

Utilization of primary health care services: a case study in Kannur district, Kerala

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Abstract

Background/Objectives: Health is an important determinant of human life. Health status of the people determines the average life expectancy, productivity, the earning capacity, employment and all other socio- economic indicators. The present study brings out a brief picture of utilization of primary health care services in Kannur districts of Kerala.

Methods/Statistical analysis: The present study is based on both primary and secondary data. The secondary data were collected from various published and unpublished sources from Economic and Statistical Department, records of PHC and Hospitals, Directorate Health Service Trivandrum. The primary data were collected from 50 households in Kannur district through structured interview schedule.

Findings: Approximately 80 percent households in the study area are not satisfied with the performance of PHC unit. Laboratory facilities are inadequate in the district. Inadequacy of supportive staff is yet another problem of PHC. This creates unnecessary delays to the patients for getting medicine and other services.

Improvements/Applications: patient section should be strengthening by supplying more number of beds and infrastructure facilities. Strengthening of sub-centers and equipping the government health care institutions would be more effective for effective utilization of health care institutions. It is necessary to conduct frequent health surveys in the district and to conduct free health camps at least 3 times in a year.

Keywords: morbidity prevalence, PHCs, health care, socio- economic factors

1. Introduction

Today, health is recognized as a “fundamental right” of every human being. The widely accepted definition of health is given by World Health Organization (WHO, 1946), stated “Health is a state of complete physical mental and social well-being, and not merely an absence of disease or infirmity”. It is increasingly being recognized that good health is an important contributor to productivity and economic growth. Good health, and its natural corollary- defense against illness and it is fundamental to every man, women, and child, not only for their well-being, but for their very survival [1]. The population of Kerala is uniformly scattered throughout the state and is fairly well advanced in its demographic transition. The rapidly declining growth rate, highest mean age at marriage especially of families, a very high level of acceptance and awareness of family planning methods and fertility control, a moderate decline in the mortality rate etc are the commendable achievements in health standards which are almost comparable to that of developed countries in the world [2]. Low birth rate and death rate along with higher female life expectancy, low infant mortality with negligible gap between rural and urban and lower levels of disability are the special characteristics of Kerala’s Health status [3]. The major factors contributing to such a unique situation are a wide network of health infrastructure and manpower, policies of successive state government and other social factors like women’s education, general health awareness and clean health habits of the people [4, 5].

The family welfare programme which is now changes as Reproductive Child Health programme with more emphasis on mother and child healthcare, management of RTI / STI including HIV/AIDS adopting a client oriented approach to improve quality of services is sure to open up new vistas in the implementation of the integrated package scheme [6, 7]. A close study of the situation in Kerala would show that family planning has been accepted as a way of life. Kerala has achieved all the major health indicators targeted for “Health for all by 2000 AD”. It would be worthwhile to look at this juncture beyond 2000 AD in the context of the global discussion of ‘Zero Population Growth’. Kerala may attain birth rate of about 10 per thousand in another 20 to 25 years. The death rate has almost stabilized around 6 per thousand. The economic and social development factors leading to women’s emancipation

and the tendency to avoid child birth as far as possible and limitation to one child will not be a distant dream in the demographic profile of Kerala [8]. The achievement of Kerala in terms of the health status of its people is indeed impressive. At the same time there is need to wake up to the emerging challenges also. It can be expected that the innovative schemes adopted in Kerala and the leadership role played by the state in the implementation of various health and family welfare programmes will serve as a model for other states.

2. Statement of the Problem

Providing healthcare services is considered as the main responsibility of the government and the availability of adequate health services is an important human right. There are four categories of healthcare services offered to the people. They are curative healthcare services, preventive healthcare services, primitive healthcare services and rehabilitative healthcare services. Generally all the four categories of healthcare services are rendered by the government in developing countries. For maintaining the health status of the citizens, the government establishes number of hospitals at state, district, and local administrative levels. Besides, this there are number of primary health care centers, sub centers etc. These institutions provide healthcare services to all citizens in a country. Now- a- days number of diseases has been increasing at an alarming rate. But services are not increasing at the same rate. Sometimes people do not have much knowledge regarding the health services provided by PHCs. It will result in a lapse of government fund on health services. In Kerala, there is at least one PHC and more than one Sub centers for every panchayath. However, the efforts of government to improve the health status of people do not reach its ultimate objectives/ targets. The approach of people towards the PHC is quite worsening. With this background, the current study aims to analyze the attitude of people towards the healthcare services and the quality of services provided by the PHC.

