

# **An Analysis of the Preferences and Utilization of Healthcare Facilities among the Rural Households of Kerala**

**Krishnan Kutty. V**

Assistant Professor of Economics, Government College Kodanchery – Kozhikode –Kerala

## **ABSTRACT**

The preferences and the utilization of healthcare systems and facilities among the households, primary data were collected from the Hindu, Muslim and the Christian households of rural Kerala, as a proportion of 110 sample from each community. According to the study, the utilization of the healthcare systems was the proportion of the all pathetic private 42.4 percent, homeopathy public 1.03 percent, homeopathy private 0.6 percent, ayurvedic public 5.1 percent and the ayurvedic private 4.4 percent among the members of the householders of Kerala. That the better care is the most one followed by specialized treatment, near to resident, free services, experienced paramedical staff are the most important variables in the preferences of the utilization of healthcare facilities. There is no significant difference in the utilization healthcare facilities among Hindu with Muslim and the Christian households in the use of general facilities and there is significant difference in Muslim and the Christian Households. In the case of healthcare facilities, there is a significance difference among the Hindu with Muslim and the Christian households and there is no significant difference among the Muslim and the Christian households.

**Keywords: Health, Healthcare, Utilization, Households, Healthcare system.**

## **INTRODUCTION**

The national government all over the world striving to expand and improve the healthcare services, since, health and human resources development is an integral component of the overall socio-economic development. It is keeping in view that health care system has been declared as a fundamental right in many countries. WHO stated that, in its constitutional principles of 1948, "Health is a state of complete physical, mental and social well – being and not merely the absence of disease or infirmity"? Without the distinction of race, religion, and political belief, economic and social condition; each government should provide the highest attainable standard of health and it is the fundamental rights of every human being. According to the Indian Constitution, health is the responsibility of State government and the levels of health care in India's are the primary, secondary and the tertiary.

The primary health care provided at the community level, the secondary health care provided at primary health centers, community health center, district hospitals etc... The tertiary health care provided at hospitals. A better health care system is followed by a better utilization of health care facilities/services. The utilization of a health care delivery is depended upon the disease conditions, level of educations, level of income, cultural, moral, belief and practice on one side and the others sides are the environmental conditions, socio- demographic variables, knowledge about the healthcare facilities, gender issues, political environment and also in the healthcare delivery itself (Katung 2001; Mosoke et al 2014).

The utilization of health care service refers to the accessibility and affordability of the household to avail services pertaining to health (Nipun et al 2015). Kerala has a reputed place in India, in the coexistences of various religious groups. The Hindu, Muslim and Christian are the major religious group and small portions of Jain, Sikh, Budhist, Jew and some others also in the State of Kerala. As per the Census 2011, Hindu constitutes 54.7 percent; Muslim is 26.56 percent and Christian 18.38 percent of the total population of the State. A healthcare system has been a method by which healthcare is financed, organized, and delivered to a population. The goal of a healthcare system is to improve the health of the population by the way of the society's available resources and the competing needs. In the healthcare systems, the various systems of medical facilities or services are rendered in the public, private and various organizations; the accessibility, affordability of the healthcare services are determined the utilization of healthcare facilities. There is no relation between the religion and health. These two variables are independent to each other.

## **Objective**

To analyze the utilization and the preferences of healthcare facilities among the rural households of Kerala.

To examine the general problems faced by the rural households in the healthcare facilities.

### **Hypothesis**

There is no significant difference in the utilization of the general, healthcare, medical and the financial facilities among the rural households of Kerala.

### **Methodology**

For the analysis, primary data were collected from the Hindu, Muslim and the Christian households of rural Kerala, as a proportion of 110 sample from each community. Sample size determined as per the census of India. A proportionality simple random sample techniques may be adopted for data collection. A total of 330 sample for the representation of the rural households of Kerala; were used for analysis of the utilization healthcare facilities and various systems of healthcare. The mathematical and statistical tools like percent, rank, analysis of variance (ANOVA) and multiple comparison test were adopted.

