

# Effects of socio-economic status of households on education, health and income

Dr. Ibrahim Cholakkal

Assistant Professor, PG and Research Department of Economics, E.M.E.A. College of Arts and Science, Kondotti, Malappuram District, Kerala (India)

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### \*Corresponding Author

Email: [ibrahimcholakkal\[at\]gmail.com](mailto:ibrahimcholakkal[at]gmail.com)

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## ABSTRACT

Socio-economic status is an indicator of the quality of life attributes of people of a region. This study tries to examine the relation between the socio-economic status of households and different traits of health, education and income of households. The study concentrated *Malappuram* a district of high social development with low economic development. The study is descriptive and analytical one based on primary data. Three indices namely Education Index, Health Index and Per Capita Monthly Income Index were constructed for the purpose of analysis. The statistical methods-ANOVA and Chi-square were used to analyze the data. The ANOVA test says that, in the case of socio-economic index, the variation between groups when households are classified based on per capita monthly income and education level are highly significant. The chi square result also says that education index, health index and per capita monthly income index are significantly associated with socio-economic status of households.

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## 1. Introduction

Socio-economic status can encompass quality of life attributes as well as the opportunities and privileges afforded to people within society. Socio-economic circumstances have an influence on our physical and mental health and also on education and income. The evidences can be seen in the way that the higher socio-economic status normally leads to lower the prevalence or incidence of health problems. Some empirical evidences are: Socio-economic differentials in mortality have been found in all countries that have been studied; the higher mortality observed among those in low socio-economic categories (Pekka Martikainen-1995). Physical inactivity, the number of 'unhealthy' behaviours, and the likelihood of reporting 3-4 'unhealthy' behaviours were inversely related to income and occupational prestige (Joceline Pomerleau et.al.-1997). socio-economic groups differ sharply in the amount of education which they have received. Not unexpectedly, the greatest proportion of those who had received university education was found in the higher professionals (Geary et.al. 1979). The Body Mass Index (BMI) of more educated people is less than the less educated people. It means that educated people are more concern about their health and physic (Zahid Asghar et.al., 2009). Since the improved socio-economic status is the net result of better income statuses, which again leads to improve education and health aspects which can be met with income. Kerala- the southernmost state of Indian Union is characterized by high socio-economic status in general and Malappuram district in particular. This study tries to analyse the effects of socio-economic status of households on education, health and income of household members.

## 2. The Study Area

For the study, two municipalities and two Panchayaths of Malappuram district in Kerala were purposively selected. In order to compare the education and health status of people of

different socio-economic situations, the samples were selected from coastal and non-coastal areas. Angadippuram Panchayath and Perinthalmanna Municipality were selected as non-coastal sample areas where as Tanur Panchayath and Ponani Municipality were selected as coastal sample areas.

From each panchayath and Municipality 5 wards were randomly selected. From each ward, 20 households were randomly surveyed. Total sample consists of 400 households of which 200 belong to coastal/rural areas and 200 belong to non-coastal/urban areas.

## 3. Objectives

1. To analyse the variation in socio-economic index between different income and education groups
2. To analyse the relation of socio-economic index with education, health and income indices.

## 4. Hypotheses

1. There is no significant association between education index and socio economic index
2. There is no significant association between health index and socio economic index
3. There is no association between per capita monthly income and socio-economic index.

## 5. Methodology

The study is descriptive and analytical in nature. For the analysis of objectives, a socio-economic index was constructed based on the variables; per capita monthly income, average year of education of households, size of households and method of disposal of wastewater and a Health Index, Education Index and Monthly Income Index were also constructed. The construction of indices is according to the general formula applied for the construction of Human

Development Index by the United Nations Development Programme (UNDP). The statistical tools-Chi square and ANOVA were applied to examine the significance of association and variations respectively of variables.