3. Materials and Methods

The present study is based on both primary and secondary data. The secondary data will be collected from various published and unpublished sources from Economic and Statistical Department, PHCs, Hospitals, Directorate Health Service Trivandrum. The primary data were collected from 50 households in Kannur district through structured interview schedule. Proportionate random sampling is adopted for selecting sampling respondent. Appropriate statistical tools like percentage, diagrams were used to analyse the collected data.

4. Results and Discussions

Health is an important indicator of economic development of any country. The increasing health status of the people reflects the socio- economic development of the country and is shaped by variety of factors such as level of income, educational level, life style, health consciousness, housing facility and access to health care services [9].

4.1. Classification on the basis of age

The distribution of numbers of the households of the respondents according to age is shown in table 1. Out of the total household members, about 55% of the members are males and 45% of them are females.

Table 1. Age wise classification of sample respondents and family members

Age	No. of members	Percentage
Below 5 years	8	3
6-20	24	11
21-35	70	32
36-50	61	28
51-65	30	14
65 and above	25	12
Total	218	100

Source: Field data

Majority of the households (78percentage) consist of less than five members and 16 Percentage has 5-8 members in their family. Only 6% of them have more than 8 members in their family. It was observed that 78% of the respondents come under nuclear family and 22% of them are joint family.

4.2. Classification on the basis of the educational status

Educational status determines the socio-economic status of the households. The educational status of the households is exhibited in table 2.

Table 2. Classification on the basis of educational status

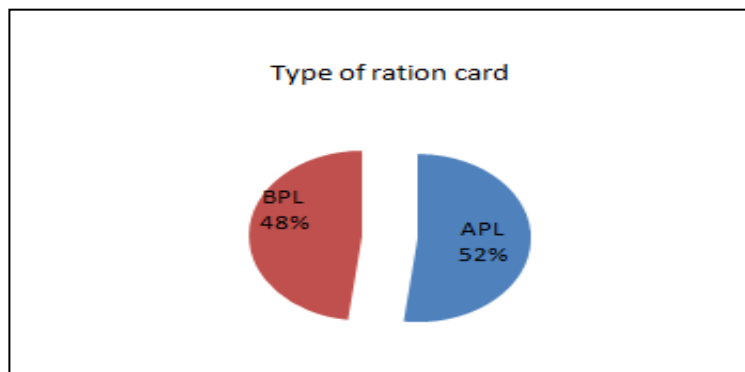
Educational level	No of members	Percentage
Illiterate	30	14
Primary	70	32
Middle	9	4
High school	54	25
Higher secondary	25	11
Degree	14	6
PG	10	5
Professional education	6	3
Total	218	100

Source: Field data

About 32% of them have completed primary level education; 25% of them are matriculated and 14% of the members are illiterates. Meanwhile, 11 Percent of them are gone to higher secondary and 6% of the family members have completed their degree. Only 10 family members have completed their PG degree and 6 members have done professional course. The study indicates that higher educated people demand better and qualitative health care facilities.

4.3 Classification on the Basis of Type of Ration Card (figure 1)

Figure 1. Type of ration card



From the figure 1, it is clear that 52% of the sample respondents have APL category ration card and 48% belongs to BPL category ration card.

4.4. Classification on the basis of income

Income is an important variable for measuring the standard of living of the people. Mostly income influences the choice of health care services. The sample households are classified on the basis of their monthly per capita income. Monthly per capita income is obtained by dividing total monthly income of the household with the number of household members which provide true purchasing capacity on the part of households. Table 3 shows distribution of respondents on the basis of their per capita income.

