The interregional comparison of Poverty and Deprivation among the fisher folk in Kerala: An Analysis

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Abstract: **Fishing is one of the oldest occupations that is closely related to the socio-economic development and it comes next to agriculture. It plays a major role in the sustainable livelihoods and poverty reduction in an economy. The basic requirement of economic growth of any country is the development of the primary sector. The major component in the primary sector comprises agricultural activities and allied sectors such as fisheries, forestry, and poultry, dairy and mining.**

Fish and fishing communities are inseparable from the main stream as they contribute much to the regular food habits of common man and economic activities of the people in the country. It has been undertaken as a powerful income and employment generator as it encouraged growth of several subsidiary industries. It is a source of foreign exchange too. This paper is an attempt to review the interregional comparison of poverty and deprivation among the active marine fisher folk of Kerala.

Keywords: **Poverty and Deprivation.**

1. INTRODUCTION

The role of fisheries sector in the world economy is imperative. Fisheries sector in India has a major role in the national economy as it contributes sustainable livelihood to around 14.49 million people and it accounts for about 5.4 per cent of the global fish production. Kerala being a maritime state has an exceptional place in the fisheries sector of India. Kerala has a fishermen population of 10.18 lakhs, of which 7.83 lakhs are marine fishermen and 2.34 lakhs are inland fishermen during 2017-2018. The fishing sector has contributed about 8.8 percent of the GSDP, which is of great significance to the Kerala economy. The marine fisheries resources from Kerala are becoming an important area for foreign exchange earnings and helps in the growth of Indian economy. Hence considerable relevance should be given to this sector. In spite of its importance to the economy, the socio-economic conditions of the marine fishing society in the coastal belt of Kerala describe an image of diversity. High incidence of poverty was a general feature among the fisher folk of Kerala. The developmental activities and the development of institutional setup carried out by the Government during different periods had uplifted the fisher folk from the incidence of poverty to a certain extent. The present paper contains an analysis on the variations that exist among the respondents perception in respect of various factors related to poverty, and deprivation of the active marine fisher folk, in the three geographical areas of Kerala, namely southern region, central region and northern region. In order to test the significance of difference is concerned, the method administered is the Analysis of Variance (ANOVA) – One Way Classification is used. Here also the finding is validated and cross checked through Post – Hoc test.

2. MATERIALS AND METHODS

The study is descriptive one based on primary data. The primary data were collected from the active marine fishermen who engaged in fishing of the marine coastal districts of Kerala through Interview survey method with structured questionnaire. A total sample of **690** active marine fishermen of Kerala is taken for the survey. Adopting the random

sampling method, 690 samples were collected. Subsequently, 360 samples are from Thiruvananthapuram,72 samples from Ernakulam and 258 samples are from Kozhikode. The study period chosen for this study has been March 2018-September 2019. The Statistical tools of analysis and suitable interpretation have been used. The usual percentages and indices are used wherever it is necessary.

OBJECTIVE OF THE STUDY

• To assess the perception of marine fisher folk in Kerala on poverty and deprivation for different groups within the demographic categories.

3. RESULTS AND DISSCUSSION

This area contains an analysis on the variations that exist among the respondents perception in respect of various factors related to poverty, and deprivation of the active marine fisher folk, in the three geographical areas of Kerala, namely southern region, central region and northern region. With this end in view, the data collected from the sample respondents of 690 active marine fisher folk in Kerala from the three zones, one district is selected from each zone has been analyzed and its relevance were tested statistically using the computer software package i.e. Statistical package for social science version 21.

For testing the significance of difference between the opinion score in respect of poverty, and deprivation as opined by different groups such as Region, Age, Academic Qualification and Experience.

Table 1: Demographic Profile of the respondent

Characteristics	Measuring Variables	Frequency	Mean	Std.Deviation
Region	South	360	4.05	.430
	Central	72	3.26	.058
	North	258	2.51	.528
	Total	**690**	**3.39**	**.849**
Age Groups	<30	107	3.99	.589
	30-50	488	3.16	.784
	>50	95	3.93	.865
	Total	**690**	**3.39**	**.849**
Educational Qualification	Primary	549	3.53	.792
	Secondary	106	3.00	.772
	Collegiate	35	2.51	1.044
	Total	**690**	**3.39**	**.849**
Years of Experience	<5	71	3.88	.848
	5 - 10	196	3.77	.708
	>10	423	3.14	.810
	Total	**690**	**3.39**	**.849**

Source: Primary data

Testing the significance of Difference

Testing the significance of difference being one of the major areas of the study, two main hypotheses were put forth for analysing the relationship of the variables of poverty and deprivation. The nature of variability of behavioral pattern of different categories of respondents drawn from the active marine fisher folk in Kerala were tested statistically using appropriate statistical tools and inferences have been made accordingly. Following are the hypothesis:

$H0_1$: There is no significant difference in the average perception on poverty for different groups within the demographic categories.