## 6. Analysis

**Table 1: Distribution of Households based on Socio Economic Status**

Level of Socio economic Status	Non coastal		Coastal		Total	
	Number	Percent	Number	Percent	Number	Percent
Low	73	36.5	73	36.5	146	36.5
Medium	75	37.5	72	36	147	36.75
High	52	26	55	27.5	107	26.75
Total	200	100	200	100	400	100

Source: Sample Survey 2016

### 6.1 Occupation versus Socio Economic Status

The distribution of households on occupation of head of households and socio economic status reveal that, 80 percent government employed head of households have high socio

The distribution of sample households based on socio economic status (table 1) shows that, 36.5 percent have low-level socio economic status, 36.75 percent have medium and 26.75 percent households have a high-level socio economic status. The coastal and non-coastal classification on socio economic status of households shows that there is no significant variation in it.

economic status (table 2). It is only 17 percent among the head of households, who are coolies.

**Table 2: Distribution of Households by Occupation of Head of Households and Socio Economic Status**

Occupation of Head of household	Socio economic status						Total	
	Low		Medium		High		No.	Percent
	Number	Percent	Number	Percent	Number	Percent		
Self employed	17	30	28	49	12	21	57	14.25
Business	4	10.25	15	38.46	20	51.28	39	9.75
Govt. employees	0	0	3	20	12	80	15	3.75
Coolie	48	44	42	38.5	19	17.43	109	27.25
NRIs	27	39.7	22	32.35	19	27.94	68	17
Housewife and unemployed	50	44.64	37	33	25	22.32	112	28
Total	146	--	147	--	107	--	400	100

Source; Sample survey 2016

### 6.2 Income versus Socio Economic Status

Table 3 illustrates the distribution of households based on socio economic index and level of per capita monthly income.

**Table. 3: Distribution of Households on Socio Economic Status and Per capita Monthly Income**

Level of Per Capita Monthly Income	Level of Socio Economic Status						Total	
	Low		Medium		High		Number	Percent
	No.	Percent	No.	Percent	No.	Percent		
Low	132	65	68	33.5	3	1.5	203	50.75
Medium	14	13	66	61	28	26	108	27
High	0	0	13	14.6	76	85.4	89	22.25
Total	146	36.5	147	36.75	107	25.75	400	100

Source: Sample survey 2016

In the sample area, 50.75 percent (203 households) have low-level per capita income. Out of them, 65 percent (132) have low-level socio economic status, 33.5 percent (68) have Medium socio economic status and 1.5 percent (3) has high socio economic status. Out of total sample households, 108 (27%) have medium level per capita monthly income. Out of them, 14 (13%) have low-level socio economics status, 66(61%) come under the medium level in socio economic status and 28(26%) enjoys high social economic status. And among 89 (22.25%) households with high level of per capita monthly income, no households are in low socio-economic status group while 13 (14.6%) and 76(85.4%) are in medium and high level socio economic status respectively. This

illustration shows that the socio economic status is high where the per capita monthly income is high and vice versa.

### 6.3 Size of Households versus Socio Economic Status

The distribution of households according to socio economic status and size of households (table 4) confirms that among small size family, 33.5 percent have high socio-economic status. It is only 22.56 percent among medium size family and 0 percent among large size family. It proves that socio economic status and size of family is inversely related.

**Table: 4: Distribution of households on size of households and socio economic status**

Size of Household	Socio Economic Status						Total	Percent
	Low	Percent	Medium	Percent	High	Percent		
Small	56	26.8	83	39.7	70	33.5	209	52.25
Medium	70	42.68	57	34.76	37	22.56	164	41
Large	20	74	7	26	0	0	27	6.75
All types	146	36.5	147	36.75	107	26.75	400	100