Table 3. Distribution of sample respondents according per capita income

Monthly per capita income	No of households	Percentage
Below500	20	40
500-1000	16	32
Above 1000	14	28
Total	50	100

Sources: Field data

About 40% of the respondents have monthly per capita income less than Rs. 500, 32% of respondents have the monthly per capita income between 500-1000 and 28% of the respondents have monthly per capita income above Rs. 1000. Hence income is an important criterion which decides one's capacity to pay for health services.

4.5. Morbidity Prevalence

In order to access the morbidity prevalence among households, illness should be classified into two categories - Acute illness and chronic illness [10].

Acute illness here refers to illness reported during one month prior to the survey period for which no regular treatment has undergone. For example fever, headache, injuries etc., whereas chronic illness for which regular treatment for long period has been required. In the case of chronic illness, illness suffering for the past one year is considered.

Morbidity prevalence rate is a measure of diseases that allows us to determine a person's likelihood of having diseases. Therefore, the number of prevalent cases is the total number of diseases existing in a population.

$$\text{Morbidity prevalence rates} = \frac{\text{Total number of cases of diseases existing in a population}}{\text{Total population}} * 1000$$

4.5.1. Acute Illness

Table 4 gives the details of morbidity prevalence rate and acute illness of the households in the study area.

Table 4. Acute illness

Illness	No of cases reported	Morbidity prevalence rate
Fever	17	77.9
Injuries	4	18.3
Head ache	3	13.7
Eye diseases	2	9.17
Chicken pox	2	9.17
Others	10	45.8
Total	38	174.3

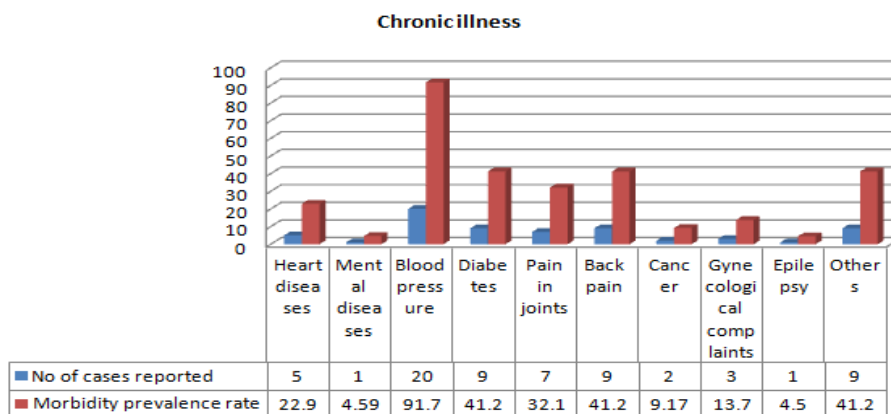
Sources: Field data

The highest number of people (17) is facing the problem of fever and the morbidity prevalence rate is 77.9 whereas only two respondents in the sample is facing the problem of chicken pox and eye disease and the morbidity prevalence rate is 9.17. In case of other diseases, the morbidity prevalence rate is 45.8. It can be interpreted that the morbidity prevalence rate is comparatively high in the study area.

4.5.2. Chronic illness

The details of morbidity prevalence rate and the chronic illness of the respondent in the study area are given in figure 2.

Figure 2. Chronic illness



The highest numbers of people (20) are facing the problem of blood pressure and the morbidity prevalence rate is 91.7. Whereas, only one respondent in the sample is facing the problem of epilepsy and the morbidity prevalence rate is 4.59. In case of other diseases the morbidity prevalence rate is 41.2. It can be interpreted that the morbidity prevalence rate of chronic illness is comparatively high due to the change in life style in the study area.

4.6. Sources of medical care

The sources of medical care can be divided into five categories. They are primary health center, government hospitals, private hospitals, sub center and others.