The perception on poverty prevailing among the selected active marine fisher folk in Kerala has been subjected to statistical tests as to whether there is any significant difference in the opinion with regard to the factors of poverty as opined by the respondents from the three zones. When the test is conducted if it is found that the computed value of test statistics falls in rejection region, i.e., the mean value of these three regions are not equal, the null hypothesis will be rejected. The summary statistics of different regions is given in Table: 2

Table 2: Summary of One Way ANOVA test statistics based on the average perception on Poverty for different groups within the demographic categories

		Sum of Squares	Df	Mean Square	F	Sig.
Region	Between Groups	358.658	2	179.329	891.232	.000
	Within Groups	138.234	687	.201		
	Total	**496.892**	**689**			
Age Groups	Between Groups	90.825	2	45.412	76.830	.000
	Within Groups	406.068	687	.591		
	Total	**496.892**	**689**			
Academic Qualification	Between Groups	53.478	2	26.739	41.428	.000
	Within Groups	443.414	687	.646		
	Total	**496.892**	**689**			
Experience	Between Groups	71.773	2	35.887	57.993	.000
	Within Groups	425.119	687	.619		
	Total	**496.892**	**689**			

Source: Primary Data

The ANOVA table yielded a p-value < 0.001, which indicates that there is significant difference between different regions, age groups, academic qualification and experience in respect of their perception on poverty.

Post Hoc Test

For the purpose of having multiple comparisons, Post Hoc Test was also undertaken. Since there are three groups, a total of 6 pairs will be possible in which there will be mirror images. The results are shown in the Table 3.

Table 3: Multiple Comparisons for Poverty within the demographic categories

(I) Region	(J) Region	Mean Difference (I-J)	Std. Error	Sig.
South	Central	.790[*]	.058	.000
	North	1.542[*]	.037	.000
Central	South	-.790[*]	.058	.000
	North	.752[*]	.060	.000
North	South	-1.542[*]	.037	.000
	Central	-.752[*]	.060	.000
(I) Age	(J) Age	Mean Difference (I-J)	Std. Error	Sig.
<30	30-50	.825[*]	.082	.000
	>50	.060	.108	.846
30-50	<30	-.825[*]	.082	.000

	>50	-.765*	.086	.000
>50	<30	-.060	.108	.846
	30-50	.765*	.086	.000
(I) Edu	(J) Edu	Mean Difference (I-J)	Std. Error	Sig.
Primary level	Secondary level	.525*	.085	.000
	Collegiate level	1.020*	.140	.000
Secondary level	Primary level	-.525*	.085	.000
	Collegiate level	.495*	.157	.005
Collegiate level	Primary level	-1.020*	.140	.000
	Secondary level	-.495*	.157	.005
(I) Experience	(J) Experience	Mean Difference (I-J)	Std. Error	Sig.
<5 Years	5 - 10 Years	.111	.109	.564
	>10 Years	.741*	.101	.000
5 - 10 Years	<5 Years	-.111	.109	.564
	>10 Years	.630*	.068	.000
>10 Years	<5 Years	-.741*	.101	.000
	5 - 10 Years	-.630*	.068	.000

*The mean difference is significant at the 0.05 level.

Tukey Post Hoc Test revealed that the perception on poverty is statistically significantly higher in the southern region compared to the central region and northern region. The perception on poverty is higher in the case of central region as compared to northern region. This means that the average perception on poverty by the respondents among the different regions is different. The perception on poverty is statistically significantly higher for the Below 30 age group compared to 30-50 age groups. The perception of poverty is statistically significantly higher for Above 50 age group compared to 30-50 age groups. But there is no statistically significant difference between the age group Below 30 and above 50.In the case of perception on poverty is statistically significantly higher for the primary education group compared to the secondary education group and the collegiate education group. And the perception on poverty was statistically significantly higher for the secondary education group as compared to the collegiate education group. Tukey Post Hoc Test revealed that the perception on poverty is statistically significantly higher for below five years experienced group compared to above 10 years experienced group Again the degree of poverty was statistically significantly higher for 5-10 years experienced group as compared to above 10 years experienced group .But there is no statistically significant difference between below 5 years experienced group and 5-10 years experienced group.

Hence the hypothesis $H0_{1:}$ There is no significant difference in the average perception on poverty for different groups within the demographic categories stands rejected. This means that the average perception on poverty by the respondents among the different group is not same.

$H0_2$: There is no significant difference in the average perception on deprivation for different groups within the demographic categories.

