Education and Health Status of Households in Malappuram District of Kerala-A Community Wise Analysis

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Abstract: The community has a key role in providing better education and health to their households. This study is a descriptive and analytical one and is based on the primary data collected from 400 households with structured questionnaire. This research problem of this study is does community influences the education and health status of households. The objectives of this study are to test the status of education and health in a community level. The objectives are analyzed with the statistical tools such as cross tabulation, multiple bar diagrams, descriptive statistics and chi square. The education index and most of the health attributes and even Aggregate health index is significantly related with community. Muslim community has low mean health index. The mean health index is high among Hindu community.

Keywords: Education, Health, Community, Education Index, Health Index, Vaccination.

I. INTRODUCTION

Community participation in education is allied with school enhancement and elevated academic performance. When schools, parents, families and communities work together to hold up learning, students attend school more regularly, stay in school longer, tend to earn higher grades, and enroll in higher-level educational programmes. Researchers cite parent-family-community involvement as a key to addressing the school dropout crisis (Belfield 2007) and note that strong school-family-community partnerships foster higher educational aspirations and more motivated students (Barton et.al. 2003)

The evidence of empirical research on community and religious aspects in health and illness could be seen in the records of past century. Many recent books and literature reviews have also focused attention on the large body of empirical research findings that have accumulated over the past several decades. These include findings connecting religious involvement with a diverse array of physical and mental health outcomes (Ellison CG 1994, Levin JS 1994). Broadly, these studies include investigations of various indicators of physical and mental health status (Bergin AE 1983, Gartner JD et.al, 1991), morbidity and mortality rates (Jarvis GK, Northcott HC 1987, Troyer H 1998).

Education and health of youth remain fundamental to their human capital development. In addition to age, gender and region of residence of youth, the socio-economic status of households, education of parents, household structure and community are important determinants of youth enrolment to higher education (Valerie L. Durrant 1998). Generally, involvement of community in educational institution is a popular topic in the realm of education. It is also highlights that school-community partnerships positively influence the overall health, attitude and behaviour of students.

The role community participation is keen in the enhancement of education and health of households. Community leaders in particular and community in general may influence for and against the education and health improvement. In the olden days, the backwardness in education and health is primarily due to the counterfeit involvement of community and community leaders in the forged gloominess of beliefs. The Measles-Rubella Vaccination campaign 2017 Kerala, became a splendid success due to the declarations and campaigning with community participation. In Pathanamthitta, Alapuzha and Idukku districts, more than 96 percent of the target group was vaccinated. At the same time in Malappuram district; only 56.44 percent take this vaccination (Mathrubhumi daily 19 November 2017). It is mainly due to the awful influence of communities.

The area of the present study is a cluster of different communities. Therefore, it is relevant to examine the nature and differences of health and education status of households among different communities.

Statement of the research problem

‘Malappuram’ the study area is a Muslim community dominated district of Kerala. Here, a general observation is that the health problems are highly reported from the Muslim community. The morbidity rate of this district is also high since this rate is continues to be high in Kerala (Krishnaswami-2004). Since health is a net result of education, the backwardness in health is a clear indicator of backwardness of education also. Therefore, research problem is that, Does community influences the education and health status of households?
Objectives of the study
1. To examine the education status of different communities
2. To analyze the education index of different communities
3. To examine the status of health attributes of different communities
4. To analyze the health index of different communities

Hypotheses
1. No significant difference in the attributes of education among different Communities
2. No significant difference in education index among different communities
3. No significant difference in health attributes among different communities
4. No significant difference in health index among different communities

Source of data
Secondary Information
Some secondary information were collected from Economic Reviews of various years of the Kerala State Planning Board, Sample Registration System Reports, Human Development Reports, Reproductive and Child Health Reports, National Rural Health Mission (NRHM) Reports and Surveys of Ministry of Human Resource Development (MHRD). Research dissertations, books, journals, periodicals and electronic database such as INFLIBNET and Google Scholar.

Primary data and Sample Design
Primary data were collected from 400 households with structured schedule from Malappuram, which is one of the low socially backward districts of Kerala (HDR, Kerala 2005). For the study, 2 municipalities and 2 panchayaths were purposively selected. To represent urban as well as non-coastal households, Perinthalmanna municipality and Angadippuram grama panchayath were selected. To represent rural as well as coastal households, Ponnani municipality and Tanur panchayath were selected. From each Panchayath and municipality 5 wards were randomly selected. From each randomly selected ward, 20 households were randomly surveyed. The total sample consists of 400 households. The primary data used for the study are cross section in nature, which is the data on one or more variables collected at the same point of time.