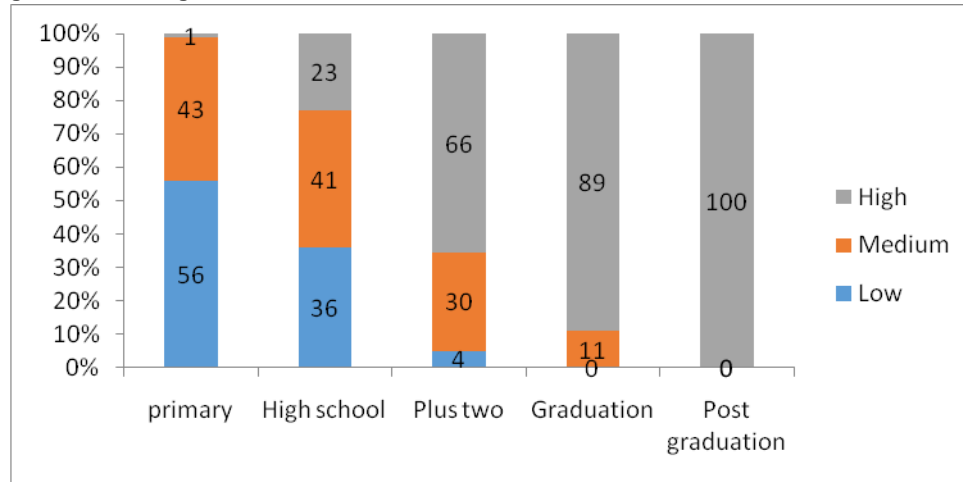
Source: Sample survey 2016

**6.4 Education versus Socio Economic Status of Households**

Education is an important criterion of socio economic status of households. Therefore, it will be positively associated with the socio economic status. The socio economic status among the households with different education level exhibits that 66 percent of plus two level educated households, 89

percent of graduate level educated households and 100 percent post graduate level educated households have high level of socio economic status in the study area (Fig.1). At the same time, only 1.4 percent of primary level educated household's and 23 percent of high school level educated households have high socio economic status.

**Figure.1: Percentage Distribution of Households on Socio-economic Status and Level of Education**



Source: Constructed from sample survey results 2016

The figure 1 exhibits that as level of education of households get better the percentage of households with high socio economic status is augmented.

**6.5 Physical Exercise versus Socio Economic Status of Households**

In the study area, only 7 percent were reported that they have the habit of doing physical exercise regularly. Among low socio economic status households, 91 percent are not doing

physical exercise and it is 39 percent among high socio economic status households. Among high socio economic status households, 18 percent have the habit of doing physical exercise regularly while it is only 3 percent among low socio economic status households. This result shows that the relation between socio economic status and the habit of doing physical exercise of households is not so significant (Table.5).

**Table 5: Distribution of Households by Socio Economic Status and the habit of doing Physical Exercise**

Habit of Doing Physical Exercise	Socio Economic Status			Total
	Low	Medium	High	
Never	133 (91%)	120 (82%)	42 (39%)	295
Sometimes	9 (6%)	22 (15%)	46 (43%)	77
Regularly	4 (3%)	5 (3%)	19 (18%)	28
All Types	146 (100%)	147 (100%)	107 (100%)	400

Source: Sample Survey 2016

**6.6 Watching Health Programmes versus Socio Economic Status of Households**

The distribution of households based on socio economic status and observation of health programmes by household members says that only among 14 percent households, all members of them have the habit of watching health programmes and 38 percent households reported that none of their members have the habit of watching health programmes. Among the households whose all members are the regular viewers of health programmes, 3.6 percent, 21.8 percent and 75 percent have low, medium and high socio economics status respectively. It is clearly exposed that the observation of health programmes and the socio-economic status of households are directly related.

**6.7 Disposal of Wastewater versus Socio Economic Status of Households**

The distribution of households on socio economic status and the method of disposal of wastewater shows that out of the total households who stream wastewater to the sanitary canal, 12 percent are low socio economic status households, 41 percent are medium socio economic status and the remaining 47 percent are high socio economic status households (table. 7). Among high socio economic status households, 65(61%) households flow their wastewater to the sanitary canal. The result shows that as the socio-economic status improves, households prefer hygienic method for the disposal of wastewater.

