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SOCIAL STATUS OF THE PALMYRAH TAPPERS IN THOOTHUKUDI DISTRICT

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ABSTRACT

India is one of the countries blessed with rich growth of palms. Palmyrah is declared as the "State Tree" of Tamil Nadu. Palmyrah tree prevents soil erosion and protects natural wealth. Neera production is seasonal in nature while its demand is inelastic. This also affects the price fixation. Due to the prevalence of high level of illiteracy, most of the tappers are unable to follow the literature available on marketing rules and the relevant act. The processing of neera into jaggery is labour-intensive and consumes expensive and scarce firewood. Women and children in the family were left with the task of boiling neera for hours together. If there is a change in social status, the society also changes a lot and therefore the analysis is made, to find the prospects of the palmyrah tappers. Prospects of the sample respondents are analysed on the basis of social factors. Government policies and programmes should be oriented towards human resource development which in turn includes education, healthcare, nutrition, and economic empowerment. . Directly, it provides employment to the toddy tappers, indirectly a significant section of people who lives in the rural segment gets livelihood through abundant source of palmyrah palm by marketing the products and products of the tree. And also it is a tree of eco-friendly and ultimately most economical one. Despite the various welfare measures taken by the government, majority of palmyrah tappers in Thoothukudi district live in utmost poverty. They are the outliers of mainstream development process.

KEYWORDS: Palmyrah, toddy tappers, Neera production, education, healthcare, nutrition,

INTRODUCTION

India is one of the countries blessed with rich growth of palms. Palmyrah is declared as the "State Tree" of Tamil Nadu. Palmyrah tree prevents soil erosion and protects natural wealth. In Thoothukudi, there are 3½ crores of palmyrah trees which are getting ready for harvest. Per tree, can give Rs.100 to the government as a revenue (3,50,00,000 x 100 = ₹ 350,00,00,000). The numbers of palmyrah trees in Tamil Nadu is eight crores (100 x 8,00,00,000 = ₹800,00,00,000). If the government gives permission to collect toddy from palmyrah trees it can also be collected from coconut trees. The numbers of coconut three times more than the palmyrah trees. So, the government's annual income from toddy is 800,00,00,000 x 3 = ₹ 2400,00,00,000. The actual income from foreign liquor is ₹50,00,00,00,000. Toddy is good for health. It is a good income to the government as well as the poor and unnoticed palmyrah tappers.

STATEMENT OF THE PROBLEM

Neera production is seasonal in nature while its demand is inelastic. This also affects the price fixation. Due to the prevalence of high level of illiteracy, most of the tappers are unable to follow the literature available on marketing rules and the relevant act. The processing of neera into jaggery is labour-intensive and consumes expensive and scarce firewood. Women and children in the family were left with the task of boiling neera for hours together. Considering the extent of the risk in collecting neera and the labour involved in processing, monetary benefits were rather insignificant. Climbing the palmyrah is both dangerous and hazardous. Each year, many of the climbers, no matter how skillful, fall from the trees to die or to remain crippled for life. The season in which the sap of the palmyrah flows is only six months in length, and the yield varies with the rainfall. The purpose of our study, is to assess the current status of the palmyrah tapping palm in Thoothukudi. This district was chosen because it is the major area of occurrence of the palmyrah in India.

OBJECTIVES OF THE STUDY

The basic objective of the study is to learn about the palmyrah tappers. This study focuses on the following specific objectives.

1. To analyze the social status of the palmyrah tappers in Thoothukudi district.
2. To evolve suggestions for the better performance and solution to the problems of palmyrah tappers.

METHODOLOGY

This study, descriptive and empirical in nature, is based on primary data. Primary data were collected directly from the households of palmyrah tappers with the help of a pre-tested interview schedule

GEOGRAPHICAL COVERAGE

The present study covers all the eight taluks in Thoothukudi district of Tamil Nadu state.

TOOLS OF ANALYSIS

The analysis and interpretation of data was made with the help of the statistical tools and techniques such as Factor Analysis, ANOVA, Multiple Discriminant Analysis and Multiple Linear Regression Analysis.

SOCIAL STATUS OF THE SAMPLE RESPONDENTS

If there is a change in social status, the society also changes a lot and therefore the analysis is made, to find the prospects of the palmyrah tappers. Prospects of the sample respondents are analysed on the basis of social factors. The social status are too many, but the present study is confined to twenty status namely, membership in various associations, leadership quality, rapport with officers, status of life, interest in religious activities, self image, involvement in social services, changes in the life style, co-operation, helping tendency, recognition in the society, changes in communication system, departure from superstitious beliefs, departure from unfair practices, departure from social tensions, self discipline, changes in unethical value, investment, expenses on luxurious items and participation in administration.