II. METHODOLOGY
The study is descriptive and analytical in nature. For the analysis of the objectives, an education index and a health index were constructed. The education index is based on the average year of education of the household members aged 23 and above. The Health Index is based on the nine health indices constructed up on different health attributes. The construction of these indices is according to the general formula applied for the construction of Human Development Index by the United Nations Development Programme (UNDP). The index standardization formula applied is Xi(actual) – Xi(Min)/Xi(Max) – Xi(Min). The descriptive statistics, multiple bar diagram and Chi Square were used to analyze the variation in education and health status of different communities.

III. COMMUNITY WISE CLASSIFICATION OF SAMPLE POPULATION
The total population in the sample households was 1855. The 26 Christian households consist of 76 persons with 36 males and 40 females, 174 Hindu households consist of 792 persons with 390 males and 402 females, and 200 Muslim households consist of 987 persons with 488 males and 499 females. The sex ratios of Christian, Hindu and Muslim communities were 1111, 1031 and 1023 respectively (table.1). In considering, the size of family of different community, Muslim community has the highest family size with 4.93 persons per household.

<table>
<thead>
<tr>
<th>Table1: Community wise Classification of Sample Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community</td>
</tr>
<tr>
<td>-----------------</td>
</tr>
<tr>
<td>Christian houses</td>
</tr>
<tr>
<td>Hindu houses</td>
</tr>
<tr>
<td>Muslim houses</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>Source: sample survey 2014</td>
</tr>
</tbody>
</table>

Education Status of Households
In the sample population, among Christian community, 42 percent households have primary level education. It is 28 percent and 43.5 percent among Hindu and Muslim communities respectively (table 2).
### Table 2: Distribution of Households on Community and Education Status (Cross tabulation)

<table>
<thead>
<tr>
<th>Community</th>
<th>Level of Education of Households</th>
<th>Total number of households</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Primary</td>
<td>High School</td>
</tr>
<tr>
<td>Christian households</td>
<td>11 (42%)</td>
<td>12 (46%)</td>
</tr>
<tr>
<td>Hindu households</td>
<td>49 (28%)</td>
<td>83 (48%)</td>
</tr>
<tr>
<td>Muslim households</td>
<td>87 (43.5%)</td>
<td>75 (37.5%)</td>
</tr>
<tr>
<td>Total</td>
<td>147</td>
<td>170</td>
</tr>
</tbody>
</table>

Source: sample survey 2014

Out of total households of Christian community, 4 percent have graduate level education while it is 9 percent and 9.5 percent of Hindu and Muslim households respectively.

The cross tabulation data shows that Hindu community is first in the level of education. Christian and Muslim communities are in second and third places respectively since, the percentage of households with primary level education is less among Hindu community followed by Christian and Muslim communities. The chi square value shows that there is significant variation among the communities in level of education (table 3)

**Place of Education**

Among Christian community, there are 7.7 percent households from which at least one member is educated outside Kerala, 5 percent households among Hindu community and 9.5 percent among Muslim community has at least one member of the household educated outside Kerala. Only from Muslim community, there are two households with at least one member of them was educated outside India.

The chi square value shows that there is no significant variation in place of education of households among different communities (table 3)

**Newspaper Reading Habit**

Among 61.5 percent households of Christian community, all members of the households regularly read newspaper. Among Hindu community, it is 52 percent and among Muslim community, it is 50.5 percent. Among 15 percent of Christian community households, 7.5 percent of Hindu community and 17 percent of Muslim community households no members have the habit of reading newspaper.

The chi square value shows that there is significant difference in newspaper reading among different communities (table 3)

### Table 3: Attributes of Education versus Community (Chi square results)

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Attributes</th>
<th>Hypotheses</th>
<th>Chi Square</th>
<th>d.f.</th>
<th>Sig. Two sided</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Level of education versus Community</td>
<td>H₀: No significant difference in level of education among communities</td>
<td>18.280</td>
<td>8</td>
<td>0.019</td>
<td>Rejected H₀</td>
</tr>
<tr>
<td>2.</td>
<td>Place of education versus Community</td>
<td>H₀: No significant difference in place of education among Community</td>
<td>4.612</td>
<td>4</td>
<td>0.329</td>
<td>Accepted H₀</td>
</tr>
<tr>
<td>3.</td>
<td>Newspaper reading versus Community</td>
<td>H₀: No significant difference in newspaper reading habit among communities</td>
<td>10.068</td>
<td>4</td>
<td>0.039</td>
<td>Rejected H₀</td>
</tr>
</tbody>
</table>

Source: Computed from survey data 2014.

**Education Index**

To observe the status of education index of different communities, the education index values were classified as low, medium and high.

Irrespective of community, out of total households, 44 percent have low education index, 41.5 percent have medium level education index and only 14.5 percent have high education index. The community wise classification shows that 42 percent of Christian community households, 34 percent of Hindu community households and 52.5 percent of Muslim community households have low education index. Among Christian community, 46 percent households have medium level education index. Among Hindu and Muslim communities, it is 49 percent and 34 percent respectively. Only 12 percent of Christian community households, 16.6 percent of Hindu community households and 13.5 percent of Muslim community households have high education index.