**Table 7: Distribution of Households based on Socio Economic Status and method of Disposal of Wastewater**

Disposal of Wastewater	Socio Economic Status of Households			Total
	Low	Medium	High	
Draw to Open Space	98	34	8	140
Draw to Kitchen Garden	31	57	34	122
Draw to Sanitary Canal	17	56	65	138
All types	146	147	107	400

Source: Sample survey 2016

**6.8 Variation in Socio-economic Index values between Different Income and Education Groups**

The variation in socio-economic index value among different per capita monthly income groups and education

groups were examined by applying the Analysis of Variance (ANOVA). The result shows in tables 8 and 9.

**Table 8: ANOVA table showing the Significance of Socio-economic Index according to Per capita Income Level of Households**

Index	Source of variation	Sum of squares	D.f	Mean squares	F	Significance
Socio-Economic index	Between groups	12.772	2	6.386 0.018	356.612	0.000
	With in groups	7.109	397			
	Total	19.881	399			

Source: Developed from sample data 2016

From the ANOVA table, it is clear that in the case of socio-economic index, the variation between groups when households are classified on the basis of per capita monthly income are highly significant since the level of significance is less than 0.05.

**Table 9: ANOVA table of Socio-economic Index versus Education Level of Households**

Index	Source of variation	Sum of squares	D.f	Mean squares	F	Significance
Socio-Economic index	Between groups	10.065	4	2.516 0.025	101.264	0.000
	With in groups	9.816	395			
	Total	19.881	399			

Source: Developed from sample data 2016

The ANOVA table shows that, in the case of socio-economic index, the variation between groups when households are classified on the basis of education level are highly significant as the level of significance is less than 0.05.

**6.9 Relation of Socio-economic Index with Education, Health and Income Indices**

The socio-economic index is constructed by considering the aspects of education, income and health. The chi square was applied to test whether the socio economic index is significantly related with education, health and income indices.

**Table 10: Distribution of Households on Socio-economic Index and Education Index**

Education Index	Socio-economic Index			Total
	Low	Medium	High	
Low	102	71	2	175
Medium	44	69	53	166
High	0	7	52	59
Total	146	147	107	400

Source: Computed from sample survey 2016

$H_0$  = There is no significant association between education index and socio economic index  
 Chi square value is 188.192  
 Degree of freedom is 4  
 5% level of significance is 0.00  
 Since the value of level of significance is less than 0.05,  $H_0$  is rejected.

**Table 11: Socio-economic Index and Health Index of Households**

Health Index	Socio-economic Index			Total
	Low	Medium	High	
Low	54	30	2	86
Medium	69	79	21	169
High	23	38	84	145
Total	146	174	107	400

Source: Computed from sample survey 2016

$H_0$  = There is no significant association between health index and socio economic index  
 Chi square value is 127.979  
 Degree of freedom is 4  
 5% level of significance is 0.00  
 Since the value of level of significance is less than 0.05,  $H_0$  is rejected and there is significant association between health index and socio-economic index.

**Table 12: Distribution of Households on the basis of Socio-economic Index and Per capita Monthly Income Index**

Per capita Monthly Income Index	Socio-economic Status Index			Total
	Low	Medium	High	
Low	132	68	3	203
Medium	14	66	28	108
High	0	13	76	89
Total	146	147	107	400

Source: Computed from sample survey 2016

Our null hypothesis is that there is no association between per capita monthly income and socio-economic index.  
 Chi square value is 286.945  
 Degree of freedom is 4  
 5% level of significance is 0.00

The value of level of significance is less than 0.05 and we rejected  $H_0$ . There is significant association between per capita monthly income and socio-economic index.

**7. Conclusion**

The study concludes that there is no significant variation in socio-economic status between coastal and non-coastal regions. Out of the total government employees, 80 percent have high socio-economic status and 85 percent of high-

income group enjoys high socio-economic status. 100 percent of the post-graduated households enjoy high socio-economic status. The extent of doing physical exercise, the observation of health programmes in medias and use of hygienic methods for the disposal of wastewater are directly related with the socio-economic status of households. The ANOVA result says that, in the case of socio-economic index, the variation between groups when households are classified based on per capita monthly income and education level are highly significant. The chi square result also says that education index, health index and per capita income index are significantly associated with socio-economic status of households.

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