Efficiency of Women Agricultural Labourers in Rice Farming Systems of Kerala and Tamil Nadu

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ABSTRACT

The study was conducted in Kollam district of Kerala and Kanyakumari district of Tamil Nadu. A labour efficiency scale was developed by functional approach and the same was used to measure the labour efficiency of women agricultural labourers. Using cluster analysis, the items were grouped into different dimensions and labeled based on the content of the items. In general, majority (63%) of the women agricultural labourers were low in labour efficiency. The analysis revealed significant difference between the women agricultural labourers of Kerala and Tamil Nadu with respect to their overall labour efficiency level. The difference was mainly due to labour attachment practices and increasing demand for non-agricultural works. Dimension-wise analysis of labour efficiency showed that majority of them belonged to the high group under the dimension adjustability and competency, whereas majority had low efficiency with respect to dimensions such as determination in work situation, inter-personal relationship, team spirit, commitment, work environment, socio-economic and situational. The respondents were observed to have neither high nor low efficiency in case of confidence dimension.

Keywords: Dimensions of labour efficiency; Labour efficiency scale; Women agricultural labourers;

Women's contribution to the farm sector has largely been ignored and inadequately understood in the Indian context (*Marothia and Sharma, 1985*). According to the latest census, 38 percent of all agricultural labourers, 20 percent of cultivators and 29 percent of all livestock and forestry workers are women. Contributing a fair share of working population, women form part of a valuable human resource that, with appropriate training and education can bring about phenomenal changes in desirable direction. Labour is the prime factor, be it the primary, secondary or tertiary sector. Labour productivity in agriculture has two important aspects. First, it profoundly affects national prosperity, i.e national income; second, it principally determines the standard of living of the agricultural population. National prosperity in the economic perspective is largely synonymous with the high output per man-hour. Therefore, if a country intends to attain prosperity it needs to encourage technical assistance and improvements to the labour population, which help to increase productivity in the agricultural economy (*Shafi, 1981*).

Any intervention for improving the conditions of women involved in agricultural activities should begin with an understanding of their role profile in terms of various agricultural and related activities (*Sen, 1993*). Women must then be placed within this context to be evaluated.The objective of the farmer is to maximize net profit and this can be fulfilled if all the factors of production are used efficiently. To know in what way different factors of production are used, efficiency indicators are to be developed. Method of production is said to be more efficient when it yields a greater valuable output per unit of a valuable input (*Rane, 1983*). In this context, it would become clear that an objective systematic appraisal of labour efficiency of women agricultural labourers will be of immense benefit to the planners and administrators and ultimately to the agricultural development process.

METHODOLOGY

The scale to measure labour efficiency was developed by functional approach as it carries more meaning in the context of agricultural labourers. One hundred and fifteen items possibly reflecting labour efficiency of agricultural labourers were generated from literature, discussion with experts in related fields and through critical incident technique. The relevancy of 115 items generated was established by sending these items to 100 judges and based on mean score percentage, 58 items were selected. The 58 items selected were administered to 100 agricultural labourers selected randomly from the non sample villages of the two districts viz., Kollam in Kerala and Kanyakumari in Tamil Nadu. Their responses were traken on a five-point continuum.

Item discrimination (critical ratio) of each item was calculated using the formula given by *Edwards (1957)*. Using Pearson's product moment method, item-total score correlation was worked out. Thirty two items with significant discrimination and item-total score correlation were selected for inclusion in the final scale.

Considering the effectiveness and novelty in application in the field of agricultural extension, cluster analysis as suggested by *Chatfield and Collins (1980*) was used for classification of the items. Since the items included in the present scale represented the unicriterion of labour efficiency, euclidean distance was worked out for every pair of items using the formula

$d^2ii' = j=1 (Xij-Xi'j)^2$

where d^2ii' = euclidean distance between items i and i'

$(Xij-Xi'j)^2$ = difference between the scores of items i and i' for the jth respondent

Having calculated the pair-wise euclidean distance, grouping of items was carried out by the method suggested by Tocher as given in *Singh and Chaudhary (1979)*. This grouping yielded ten clusters thereafter labelled as dimensions considering the content of the items.