The association between community and level of education index is analysed by applying chi square. Our null hypothesis is that no significant differences in education index among communities.

Chi square value = 13.672
Degree of freedom = 4
5 percent significance value = 0.008
As the Significance value is less than 0.05, we rejected the null hypothesis. Thus, there is significant difference in education index among communities.

Consumption Behavior of Households

Among the new generation, there is a tendency to stay away from the traditional consumption pattern and behaviour. They are looking certain modern food habits, which includes junk foods and drinks. The excessive consumption of certain commodities may make negative impact on health of people. To compare the consumption behaviour of communities, the consumption of fast food, meat and green leafy vegetables were considered.

Fast Food Consumption

In the sample households, 26 percent have fast food consumption behavior irrespective of community. Among Christian community 31 percent households have fast food consumption behavior. It is 21 percent among Hindu community and 31 percent among Muslim community.

Meat Consumption

In the sample population, the regular meat consumption behavior is more among the Muslim community. Out of total Muslim households, 9.5 percent regularly consumes meat and the remaining 89.5 percent consumes it occasionally. Among Christian community, 100 percent households consumes it occasionally. Among Hindu community one percent households consumes it regularly while 94 percent consumes it occasionally.

Consumption of Green Leafy Vegetables

In the study area, Hindu community is first in the regular consumption of green leafy vegetables followed by Christian and Muslim communities. Among Christian households, 39 percent are regularly consuming green leafy vegetables. It is 41 percent among Hindu community and only 29.5 percent among Muslim community (fig. 1).

Figure 1: Consumption of Green Leafy Vegetables versus Communities

Substance Abuse versus Community

The ratio of substance abuse is one of the important factors that influence the health of people. To examine the ratio of substance abuse among different communities, the smoking habit and liquor consumption behavior of household members were selected.

Smoking habit of people

Among 49 percent households, at least one member of them has smoking habit. It is 35 percent, 52 percent and 49 percent among Christian, Hindu and Muslim communities respectively (fig. 2).

Liquor Consumption Status

Among total sample population, 30 percent households are reported at least one member of them have the liquor consumption behavior. Among Christian households, 35 percent households reported that at least one member of them has liquor consumption behavior. It is 49 percent among Hindu community and only 13 percent among Muslim community (fig. 2).
The difference in smoking habits among communities was examined by chi square. Our null hypothesis is that there is no significant difference in smoking habits among different communities. The chi square value of smoking habit versus community is 6.68. Degree of freedom is 8 and the value of significance is 0.572. The value of level of significance is more than 0.05 and the H₀ is accepted. Therefore, there is no significant difference in smoking habit among different communities.

The differences in liquor consumption among different communities were also examined by chi square. The null hypothesis is that there is no significant difference in liquor consumption behaviour among different communities. The chi square value of liquor consumption versus community is 58.763. Degree of freedom is 2 and the value of level of significance is 0.00. The null hypothesis is rejected. Therefore, there is significant difference in liquor consumption among different communities.

Type of Medical Treatment

Out of total households, 350 (87.5%) selected Allopathic medical treatment. Among Christian community, 85 percent households chose Allopathic medical treatment, 91 percent of Hindu households and 85 percent of Muslim households went for allopathic medical treatment (table 4.)

Table 4: Distribution of Households on Type of Medical Treatment versus Communities (Cross-tabulation)

<table>
<thead>
<tr>
<th>Type</th>
<th>Christian households</th>
<th>Hindu households</th>
<th>Muslim households</th>
<th>Total Households</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allopathic</td>
<td>22 (84.8%)</td>
<td>158 (91%)</td>
<td>170 (85%)</td>
<td>350</td>
</tr>
<tr>
<td>Ayurveda</td>
<td>2 (7.6%)</td>
<td>9 (5%)</td>
<td>21 (10.5%)</td>
<td>32</td>
</tr>
<tr>
<td>Homeopathic</td>
<td>2 (7.6%)</td>
<td>6 (3.5%)</td>
<td>4 (2%)</td>
<td>12</td>
</tr>
<tr>
<td>Naturopathic</td>
<td>0</td>
<td>1 (0.5%)</td>
<td>3 (1.5%)</td>
<td>4</td>
</tr>
<tr>
<td>Others</td>
<td>0</td>
<td>0</td>
<td>2 (1%)</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>26</td>
<td>174</td>
<td>200</td>
<td>400</td>
</tr>
</tbody>
</table>

Source: Sample survey 2014

The chi square test was also applied to examine the relation between the selection of type of medical treatment and type of community.