### **REVIEW OF LITERATURE**

Education has a positive relationship with the use of health services (Grossman 1975). One with good level of education would appreciate the need to utilize the PHC in spite of the distance and travel time (Buor 2003). The healthcare systems in Kerala and its utilization, Kannan K P et al (1991), two aspects were examined in this study, one composition, organization and quantitative dimension and the other, utilization of healthcare system in the rural people. Three major medical systems Allopathic, Ayurveda and Homeopathy are examined in detailed. Quantitative methods of healthcare services are examined in terms of area and population. Two factors are influenced the choice of the people to adopt the medical system, one with, the choice of system and the other is the nature of disease. In the case of utilization of healthcare systems - government and private or self, are in acute illness, 23% of the patient approach in the government institution, 66% in the private and 11% adopt the self treatment. The major reason for not approach the government institution are longer distance, lack of confidence, non- availability of doctors, non-availability of medicine, lack of proper treatment etc... Accordingly, Katung 2001 and Mosoke et al 2014; the utilization of a health care system may depend on educational levels, income factor, cultural belief and practice; other factors include environmental condition and the socio-demographic factors.

The utilization of health care service refers to the accessibility and affordability of the household to avail services pertaining to health (Nipun et al 2015). Jing Tan (2009), health service utilization among Chinese, Filipinos, and Asian Indian older adult in the United States, study used, the dependent variable is taken as the health service utilization and the independent variable are the predisposing, enabling and the need factor. The citizenship status and native is the immigrant – related factor. The most missing case data are the poverty (29%) in this study. Around 60.4% of the Chinese older adult lived in west of the US. Asian Indian older adult is scattered across the country. Asian older adult is younger than the Chinese. Asian Indian older adult is less likely to live alone. Of that, 53.68% of the Asian Indian older adults are obtains more than high school education. The proportions of the poverty ratio are 14.29% and 71.28% in Chinese and Asian Indian older adult. The proportions of the health insurance coverage are 96.16% in Filipino, 95.51% in Chinese and 87.44% in the Asian Indian Older adult.

The citizenship has a positive effect on health insurance. Hence, Fatim and Avan 2002 and Musoke et al 2014 examine the long distance that patients need to travel to get health services are a precursor to use of such services. This study had shown that the distance to health facilities affects health services utilization. Two factors seen to influence the choice decisions of household: one is related to the choice of system for children and other is the choice based on the nature of disease. Another aspect of healthcare utilization is in terms of government, private or self treatment (Kannan et al 2000). Jimoh Ayanda Oladipo (2014) examine that the utilization of health is an important factor in determining health planning and best health care delivery in the past and present. Through the predisposing, enabling, need and healthcare factors are examining why the people behave differently in the utilization of health care services. In the need factor, diseases and symptoms are more important than the disability and health status.

Irrespective of his/ her household income or socio – economic status, Equity in healthcare utilization is often interpreted as persons in equal need of medical care, who receives the equal treatment, (Ghosh 2014) Aditisharma et al (2018) examine the utilization of health care schemes in Indian scenario, which shows that the health systems in a society are built in equity and all people have equal opportunities to maintain good health. List out the various schemes like Rashtriya Swasthya Bima Yojana, Bhamashah Swasthya Bima Yojana, Mukhyamantri State Healthcare scheme, Bhai Ganhya Sehat Sewa Scheme, Mukhyamantri Swasthya Bima Yojana and Vajpayee Arogyashree Scheme. All these schemes were introduced for the poor section of the society for the better health. ‘Equity in the utilization of healthcare service in India, Evidence from national sample survey’ by Soumitra Ghosh (2014), used cross sectional data from NSSO in 2004. To measure the healthcare utilization, two core items are included, they

are outpatient and inpatients. The inpatient care utilization based on two items like annual hospitalization rate and the average length of hospitalization rate. The percentages of population reporting illness in the hospital are 9.92% in rural and 8.82% in urban area. About 62% of the rural and 58% of the urban people is facing the problem of communicable disease.