Table 5. Sources of Medical Care

Types of diseases	PHC		Government hospitals		Private hospitals		Sub center		Others	
	Number	%	number	%	Number	%	Number	Percentage	Number	%
Acute illness	23	60	9	24	3	8	3	8	0	0
Chronic illness	15	23	19	29	30	45	0	0	2	3

Source: Field data

Table 5 shows the sources of medical care with which households in the study area approach when they suffer from acute illness and chronic illness. In case of acute illness majority of the households (60%) seek PHCs, whereas 24% of the households approach government hospitals and 8% of households goes to both private hospitals and sub centers (consultation only for fever). On the other hand, 45% of the households prefer private hospitals in the case of chronic illness and 29% of the households prefer government hospitals, 23% of the households prefer PHCs and the remaining 3% prefer other facilities.

4.7. Details of utilization of PHC for children’s immunization purpose

Figure 3. PHC for Immunization Purpose

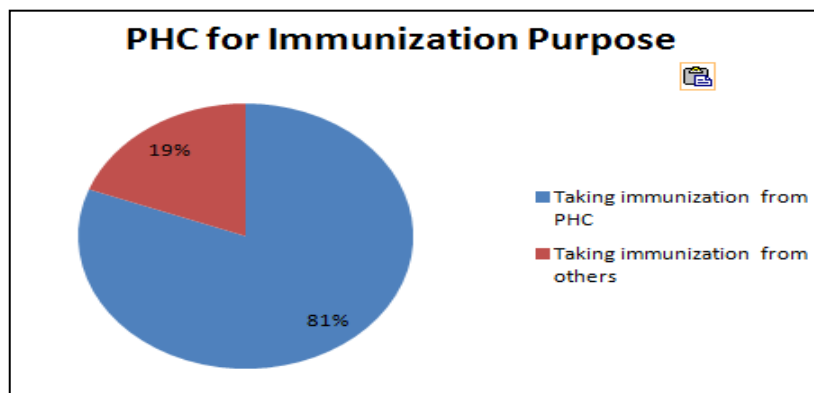


Figure 3 shows the details of utilization of PHCs for children's immunization purpose in the study area. Nearly 81% of the households prefer PHCs for giving immunization to their children. The remaining 19% of the households prefer other sources for immunization purpose like the government hospitals. Hence it is very clear that majority of people in the study area consider PHC as the accessible center for taking immunization for their children.

4.8. Morbidity prevalence and educational status

Education is a socio-economic status indicator and has a great influence on illness and utilization of healthcare services. Table 6 gives the morbidity prevalence and educational status of acute and chronic illness patients.

Table 6. Morbidity Prevalence and Educational Status

Educational status	Acute illness	Chronic illness	Total
Illiterate	6	9	15 (14.4)
Primary	10	25	35 (35.7)
Middle	1	5	6 (5.7)
High school	4	15	19 (18.3)
Higher secondary	7	5	12 (11.5)
Degree	5	4	9 (8.7)
PG	3	2	5 (4.8)
Professional education	2	1	3 (2.9)
Total	38	66	104

Source: Field data. Note: figure in parentheses indicate Percentage

From table 6, it can be seen that the morbidity prevalence of the illiterates are 14.4%. The morbidity prevalence of the family members in primary educational status is 18.3%. The morbidity prevalence of professionals and post graduates are 2.9 and 4.8 respectively, which is low as compared to the others. The higher the educational status, lower will be the illness prevalence due to the awareness about the health problems, nutrition care and health environmental surroundings. Morbidity refers to the incidence of illness or it refers to the "disease load". A condition of low morbidity logically leads to a better health status. The sample respondents are classified according to their per capita income. Those respondents with per capita income less than 500 are classified as low income group, those respondents with per capita income between 500-1000 are classified as middle income group and those respondents with monthly per capita income above 1000 are classified as high income group. Table 7 shows the classification of households on the basis of per capita income and acute illness.