Dimension score was obtained by

$$\sum_{i=1}^{n} t_i = t_1 + t_2 + t_3 + ...t_n$$

where t_1 ...tn refers to individuals score on items

Labour efficiency score was computed by summing the dimension wise scores as

$$\sum_{i=1}^{n} D_i = D_1 + D_2 + D_3 + ...D_n$$

where $D_1 \ldots D_n$ refers to individual scores on dimensions

The minimum score obtainable by a respondent by using the scale is 32 and the maximum is 160.

The scale has been standardised by establishing the reliability and validity of the scale.

The study was conducted in Kollam district of Kerala and Kanyakumari district of Tamil Nadu, where more or less similar agro-climatic condition and cropping pattern exist. Two blocks viz., Mukhathala and Ithikkara from Kollam and Killiyoor and Thiruvattar from Kanyakumari district were selected at random. Three panchayats from each block and 25 women agricultural labourers from each panchayats were selected for the study. Altogether 300 women agricultural labourers were selected for the study. The data was collected using the well-structured schedule prepared for the purpose of the study.

RESULTS AND DISCUSSION

Table 1 reveals that majority of the respondents (63%) were under low efficiency group and 37% were under high efficiency group. It was observed that majority of the women agricultural labourers belonged to low group in both Kollam (57.30%) and Kanyakumari (58.0 %) districts. The results of the 't' test were significant, indicating that the labour efficiency in the two study districts varied significantly.

Table 1. Distribution of women agricultural labourers in total sample and in Kollam and Kanyakumari districts based on their labour efficiency

Particulars	Mean score	Efficiency group	
	Low (%)	High (%)	Total
Sample	77.23	63.00	37.00
Kollam	75.54	57.30	42.70
Kanyakumari	78.90	58.00	42.00

t = 2.66**

Table 2. Distribution of women agricultural labourers based on labour efficiency dimensions

Dimensions	Mean score	Efficiency group	
		Low (%)	High (%)
1. Determination in work situation	23.23	55.67	44.33
2. Inter-personal relationship	11.12	60.00	40.00
3. Confidence	4.69	50.00	50.00
4. Adjustability	6.97	47.33	52.67
5. Competency	4.91	43.33	56.67
6. Team spirit	4.43	54.33	45.67
7. Commitment	4.51	55.33	44.67
8. Work environment	4.35	56.67	43.33
9. Socio-economic	9.28	58.33	41.67
10. Situational	2.29	63.00	37.00

It is evident from Table 2 that majority of the women agricultural labourers belonged to high group under the dimension adjustability and competency. An equal proportion of women agricultural labourers came under low and high groups in confidence dimension. In contrast, dimensions such as determination in work situation, inter-personal relationship, team spirit, commitment, work environment, socio-economic and situational had large proportion of women agricultural labourers under low efficiency group.

Table 3 detailing the distribution of women agricultural labourers shows that women agricultural labourers in general were low in overall efficiency.In the

Table 3. Distribution and comparison of women agricultural labourers of Kollam and Kanyakumari districts based on labour efficiency dimensions

Dimensions	Efficiency Group				Mean score		"t" Value
	Kollam		Kanyakumari		Kollam	Kanyakumari	
	Low(%)	High(%)	Low (%)	High (%)			
1. Determination in work situation	52.00	48.00	52.00	48.00	23.59	22.87	1.47
2. Inter-personal	59.33	40.67	60.67	39.33	11.20	11.04	0.69
3. Confidence relationship	64.00	36.00	68.67	31.33	4.37	5.01	3.43**
4. Adjustability	64.00	36.00	52.67	47.33	7.12	6.82	1.41
5. Competency	64.00	36.00	47.33	52.67	5.08	4.74	1.94
6. Team spirit	56.67	43.33	52.00	48.00	4.36	4.51	0.64
7. Commitment	58.00	42.00	52.67	47.33	4.53	4.49	0.32
8. Work environment	63.33	36.67	50.00	50.00	4.13	4.57	2.46*
9. Socio-economic	57.33	42.67	59.33	40.67	9.25	9.31	0.54
10. Situational	66.00	34.00	60.00	40.00	2.19	2.39	1.61

* Significant at 5% level ** Significant at 1% level

efficiency dimensions of adjustability and competency, the women agricultural labourers in high group were above 50% in both the districts. With respect to the other dimensions determination in work situation, inter-personal relationship, confidence, team spirit, commitment, work environment, socio-economic and situational, majority of the women agricultural labourers were observed to have low efficiency. In the case of confidence dimension, the women agricultural labourers cannot be said to be efficient or not, as equal proportion of women agricultural labourers came under low and high efficiency groups. The reasons for observing generally low efficiency may be as follows.