The average lengths of the hospitalization are 9.5 days in rural and 8.6 days in urban areas. Only 0.36% of the rural and 3.13% of the urban people is enrolled in health insurance. The outpatient care is 9% in urban and 7% in rural areas. In comparison to other States, Kerala occupies the highest outpatient care (22%) and lowest in Bihar (4.4%). The hospital admission was highest in Kerala and lowest in Panjab. Yun-Ning Li et al (2016) study the utilization of health services among rural residents based on the predisposing, enabling and need factors in the accessibility. It estimated the average age of the respondent is 32.72, the proportion of the male and female are in the ration of 52.42% and 47.58% based on the predisposing factors, the enabling factors like education levels are 19.52% (no education), 29.18% (primary school), 38.50% (secondary), 9.86% (high school), 2.93% (college or more). But in need factors like chronic diseases, 11.57% (yes) and 88.43% (no). The age was positively associated with the utilization of physician. Household's size was negatively associated with the utilization of the healthcare facilities.

## RESULTS AND DISCUSSION

The preferences and the utilization of the healthcare systems and the facilities among the rural households of Kerala were examined.

**Table 1: Utilization of healthcare facilities among the members householders of the Kerala**

Treatment options	Householders of Kerala			Kerala
	Hindu	Muslim	Christian	
Allopathetic Public	353(33.5)	317(28)	313(40)	983(46.4)
Allopathetic Private	273(26)	363(32.2)	262(33.4)	898(42.4)
Homeopathy Public	11(0.99)	4(0.35)	7(0.89)	22(1.03)
Homeopathy Private	4(0.33)	5(0.398)	4(0.33)	13(0.6)
Ayurvedic Public	47(4.56)	21(1.87)	41(5.2)	109(5.1)
Ayurvedic Private	22(2.09)	50(4.49)	21(2.68)	93(4.4)

Figures in the parenthesis are percentage.  
 Source: Analysis of Primary Data.

Table 1 shows that the utilization various healthcare systems among the members of householders of rural Kerala, that about 33.5 percent of the Hindu, 28 percent of the Muslim, 40 percent of the Christian householders were used allopathetic public and over all Kerala, its 46.4 percent. The proportion of the allopathetic private 42.4 percent, homeopathy public 1.03 percent, homeopathy private 0.6 percent, ayurvedic public 5.1 percent and the ayurvedic private 4.4 percent among the members of the householders of Kerala.

**Table 2: Preference for the uses of healthcare facilities among the communities of Kerala**

Preference	Hindu		Muslim		Christian	
	Mean	Rank	Mean	Rank	Mean	Rank
Near to residence	10.1	3	10.0	3	10.09	3
Free service	9.20	5	9.41	5	9.48	5
Experienced paramedical staff	8.78	7	9.03	7	8.80	6
Easy to reach by transport	7.49	8	6.37	10	6.77	9
Reputation of the hospitals	3.67	15	9.82	15	4.85	15
Strong hospital infrastructure	6.77	10	7.73	8	7.09	8
Better care	12.1	1	11.5	1	12.22	1
Know someone from staff	6.70	11	6.36	11	6.64	11
Experienced para-medical Professionals	9.13	6	9.87	4	9.63	4

Specialized treatment	11.6	2	11.1	2	11.01	2
Inexpensive	9.35	4	9.17	6	8.03	7
Referred by other doctor	7.08	9	6.27	13	6.16	13
Acceptability of all types of health insurance scheme	5.26	14	5.22	14	5.44	14
Excellence attention in all emergency situation	5.73	13	6.71	9	6.75	10
Peer group influence	6.08	12	6.34	12	6.44	12

Source: Analysis of Primary Data.

Table 2 indicates the preferences of the utilization of the rural householders of Kerala, that the better care is the most important factors Hindu, Muslim and the Christian households of rural Kerala, followed by common for all households were near to resident, free services, specialized treatment, know someone from staff, acceptability of all types of health insurance scheme and the last is reputation of the hospitals. Therefore, under the categories of preferences, the better care is chosen by all households.

