [3], Devarajaiah (2010) [5], Lavanya (2010) [12], Lakshmi Narayani et al. (2011) [11]

and Savitha et al. (2011) [17]. The null hypothesis H₀(1) is rejected by accepting the alternative hypothesis that there is a difference in the livelihood security status among agricultural labourers in different agricultural situations as results clearly shows the difference in livelihood security status among agricultural labourers in different agricultural situations.

Table 2: Relationship between independent variables and livelihood security status of agricultural labourers

(n=210)

Sl. No.	Characteristics	Correlation co-efficient (r)
1.	Age	-0.091 NS
2.	Education	0.020 NS
3.	Land holding	0.192**
4.	Livestock possession	0.050 NS
5.	Caste	-0.272**
6.	Family size	0.196**
7.	Family type	0.054 NS
8.	Dependency ratio	-0.157**
9.	Adjustability	0.144*
10.	Participation in developmental process	0.028 NS
11.	Farming system practiced	0.161**
12.	Determination in work situation	0.158**
13.	Savings	0.133*
14.	Indebtedness	-0.182**
15.	Training received	0.271**
16.	Information seeking behaviour	0.335**
17.	Self confidence	0.297**
18.	Risk orientation	-0.313**
19.	Scientific orientation	0.272**
20.	Value orientation	0.049 NS
21.	Social participation	0.093 NS
22.	Extension participation	0.082 NS
23.	Economic motivation	0.121*
24.	Achievement motivation	0.223**
25.	Deferred gratification	0.021 NS
26.	Innovative proneness	0.124*
27.	Cosmopoliteness	0.015 NS
28.	Mass media utilization	0.008 NS
29.	Management orientation	0.363**

**Significant at 0.01 probability level.
* Significant at 0.05 probability level.
NS: Non-Significant.

The relationship between independent variables with livelihood security status of agricultural labourers was furnished in the Table 2. The variables such as land holding, family size, farming system practiced, determination in work situation, saving, training received, information seeking behaviour, self-confidence, scientific orientation, economic motivation, achievement motivation, innovative proneness and management orientation had positive and significant relationship with livelihood security status. The feasible reasons might be that land holding is the major asset which gives continued income to the family; as family size increases number of earning members in the family increases; determination in work situation and adjustable nature of the respondents results in more efficient output by the agricultural labourers in the work situations also finds new opportunities of employment for additional income; the practice of different farming systems like agriculture, horticulture, livestock, agro-forestry etc., leads to additional income to the households; savings provides security to spend on other requirements of the family also to face crisis situations; trainings increases confidence level and skills to do varied works as a result

earnings also increase; information seeking behaviour of the respondents helps them to find the new ways of employment and create awareness about their outside world; self-confidence is the vital characteristic to face any situation to lead life; scientific orientation leads to know new ways of opportunities, helps to learn new ways of farm practices also enhances their skills to do varied works; as economic motivation increases, respondents attach greater importance to profit maximization; achievement motivation emphasizes a desire for excellence in order to attain a sense of personal accomplishment in the life; innovative proneness of an individual closely associated with change, adopting innovative ideas and practices; orientation towards managerial aspects enhances income from their farm production thus, security for the life enhanced.

The variables *viz.*, caste, dependency ratio, indebtedness and risk orientation had negative and significant relationship with livelihood security status. It could be due to the fact that people who belonged to SC/ST, category I and OBC caste

ready to work any type of hard work when compared to general category people; dependency ratio increases livelihood security decreases due to dependency of non-earning members on earning members; indebtedness increases earnings goes to clear the indebtedness and leads to poor security to the life of the respondents and their dependents; risk orientation of the respondents increases security for their life. The studies conducted by Anand Rathod (2007) [1], Geetha (2007), Hardeep Kaur and Talukdar (2007) [8], Basavaraj Biradar (2008) [2], Chandrani Saha (2008) [4], Lakshmi Narayani (2009) [10], Biswarup Saha and Ram Bahal (2010) [3], Devarajaiah (2010) [5], Ereneus Marbaniang (2010) [6] and Lavanya (2010) [12] supports the results of the present study.

The alternative hypothesis stating that there is relationship between independent variables and dependent variable was accepted by rejecting null hypothesis H_0 (2) since independent variables had significant relationship with livelihood security status of agricultural labourers.