H₀ = Selection of Type of medical treatment is independent from type of communities
The chi square value = 9.455
Degree of freedom = 8
5% significance value = 0.315
Since the value of level of significance is more than 0.05, we accepted H₀.

Age of First Pregnancy

Among Christian community, 46 percent pregnancies were before 20th age of women, it is 37 percent among Hindu community and 70 percent among Muslim community (fig. 3)
The first pregnancy before 20th age was more among Muslim community and the first pregnancy after 20th age was more among Hindu community. The dependency of age of first pregnancy with community was verified by using the chi square test.

\[ H_0 = \text{Age of first pregnancy is independent from type of community} \]

The Chi square value is 42.024, Degree of freedom is 2 and 5% significance value is 0.00. Since value of level of significance is less than 0.05, the \( H_0 \) is rejected. Therefore, the age of first pregnancy is significantly associated with the type of community.

**Vaccination Status**

Among the total sample households, 356 (89%) reported that they are aware about the importance of vaccination and strictly follows it. The extent of vaccination given to children among communities was examined by Chi square.

\[ H_0 = \text{The extent of giving vaccination to children is independent from type of community} \]

Pearson Chi square value = 0.563
Degree of freedom = 2
5% significance value = 0.755
As significance value is more than 0.05, the null hypothesis is accepted. Therefore, the extent of giving vaccination to children is independent from type of community.

**Sterilisation Status**

There is significant variation among different communities in the case of sterilisation. Muslim community is in backward in adopting sterilisation methods. There are 27 percent households in Christian community with at least one member has sterilized. It is 43 percent among Hindu and only 14 percent among Muslim community.

**Health Insurance**

Out of total households, among 32 percent, nobody has health insurance. It is 27 percent among Christian households, 30 percent among Hindu households and 34 percent among Muslim households. Among 11.5 percent Christian households, 16 percent Hindu households and 12 percent Muslim households, all
members of them have health insurance. Using Chi square, the significance between health insurance and community was examined. Our null hypothesis (H₀) is type of community and health insurance is independent.

Chi square value = 4.258
Degree of freedom = 8
Significance value = 0.833 and as the significance value is higher than 0.05, we accepted the null hypothesis.
Therefore, type of community and health insurance are independent.

Aggregate Health Index versus Community

An attempt is made to examine the descriptive statistics of health index among different communities, which is shown in table 6.

Table: Descriptive Statistics of Health Index according to Community

<table>
<thead>
<tr>
<th>Community</th>
<th>Health Index (aggregate health index)</th>
<th>Mean</th>
<th>N</th>
<th>SD</th>
<th>Variance</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Christian</td>
<td></td>
<td>0.5209</td>
<td>26</td>
<td>0.20094</td>
<td>0.04038</td>
<td>0.78469</td>
</tr>
<tr>
<td>Hindu</td>
<td></td>
<td>0.57405</td>
<td>174</td>
<td>0.188037</td>
<td>0.035358</td>
<td>0.99043</td>
</tr>
<tr>
<td>Muslim</td>
<td></td>
<td>0.516651</td>
<td>200</td>
<td>0.164258</td>
<td>0.026981</td>
<td>0.94259</td>
</tr>
</tbody>
</table>

Source: Developed from sample survey data 2014
Table 6 reveals that the mean health index is highest among Hindu community (0.57) and lowest among Muslim community (0.51).

For the analysis of health index of different communities by using Chi square, the health index values are classified as low, medium and high.

Irrespective of community, 21.5 percent households have low health index, 42.25 percent households have medium level health index and 36.5 percent households have high health index. The community wise analysis shows that 31 percent of Christian community have low-level health index and it is 18 percent among Hindu community and 23 percent among Muslim community. The medium level health indexes enjoyed by the households are 42 percent, 34 percent and 49.5 percent respectively among Christian, Hindu and Muslim communities. Among Christian community, 27 percent households enjoys high-level health index. It is 48 percent and 27.5 percent among Hindu and Muslim communities respectively.

Figure 5: Percentage Level of Health Index among Community

Source: Developed from Sample Survey data 2014
The chi square was adopted to identify the significance of association between health index and community. Our null hypothesis is that, there is no significant difference in health index among communities.
The chi square value is 18.527
Degree of freedom is 4
5 percent significance value is 0.001
Since the 5 percent significance value is below 0.05, we rejected the null hypothesis, and we conclude that there is significant difference in health index among different communities.

III. CONCLUSION

The analysis of the objectives reveals that there is no significant association of place of education of household members, smoking habits of household members, type of medical treatment, vaccination and health insurance with the community. There is significant association of level of education of households, newspaper reading habits, education index, liquor consumption habits and age of first pregnancy with community. Hindu community has the highest mean health index while Christian and Muslim community score second and third
positions respectively. The aggregate health index is also significantly associated with community. It is concluded that the community has clear influence up on the education and health status of households.

IV. REFERENCES