Among the major crops of Kollam and Kanyakumari districts, paddy is the only crop requiring large number of hired labourers for its production. Rice being a seasonal crop offers employment opportunities to the women agricultural labourers only during the peak seasons. Added to this, the area under paddy is in the declining trend getting replaced by high value crops like banana and coconut. Moreover, they find more days of employment and derive major share of their income from non-agricultural sector. For works in brick kiln and cashew factory the women agricultural labourers are paid based on the quantum of work done, paving way to work at ease. Whereas in the agricultural sector the women agricultural labourers are under pressure to do a particular amount of work per day and is more pressing during peak seasons for transplanting and harvesting. In most of the areas they do agricultural work just to oblige the farmer as they were involved in working in the same land for generations. Agriculture being a hereditary and caste occupation, the sentimentality attached towards agricultural work makes women agricultural labourers still work in the fields. In such a situation the women agricultural labourers take agricultural work in the lighter sense and hence bestow less effort and attention in doing agricultural work. This might be the possible reason for noticing more per cent under low efficiency in the overall level and in majority of the labour efficiency dimensions. It has been reported that in general, Indian labour is not much efficient intrinsically and many internal factors are responsible for their low efficiency (*Sankaran, 1970*).

Majority of the farmers in Kerala reported not having good opinion on the sincerity and dedication of the workers in their job. Owing to this, the farmers have to be little rigid in extracting the work from the labourers as well as in observing strictly the working hours without giving any liberty to the labourers in wasting their working time unnecessarily. These may be the reasons for not observing sound relationship in emphasizing and recognizing the efforts of the labourers by the farmers especially in getting the work done by the labourers (*Ramanathan, 1995*). Efficiency of labour also depends upon the relation between the farmer and labourer. If the relations between the two are friendly and cordial, efficiency will be high. If the employer possesses a sympathetic attitude towards the workers, the worker will give his best.

The reasons for the significant difference in the two study districts with regard to overall labour efficiency may be as follows. In Kerala, the status of agricultural labourers is apparently different from that observed in

other states. Due to the high literacy level and influence of unionization among labourers, the agricultural labourers feel much elevated in their social status. It was observed that the farmers in Kerala do not have a say on the agricultural labourers employed by them. Any attempt to direct and control the agricultural labourers results in stoppage of work and reduced turnover. The situation of agricultural labourers in Tamil Nadu is different. Though Kanyakumari district has high literacy level, the plight of women agricultural labourers is poor. They hardly have any unionization activities and are least aware of their rights and benefits. Only recently the women agricultural labourers of low castes have started going for non-agricultural works in brick kiln and cashew factory. Hence, under such circumstances, it is possible to notice regional variation in the labour efficiency pattern of women agricultural labourers.

It was inferred from the study that the labour efficiency dimensions, confidence and work environment had statistically significant difference between the women agricultural labourers of the two districts. Considerable change in the study districts was noticed in terms of the mental status of women agricultural labourers and treatment by the farmer. In Kanyakumari district, most of the labourers work continuously in the same field for years and has good rapport with the employer farmer. This creates a conducive environment for work and helps to develop confidence in their minds. Whereas in Kollam district it was observed that women agricultural labourers are hired from the nearby villages at least during peak seasons and they do not bother much about the relationship with the farmer. These might be the possible reasons for the significant difference between the two districts with regard to work environment and confidence dimensions.

Increase in production must be accompanied by a reduction in the cost of production of every additional unit and such a state of affair amounts to higher productivity (*Dalvi quoted by Singh, 1988*). Land and capital are considered as passive factors of production, whereas labour is an active factor. Labour efficiency is a complex affair not easy to measure and compare especially in agriculture with different conditions of soil, climate, animal power, implements and the direction and incentives to work. The empirically derived dimensions of the labour efficiency scale can be the foundation based on which necessary programmes for development of labour efficiency of agricultural labour can be laid upon. The study has pointed out that the labour efficiency in general of both the districts were poor. Hence, greater attention is to be given focussing on the factors hemmed with labour efficiency.

CONCLUSION

The analysis of overall labour efficiency of the women agricultural labourers indicated that majority of them were under low efficiency group. There was significant difference between the women agricultural labourers of Kerala and Tamil Nadu with respect to their overall labour efficiency levels as well as with respect to the different dimensions of labour efficiency.

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