The palmyrah tappers are asked to rate the above said twenty social status from five to one respectively. The tappers with high perception of the negative statements are given low marks and vice versa to exhibit their attitude towards the social status in general. The lower marks on the variable indicate the unfavourable attitude towards various social status in general, whereas the higher marks show the favourable attitude towards it.

The score of twenty statements related to social status to change among the palmyrah tappers is calculated individually in order to reveal their level of social status to change. The one-way analysis of variance has been administered to analyses the significant difference among the three age groups of palmyrah tappers regarding each aspect in their levels of social status to change. The resulted mean scores and the respective 'F' statistics are shown in table 6.3.

Table: 1 Social Status Of The Sample Respondents

Social Status Variables	Mean score			Total	F-Stat
	Youngsters	Middle Aged	Elders		
Membership in various associations	3.574	3.714	3.257	3.463	3.894*
Leadership quality	3.222	3.480	3.324	3.357	0.754 ^{NS}
Rapport with officers	3.537	3.786	3.311	3.507	4.085*
Status of life	3.444	3.723	3.568	3.597	0.927 ^{NS}
Interest in religious activities	3.574	3.755	3.331	3.513	3.546*
Self image	3.556	3.714	3.236	3.450	4.215*
Involvement in social services	3.556	3.724	3.297	3.483	3.436*
Changes in the life style	3.333	3.602	3.304	3.407	1.564 ^{NS}
Co-operation	3.444	3.694	3.558	3.582	0.713 ^{NS}
Helping tendency	3.333	3.490	3.527	3.480	0.437 ^{NS}
Recognition in the society	3.631	3.633	3.230	3.433	3.673*
Changes in communication system	3.204	3.418	3.054	3.200	2.526 ^{NS}
Departure from superstitious beliefs	3.630	3.653	3.264	3.457	3.381*
Departure from unfair practices	3.537	3.633	3.331	3.467	1.793 ^{NS}
Departure from social tensions	3.519	3.133	3.149	3.210	2.162 ^{NS}
Self discipline	3.648	3.653	3.293	3.475	3.024*
Changes in unethical value	3.444	3.694	3.405	3.507	1.638 ^{NS}
Investment	3.352	3.347	3.122	3.237	1.171 ^{NS}
Expenses on luxurious items	3.741	3.622	3.304	3.487	2.951*
Participation in administration	3.370	3.684	3.392	3.483	1.794 ^{NS}

Note : * Significant at five percent level

N.S. – Not Significant

The highly viewed social status among the younger group are expenses on luxurious items, self discipline and recognition in the society, since its mean scores are 3.741, 3.648 and 3.631 respectively. Among the middle aged groups social status are rapport with officers, interest in religious activities and involvement in social services, since the mean scores are 3.786, 3.755 and 3.724 respectively. Among the elders groups social status are status of life, co-operation and helping tendency, since its mean scores are 3.568, 3.558 and 3.527 respectively. The overall social status among the younger age group, middle aged group and elder age group are status of life, co-operation and rapport with officers, since its mean scores are 3.597, 3.582 and 3.507 respectively.

Regarding the importance given on these variables, the significant difference among the three age groups of tappers have been identified as membership in various associations, rapport with officers, interest in religious activities, self image, involvement in social services, recognition in the society, departure from superstitious beliefs, self discipline and expenses on luxurious items, since the respective 'f' statistics are significant at five per cent level. The other variables such as leadership quality, status of life, changes in the life style, co-operation, helping tendency, changes in communication system, departure from unfair practices, departure from

social tensions, changes in unethical value, investment and participation in administration are not significant with the age of the palmyrah tappers.

Factor Loading for Social Status of Palmyrah Tappers:-

There are various social status variables influencing the palmyrah tappers status in the society. In order to identify the most important variables and the factors that explain correlation within a set of observed variables and to reduce the data, to identify trade number of variables that explain the variance observed in a much larger number of manifest factors, factor analysis is used. In other words, the factor analysis technique is used to reduce the long list of variables that influence the palmyrah tappers and to make meaningful decisions. There are several methods available for factor analysis. The factors extracted from the factor analysis are identified with the help of factor loading of the variable associated with the factors. The technique of factor analysis is used to reduce the number of variables into a smaller and manageable number by combining related ones into factors. It is an excellent way in identifying the latent factors by analyzing correlation among variables and it explains the variables that influence much to the base or dependent variables. 'Principal Component Analysis' method is used to extract factors

with an Eigen value of 1 or more. In order to assign variables 'Rotated Factor Matrix' is used. In this study, factor analysis is applied for the social status, economic status and problems faced by the palmyrah tappers and the results are given one by one. In order to find the appropriateness of this analysis, Kaiser Meyer Olkin (KMO) and Bartlett's Test of sphericity is used. The factor analysis results in five important factors.