Table 3: Association between profile characteristics and livelihood security status of agricultural labourers

(n=210)

Sl. No.	Characteristics	Chi-square Value
1.	Age	3.41NS
2.	Education	0.92 NS
3.	Land holding	21.03**
4.	Livestock possession	0.76 NS
5.	Caste	16.75**
6.	Family size	12.38*
7.	Family type	2.24 NS
8.	Dependency ratio	17.87**
9.	Adjustability	10.11*
10.	Participation in developmental process	3.09 NS
11.	Farming system practiced	10.44*
12.	Determination in work situation	6.95 NS
13.	Savings	12.77*
14.	Indebtedness	16.76**
15.	Training received	17.27**
16.	Information seeking behaviour	10.65*
17.	Self confidence	9.54*
18.	Risk orientation	18.46**
19.	Scientific orientation	17.57**
20.	Value orientation	6.43 NS
21.	Social participation	8.42 NS
22.	Extension participation	1.73 NS
23.	Economic motivation	10.99*
24.	Achievement motivation	11.59*
25.	Deferred gratification	4.86 NS
26.	Innovative proneness	9.80*
27.	Cosmopoliteness	0.25 NS
28.	Mass media utilization	1.59 NS
29.	Management orientation	16.55**

**Significant at 1 per cent level.
*Significant at 5 per cent level.
NS: Non-Significant.

The findings depicted in Table 3 observed that there was positive and significant association at one per cent level between land holding (X^2=21.03), caste (X^2=16.75), dependency ratio (X^2=17.87), indebtedness (X^2=16.76), training received (X^2=17.27), risk orientation (X^2=18.46), scientific orientation (X^2=17.57) and management orientation (X^2=16.55) with livelihood security of agricultural labourers in pooled situation. The variables like family size (X^2=12.38), adjustability (X^2=10.11), farming system practiced (X^2=10.44), savings (X^2=12.77), information seeking

behaviour (X^2=10.65), self-confidence (X^2=9.54), economic motivation (X^2=10.99), achievement motivation (X^2=11.59) and innovative proneness (X^2=9.80) had positive and significant association at five per cent level with livelihood security of the respondents in pooled situation. The remaining independent variables like age (X^2=3.41), education (X^2=0.92), livestock possession (X^2=0.76), family type (X^2=2.24), participation in developmental process (X^2=3.09), determination at work situation (X^2=6.95), value orientation (X^2=6.43), social participation (X^2=8.42), extension

participation (X^2=1.73), deferred gratification (X^2=4.86), Cosmopoliteness (X^2=0.25) and mass media utilization (X^2=1.59) had positive and non-significant association with of agricultural labourers' livelihood security in pooled situation.

Table 4: Extent of contribution of independent variables to livelihood security status of agricultural labourers

(n=210)

Sl. No.	Independent Variables	Regression co-efficient (b)	Standard error (SE_b)	t- value
1.	Age	-0.0444	0.0823	0.54NS
2.	Education	0.0309	0.0778	0.40 NS
3.	Land holding	0.2449	0.0784	3.14**
4.	Livestock possession	0.0382	0.0806	0.47 NS
5.	Caste	-0.1851	0.0654	2.83**
6.	Family size	0.1309	0.0986	1.33 NS
7.	Family type	0.0626	0.1507	0.41 NS
8.	Dependency ratio	-0.2386	0.0887	2.69**
9.	Adjustability	0.1685	0.0916	1.84 NS
10.	Participation in developmental process	0.0338	0.1377	0.25 NS
11.	Farming system practiced	0.3334	0.1026	3.25**
12.	Determination in work situation	0.2533	0.0853	2.97**
13.	Savings	0.2268	0.0941	2.41*
14.	Indebtedness	-0.3820	0.0934	4.09**
15.	Training received	0.6360	0.1339	4.75**
16.	Information seeking behaviour	0.2422	0.0794	3.05**
17.	Self confidence	0.2442	0.0641	3.81**
18.	Risk orientation	-0.3797	0.0915	4.15**
19.	Scientific orientation	0.2665	0.0838	3.18**
20.	Value orientation	0.1376	0.0769	1.78 NS
21.	Social participation	0.0293	0.0820	0.36 NS
22.	Extension participation	0.0507	0.0992	0.51 NS
23.	Economic motivation	0.2251	0.0825	2.73**
24.	Achievement motivation	0.3030	0.0957	3.07**
25.	Deferred gratification	0.0512	0.0719	0.71 NS
26.	Innovative proneness	0.1346	0.0769	1.75 NS
27.	Cosmopoliteness	0.0806	0.0875	0.97 NS
28.	Mass media utilization	0.0425	0.1019	0.42 NS
29.	Management orientation	0.4905	0.0995	4.93**

R^2 = 0.8140
a = 1.9575
F = 12.56**
**Significant at 0.01 probability level
*Significant at 0.05 probability level
NS: Non-Significant.

A critical look at the Table 4 inferred the contribution of independent variables of agricultural labourers to their dependent variable. The results concluded that out of 29 independent variables 15 variables like land holding, caste, dependency ratio, farming system practiced, determination at work situation, savings, indebtedness, training received, information seeking behaviour, self-confidence, risk orientation, scientific orientation, economic motivation, achievement motivation and management orientation had significantly contributed to the livelihood security status of agricultural labourers. The R^2 value pointed out that all the 29 independent variables had contributed to the tune of 81.40 per cent of variation in livelihood security status. The plausible reasons might be that personal, socio-economic, psychological, motivational, situational and extension factors were the deciding factors of livelihood security. Independent variables had contributed to livelihood security status hence, the null hypothesis $H_0(3)$ was rejected by accepting the alternative hypothesis stating that there is a influence of independent variables on livelihood security status.

Acknowledgement

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