**Table 3: Preference for the uses of healthcare facilities – Kerala**

Preference	All households		
	Mean	Std. Deviation	Rank
Near to residence	5.1	2.29	3
Free service	4.5	2.46	4
Experienced paramedical staff	4.6	1.78	6
Easy to reach by transport	3.44	1.99	9
Reputation of the hospitals	2.23	1.69	15
Strong hospital infrastructure	3.6	2.2	7
Better care	5.9	1.43	1
Know someone from staff	3.27	1.67	10
Experienced paramedical Professionals	4.77	1.78	5
Specialized treatment	5.6	2.12	2
Inexpensive	4.43	2.34	8
Referred by another doctor	3.3	1.7	11
Acceptability of all types of health insurance scheme	2.66	1.58	13
Excellence attention in all emergency situation	3.26	1.48	12
Peer group influence	3.09	1.57	14

Source: Analysis of Primary Data.

Table 3 highlighted that the preferences for utilization of healthcare facilities among the rural households, which is noted that better care is the most one followed by specialized treatment, near to resident, free services, experienced paramedical staff are the most important variables in the preferences of the utilization of healthcare facilities. The peer group influence, reputation of the hospital are the last position for the preferences of the householders of Kerala.

**Table 4: Uses of the Various Facilities among the communities of the Kerala**

Item	Particulars	Kerala					
		Hindu		Muslim		Christian	
		Score	Rank	Score	Rank	Score	Rank
General Facilities	Clean appearance	503	3	499	3	506	3
	Registration Counter	501	4	472	8	467	8
	Access to various departments	515	2	501	2	507	2
	Quality of other facilities	496	6	478	6	481	7
	Visitors allowed	490	7	474	7	491	5
	Ward disposal	488	8	491	4	488	6
	Healthy environment	517	1	510	1	508	1
Comfort to stay in ward	500	5	490	5	496	4	
Health	Faster access to treatment with no waiting time	494	4	448	9	484	7

	Specialized doctors available	476	7	454	8	450	9
	Treatment and consultation done quickly	474	8	487	4	498	4
	Effective treatment	503	1	505	1	509	1
	Prompt attention by nurses	499	3	491	3	506	3
	Availability of doctors for women and children	463	9	476	7	485	6
	Satisfaction over treatment	500	2	494	2	508	2
	Sufficient time to patient to meet the doctors	477	6	477	6	480	8
	Good post operative care	490	5	480	5	496	5
Medical Facilities	Quality of diagnostics	521	1	523	1	528	1
	Improved medical technology	480	6	486	6	471	6
	Specialized medicines for serious ailments	479	7	483	7	490	4
	Quality of surgical/delivery services	499	3	506	3	492	3
	Provision and services of pharmacy	515	2	508	2	507	2
	Availability of blood bank and ambulance service	491	5	493	4	484	5
	Adequacy of beds/rooms	493	4	490	5	453	7
	Availability of wheelchair/stretchers	473	8	482	8	408	8
Financial Facilities	Treatment was not very costly	499	1	486	1	505	1
	Financial consideration given in the hospitals	476	4	445	4	464	4
	Payment arrangement given in the hospitals	485	2	457	3	465	3
	Cost of bills are shown with transparent	477	3	484	2	503	2

Source: Analysis of Primary Data.

Table 4 shows that the utilization of the general, healthcare, medical and the financial facilities among the rural households of Kerala; in general facilities, healthy environment, access to various department, clean appearance are common for all community. In the healthcare facilities, effective treatment, prompt attention by nurses, satisfaction over the treatment and good post operative care is common. As in the case of medical facilities, quality of diagnostic, improved medical technology, quality of surgical services and the provision and services of pharmacy were the common for all the community households. Similarly, in the financial facilities, treatment was not very costly and the financial arrangement given in the hospitals were the common for all households.