However, the principal factor method of 'Rotation' is mostly used in factor analysis technique. Factors matrices are rotated to interpret them adequately as the original factor matrices are arbitrary. Thus, a major goal rotation is to obtain

meaningful factors that are as consistent as possible from analysis to analysis. Rotated factor matrix is one of the final outcomes of a factor analysis and it is a table of co-efficient that expresses the ratio between the variables and the factors.

The table 1 gives the loadings received by the factors under f1, f2, f3, f4 and f5 which represents the ratings of the respondents such as 'strongly agree', 'agree', 'no opinion', 'disagree' and 'strongly disagree' having the score values of 5, 4, 3, 2 and 1 respectively. Twenty variables are identified as the factors which influence the social status of the palmyrah tappers in their activities.

Table: 2 Rotated Component Matrix - Social Status of Palmyrah Tappers

Social Status Variables	Factor Loading				
	F1	F2	F3	F4	F5
Membership in various associations	.930	.131	.168	.120	.116
Self image	.923	.131	.174	.133	.116
Rapport with officers	.874	.076	.137	.170	.246
Interest in religious activities	.855	.092	.219	.137	.004
Involvement in social services	.850	.103	.096	.142	.314
Departure from superstitious beliefs	.088	.925	.124	.120	-.060
Departure from unfair practices	.127	.919	.123	.165	.103
Self discipline	.080	.914	.196	.142	.200
Recognition in the society	.184	.913	.143	.117	.049
Departure from social tensions	.089	.106	.608	-.200	.104
Expenses on luxurious items	.235	.029	.603	.144	.060
Helping tendency	.121	.145	.557	.293	.211
Changes in communication system	.033	.140	.548	.326	.093
Co-operation	.269	.211	.539	-.046	.146
Status of life	.039	.024	.523	.216	.261
Changes in the life Style	.127	.119	.256	.707	.098
Leadership quality	.155	.131	.020	.652	-.023
Investment	.174	.088	-.008	.566	.035
Participation in administration	.087	.152	.303	.211	.536
Changes in unethical value	.046	.037	.195	.124	.506

Extraction Method: Principal Component Analysis

Rotation Method: Varimax with Kaiser Normalization. Rotation converged in 5 iterations.

The table 2 clearly shows that in the first column the variables namely, 'membership in various associations', 'self image', 'rapport with officers', 'interest in religious activities' and 'involvement in social services' have higher loadings of .930, .923, .874, .855 and .850 respectively. It can be suggested that factor 1 is the combination of these five factors and have the variance of 32.690 per cent and it can be named as 'Self Development'.

From the second column it can be seen that, the variables of 'departure from superstitious beliefs', 'departure from unfair practices', 'self discipline' and 'recognition in the society have higher loadings with a

variance of 13.983 and it can be combined and called as 'Good Recognition'.

The third column shows that, the factors 'departure from social tensions' .608, 'expenses on luxurious items'.603, 'helping tendency' .557, 'changes in communication system' .548, 'co-operation' .539 and 'status of life' .523 have high loadings and are summated and named as 'Proper Identification'.

From the fourth column it can be seen that, the variables of 'changes in the life style', 'leadership quality' and 'investment' have higher loadings with a variance of 8.806 and it can be combined and called as 'Modern Life Style'.

In the last column, the two variables are 'participation in administration' and 'changes in

unethical value' have higher loadings and are summated and named as 'Self Assessment'.

Thus twenty factors are reduced to five variables and are given different names by using factor analysis. Thus 'Self Development', 'Good Recognition', 'Proper Identification', 'Modern Life Style' and 'Self Assessment' are the factors influencing the social status of the palmyrah tappers.

Eigen Values of Social Status of Sample Respondents:-

Kaiser Meyer Olkin (KMO) measures of sampling adequacy and Bartlett's test of Sphericity to test the appropriateness of factor model is made and the result is shown below.