The perception on deprivation prevailing among the selected active marine fisher folk in Kerala has been subjected to statistical tests as to whether there is any significant difference in the opinion with regard to the factors of deprivation as opined by the respondents from the three zones. The summary statistics of different groups within the demographic categories are given in Table: 4

Table 4: Summary of One Way ANOVA test statistics based on the average perception on Deprivation for different groups within the demographic categories

		Sum of Squares	Df	Mean Square	F	Sig.
Region	Between Groups	202.169	2	101.084	254.789	.000
	Within Groups	272.558	687	.397		
	Total	574.727	689			
Age Groups	Between Groups	6.987	2	3.493	5.131	.006
	Within Groups	467.740	687	.681		
	Total	474.727	689			
Academic Qualification	Between Groups	1.967	2	.983	1.429	.240
	Within Groups	472.760	687	.688		
	Total	474.727	689			
Experience	Between Groups	9.103	2	4.552	6.716	.001
	Within Groups	465.623	687	.678		
	Total	474.727	689			

Source: Primary Data

The ANOVA table yielded a p-value < 0.001, which indicates that there is significant difference between different regions, age groups and experience in respect of their perception on deprivation. But in the case of academic qualification the null hypothesis is failed to reject and there is no significant difference between different academic qualification groups in respect of their perception on deprivation.

Post Hoc Test

The Post Hoc Test presents the test of comparison between all possible pairs. Since there are three groups, a total of six pairs will be possible in which there will be mirror images. The result are shown in the Table: 5

Table 5: Multiple Comparisons for deprivation within the demographic categories

(I) Region	(J) Region	Mean Difference (I-J)	Std. Error	Sig.
South	Central	.339[*]	.081	.000
	North	1.156[*]	.051	.000
Central	South	-.339[*]	.081	.000
	North	.817[*]	.084	.000
North	South	-1.156[*]	.051	.000
	Central	-.817[*]	.084	.000
(I) Age	**(J) Age**	**Mean Difference (I-J)**	**Std. Error**	**Sig.**
<30	30-50	.233[*]	.088	.023
	>50	.025	.116	.974
30-50	<30	-.233[*]	.088	.023
	>50	-.207	.093	.065
>50	<30	-.025	.116	.974
	30-50	.207	.093	.065
(I) Experience	**(J) Experience**	**Mean Difference (I-J)**	**Std. Error**	**Sig.**
<5 Years	5 - 10 Years	.123	.114	.529
	>10 Years	.316[*]	.106	.008
5 - 10 Years	<5 Years	-.123	.114	.529
	>10 Years	.193[*]	.071	.019
>10 Years	<5 Years	-.316[*]	.106	.008
	5 - 10 Years	-.193[*]	.071	.019

*The mean difference is significant at the 0.05 level

Source: Primary Data

Tukey Post Hoc Test revealed that the perception on deprivation is statistically significantly higher in the southern region (4.16 ± .516, P<0.001) compared to the central region (3.82 ± .509, P<0.001) and northern region (3.01 ±.785, P<0.001).Again the degree of deprivation was statistically significantly higher for the central region as compared to the Northern region. There is significant difference in the average perception on deprivation for different regions within the demographic categories. The degree of deprivation was statistically significantly higher for the Below 30 age group (3.86± .566, P<0.05) compared to the Above 50 age group (3.84 ± .704, P<0.05) and 30-50 age group (3.63 ±.892, P<0.05).But there is no statistically significant difference between other groups. Tukey Post Hoc Test revealed that the perception on deprivation is statistically significantly higher for below 5 Years experienced group (3.92 ±.699, P<0.001compared to 5-10 years experienced groups (3.80± .597, P<.001) and the above 10 years experienced group (3.61 ±.926, P<.001). There is significant difference in the average perception on deprivation for different academic qualification groups within the categories.

4. CONCLUSION

The fishing sector has been contributing greatly to the economy of Kerala. But the socio-economic status of Kerala's marine fishermen is not worth commenting and the mainstream society looks with aversion. The contribution they make to the economic output of the state and nutrition supplement of the people of Kerala is remarkable. High incidence of poverty and deprivation was a general feature among the fisher folk of Kerala. It is a fact that the continuous efforts and developmental activities and the development of institutional setup carried out by Government during different periods had uplifted the fisher folk from the incidence of poverty to a certain extent. By analysing the demographic categories of fishermen like region, age, academic qualification and experience the incidence of poverty is moderate among these sections, they are still caught under the vicious circle of deprivation.Though several developmental projects were initiated by the Government from time to time since the introduction of the five year plan and till date, the overall development of the fishing communities has not yet been attained.

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