**Table 5: Utilization general and medical facilities among the householders of the Kerala**

General Facility	Score	Rank	Medical Facility	Score	Rank
Clean appearance	1508	3	Quality of diagnostics	1572	1
Registration Counter	1440	8	Improved medical technology	1437	6
Access to various departments	1523	2	Specialized medicines for serious ailments	1452	5
Quality of other facilities	1455	7	Quality of surgical/delivery services	1497	3
Visitors allowed	1456	6	Provision and services of pharmacy	1530	2
Ward disposal	1467	5	Availability of blood bank and ambulance service	1468	4
Healthy environment	1535	1	Adequacy of beds/rooms	1436	7
Comfort to stay in ward	1486	4	Availability of wheelchair/stretchers	1363	8

Source: Analysis of Primary Data.

Table 5 shows that the utilization of general and medical facilities among the Hindu, Muslim and the Christian households of Kerala; healthy environment, access to various department and the clean appearance is the most factor for general and quality of diagnostics, provision and services of pharmacy and quality of surgical services were the factors for the utilization of the medical facilities in the rural households of Kerala.

**Table 6: Utilization healthcare and financial facilities among the householders of the Kerala**

Healthcare Facility	Score	Rank
Faster access to treatment with no waiting time	1426	7
Specialized doctors available	1380	9
Treatment and consultation done quickly	1459	5
Effective treatment	1517	1
Prompt attention by nurses	1496	3
Availability of doctors for women and children	1424	8
Satisfaction over treatment	1502	2
Sufficient time to patient to meet the doctors	1434	6
Good post operative care	1466	4
Financial Facility		
Treatment was not very costly	1490	1
Financial consideration given in the hospitals	1385	4
Payment arrangement given in the hospitals	1407	3
Cost of bills are shown with transparent	1464	2

Source: Analysis of Primary Data.

Table 6 shows the utilization of healthcare and financial facilities among the households of Kerala, effective treatment, satisfaction over treatment and prompt attention by nurses were the important factor for the healthcare and the treatment was not very costly, cost of bills are shown with transparent were the variables for the utilization of the financial facilities among the households of Kerala.

**Table 7: Uses of healthcare facilities among the Hindu, Muslim and Christian households across the Kerala**

Variable	Households	N	Mean	Standard deviation	F value	P value
Use of General facilities	Hindu	110	11.76	1.22	1.86*	0.012
	Muslim	110	11.66	1.24		
	Christian	110	11.96	1.08		
Use of Healthcare facilities	Hindu	110	13.22	1.65	8.61*	0.0005
	Muslim	110	13.88	1.88		
	Christian	110	14.17	1.71		
Use of Medical facilities	Hindu	110	14.77	2.77	12.5*	0.0005
	Muslim	110	16.21	2.08		
	Christian	110	16.06	2.23		
Use of Financial facilities	Hindu	110	5.66	0.90	3.24*	0.001
	Muslim	110	5.33	1.14		
	Christian	110	5.58	0.98		

\*Significant at 0.05 level.

Source: Analysis of Primary Data.

Table 7 indicates that the variation of the utilization of general, healthcare, medical and the financial facilities among the households of Kerala; the ANOVA test results shows that the p-value of all the variables were less than 0.05, therefore, reject the null hypothesis. So that conducts a multiple comparison test to identify which among the community significantly differs.

#### Multiple Comparison Tests

Dependent Variable		Mean difference (I - J)	Std Error	Sig	
Use of General	Hindu	Muslim	0.100	0.111	0.185
		Christian	-0.198	0.111	0.038
	Muslim	Hindu	-0.100	0.111	0.185

facilities	Christian	Christian	-0.297*	0.111	0.004
		Hindu	0.198	0.111	0.038
		Muslim	0.297*	0.111	0.004
Use of Healthcare facilities	Hindu	Muslim	-0.658*	0.165	0.000
		Christian	-0.942*	0.165	0.000
	Muslim	Hindu	0.658*	0.165	0.000
		Christian	-0.285	0.165	0.043
	Christian	Hindu	0.942*	0.165	0.000
		Muslim	0.285	0.165	0.043
Use of Medical facilities	Hindu	Muslim	-0.721*	0.224	0.000
		Christian	-0.647*	0.224	0.000
	Muslim	Hindu	0.721*	0.224	0.000
		Christian	0.149	0.224	0.253
	Christian	Hindu	0.647*	0.224	0.000
		Muslim	-0.149	0.224	0.253
Use of financial facilities	Hindu	Muslim	0.328*	0.096	0.000
		Christian	0.080	0.096	0.201
	Muslim	Hindu	-0.328*	0.096	0.000
		Christian	-0.289*	0.096	0.004
	Christian	Hindu	-0.080	0.096	0.201
		Muslim	0.289*	0.096	0.004