Table: 3 KMO and Bartlett's Test

	Values
KMO Measure of Sampling Adequacy	0.833
Bartlett's test of Sphericity Chi-square value	4592.257
Degrees of freedom	190
Significance	0.000

The KMO shows, a green signal for factor analysis, as KMO value is very high (0.833). Similarly, the Bartlett's test rejects the null hypothesis i.e., the variables are not related to as the approximate chi-square value is 4592.257 at 190 degrees of freedom which is significant at 1 per cent level of significance. Thus, factor analysis may be considered as an

appropriate technique. The following table shows, the result of Principal Component Analysis to find out the number of variables with an Eigen value more than 1. The factors, its Eigen value and the per cent of variance explained by the factor are illustrated in table 4.

Table: 4 Eigen Values of Social Status of Sample Respondents

Sl. No.	Factors	No. of Variables	Eigen Value	Percentage of Variance	Cum. Percentage of Variance
1.	Self development	5	6.538	32.690	32.690
2.	Good recognition	4	2.797	13.983	46.673
3.	Proper identification	7	2.161	10.805	57.478
4.	Modern life style	3	1.761	8.806	66.284
5.	Self assessment	2	1.458	7.486	73.770

* Kaiser-Meyer-Olkin measure of Sampling Adequacy: 0.833

* Bartlett's Test of Sphericity Chi-square : 4592.257

Degrees of freedom: 190

Significance: 0.000

The most important factor is 'Self Development', since its Eigen value is 6.538. The 'Self Development' factor explains, the variables considered for identifying the palmyrah tappers social status to the extent of 32.690 per cent. It is followed by the factors namely, 'Good Recognition' and 'Proper Identification', since its Eigen values are 2.797 and 2.161 respectively. The variables explained by these two factors are 13.983 and 10.805 per cent respectively. The last two factors narrated by the factor analysis are 'Modern Life Style' and 'Self Assessment', since its Eigen values are 1.761 and 1.458 respectively. The variance explained by these factors is 8.806 and 7.486 per cent respectively.

Kaiser-Meyer-Olkin measure of sampling adequacy also employed and the value is 0.833 and the Bartlett's test of Sphericity chi-square value is 4592.257. The calculated value is less than the table value at 190 degrees of freedom. Hence there is a relationship between the social status variables and the different age groups of palmyrah tappers.

FINDINGS

The study discloses 53.70 per cent belong to Tiruchendur taluk. In Thoothukudi district, the major portions of palmyrah tappers are concentrated in this taluk.

- Among the social status variables like membership in various associations, rapport

with officers, interest in religious activities, self image, involvement in social services, recognition in the society, departure from superstitious beliefs, self discipline and expenses on luxurious items are significant at 5 per cent levels

- The factor analysis technique is used to reduce the long list of variables that influence the palmyrah tappers and to make meaningful decisions. In this study, factor analysis is applied for the social status of the palmyrah tappers and the results are given one by one.
- In order to find the appropriateness of this analysis, Kaiser Meyer Olkin (KMO) and Bartlett's test of Sphericity is used. Self development, good recognition, proper identification, modern life style and self assessment are the factors influencing the social status of the palmyrah tappers.
- If there is a change in social status, the society also changes a lot and therefore the analysis is made, to find the prospects of the palmyrah tappers.

SUGGESTIONS

Based on the analysis and findings of the study, the following suggestions have been made for improvement of the palmyrah tappers. Based on the analysis and findings of the study, the following suggestions have been made for improvement of the palmyrah tappers.

- Government and voluntary organizations have to take necessary steps to develop the life of palmyrah tappers and use of palmyrah products.
- Government policies and programmes should be oriented towards human resource development which in turn includes education, healthcare, nutrition, and economic empowerment.
- Education of the children of the tapping community upto higher secondary level should be made compulsory so that they can be motivated for higher studies, by enabling them at least a few of them to leap into government or private sector employment. This will definitely enhance the socio-economic status of the family but also avoid their dependence on tapping as the only source of livelihood.

- The government should fix the minimum price for palm products and establish a support price for jaggery.
- The palmyrah tappers must be technically trained to increase the productivity by the training institutions.

CONCLUSIONS

Tapping is among the most dangerous occupations in the world. In India generally, palmyrah tappers live on the verge of extreme poverty. The problem is lack of initiative both from the government and the private growers and the non-existence of a proper marketing network. The challenge facing scientists, researchers, extension workers and farmers in the next millennium is to find appropriate ways of utilizing the earth's resources to feed the predicted doubling of the human population while at the same time improving the living standards of rural people. Directly, it provides employment to the toddy tappers, indirectly a significant section of people who lives in the rural segment gets livelihood through abundant source of palmyrah palm by marketing the products and products of the tree. And also it is a tree of eco-friendly and ultimately most economical one. Despite the various welfare measures taken by the government, majority of palmyrah tappers in Thoothukudi district live in utmost poverty. They are the outliers of mainstream development process.

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