The significant difference exist groups are indicated by (\*).  
 Source: Analysis of Primary Data.

There is no significant difference in the utilization healthcare facilities among Hindu with Muslim and the Christian households in the use of general facilities and there is significant difference in Muslim and the Christian Households. In the case of healthcare facilities, there is a significance difference among the Hindu with Muslim and the Christian households and there is no significant difference among the Muslim and the Christian households.

## CONCLUSION

A nations wealth is the health and better health is fruitful condition of the people. The utilization of healthcare systems or facilities may depend up on the income, education, wealth, size of family, attitudes of the householders. As the results of the study, the utilization of the healthcare systems was the proportion of the allopathetic private 42.4 percent, homeopathy public 1.03 percent, homeopathy private 0.6 percent, ayurvedic public 5.1 percent and the ayurvedic private 4.4 percent among the members of the householders of Kerala. Study noted that better care is the most one followed by specialized treatment, near to resident, free services, experienced paramedical staff are the most important variables in the preferences of the utilization of healthcare facilities. The healthy environment, access to various department and the clean appearance is the most factor for general and quality of diagnostics, provision and services of pharmacy and quality of surgical services were the factors for the utilization of the medical facilities in the rural households of Kerala. The effective treatment, satisfaction over treatment and prompt attention by nurses were the important factor for the healthcare and the treatment was not very costly, cost of bills are shown with transparent were the variables for the utilization of the financial facilities among the households of Kerala.

## REFERENCES

- [1]. Dhanya, P & P. Maneesh (2016). "Utilization of Primary Health care Services: A case study in Kannur, Kerala", *Indian journal of Economics and development*, 4 (1), ISSN (ONLINE): 2320 – 9835.
- [2]. Ghosh, Soumitra (2014), "Equity in the utilization of healthcare services in India: Evidence from National Sample Survey", *Int J Health policy Manag*, 2(1), 29 – 38.
- [3]. Jang, Y., Kim, G., & Chiriboga, D. A. (2005). Health, healthcare utilization, and satisfaction with service: Barriers and facilitators for older Korean Americans. *Journal of the American Geriatrics Society*, 53(9), 1613-1617.
- [4]. Kannan, K.P, K.R.Thankappan, V. Ramankutty, K P. Aravindan (1991) The healthcare system in Kerala and its utilisation. *Kerala Sastra Sahithya Parishad*, chpt 8, 116 – 137.
- [5]. Lekshmi, S., G.P. Mohanta, K.G. Revikumar & P.K. Manna (2014), "Development and emerging issues in public and private healthcare systems of Kerala", *Int J Pharm Pharm Sci*, 6 (2), 92 – 98.

- [6]. Maha, Fathima. C.K &NabilahHaniph (2017),” Health status of rural people – A case study with special reference to Mannarkkad municipality”, *SSRG international Journal of Economics and Management studies*, 4 (4), 14 – 18.
- [7]. Oladipo, Jimoh Ayanda (2014), “Utilization of health care services in rural and urban areas: a determinant factor in Planning and managing health care delivery systems”, *African health Science*, 14 (2), 322 – 333.
- [8]. Ramankutty. V (2000), Historical analysis of the development of healthcare facilities in Kerala state, India. Health policy and planning, Oxford University Press, 15 (1), 103 – 109.
- [9]. Theresia, U.C &Mohindra. K.S (2011).” *Public health challenges in Kerala and Srilanka*”, Economic and Political Weekly, Vol.XLVI (30), 99 – 107.