Table 7. Morbidity prevalence and per capita income: acute illness

Sl no	Common diseases	Income group			Total
		Low	Middle	High	
1	Fever	10(58.82)	5(29.4)	2(11.6)	17(44.74)
2	Injuries	2(50)	1(25)	1(25)	4(10.53)
3	Head ache	2(66.67)	0	1(33.33)	3(7.89)
4	Eye diseases	0	1(50)	1(50)	2(5.26)
5	Chicken pox	1(50)	1(50)	0	2(5.26)
6	Others	5(50)	3(30)	2(20)	10(26.31)
7	Total	20(52.63)	11(28.95)	7(18.42)	38 (100)

Source: Field data Note: figure in parentheses indicate Percentage

About 52.63% of the family members in low income group and 28.95 of the middle income group are affected by acute illness. High income group constitute only 18.42% of the total illness. Large numbers of respondents are affected by ordinary fever. About 10 members (58.82) in low income group are affected by fever, 2 persons (50%) in the low income family are affected by injuries and 5 members (50%) are affected by other kinds of illnesses. Only 1 person from the middle income families is affected by eye diseases and chicken pox. It is same as in the case of low income groups. In the case of high income group, 2 persons (11.76%) are affected by ordinary fever and no one is

affected by chicken pox. The low income group is highly affected by acute illnesses due to occupation and environmental conditions.

4.9. Morbidity prevalence and per capita income: Chronic illness

Chronic diseases are those diseases which last long and require continuous treatment. The chronic illnesses which affect the households are heart diseases, mental diseases, BP, Diabetes etc. Table 8 reveals the relationship between chronic illness and the per capita income.

Table 8. Chronic illness and per capita income

Sl No.	Common diseases	Income group			Total
		Low	Middle	High	
1	Heart diseases	3(60)	1(20)	1(20)	5(7.57)
2	Mental diseases	1(100)	0	0	1(1.51)
3	Blood pressure	7(35)	5(25)	8(40)	20(30.30)
4	Diabetes	2(22.22)	3(33.33)	4(44.44)	9(13.64)
5	Pain in joints	45(57.14)	2(25.57)	1(14.29)	7(10.61)
6	Back pain	5(55.56)	1(11.11)	3(33.33)	9(13.64)
7	Cancer	1(50)	1(50)	0	2(3.03)
8	Gynecological complaints	2(66.66)	0	1(33.33)	3(4.55)
9	Epilepsy	1(100)	0	0	1(1.51)
10	Others	4(44.44)	3(33.33)	2(22.22)	9(13.64)
	Total	30(45.55)	16(24.24)	20(30.30)	66

Source: Field data Note: figure in parentheses indicate Percentage

Approximately 45.55% of the family members in low income group and 30.30% in the high income groups are affected by chronic illnesses. Middle income group constitutes only 24.24% of the total chronic illnesses. Large numbers of respondents were affected by blood pressure. 35% of low income groups are affected by blood pressure and it is high in the case of high income group (40%). Cancer is reported to the extent of 50% of the total chronic illness and it is same in the low and middle income groups. 60% of low income groups are affected by heart diseases and it is same in the case of middle income and high income groups. From the study it clear that all the income groups of respondents have chronic illness.

4.10. Choice of health care services

Advances in medical sciences and changes in the organization of medical practices have enabled contemporary physicians to provide highest quality of medical care to the ailing persons. The low income families which are considerably more disease prone and which have considerable need for medical attention have less availability to pay for needed medical services. People have utilized government hospitals, primary health centers, private hospitals and other medical services. Table 9 shows household preference of health care services.

Table 9. Choice of health care services

Choice of hospitals	No of households	Percentage
PHC	18	36
Private hospitals	13	26
Government hospitals	14	28
Sub centers	3	6
Others	2	4
Total	50	100

Source: Field data

Majority of the sample respondents prefer primary health center (36%), government hospitals (28%) and 26% of them prefer private hospitals. Only 6% of the respondents prefer sub centers and 4% of them prefer other medical services.

4.11. Choices of health care service and per capita income

The relationship between income and choice of health care facility are shown in table 10.

Table 10. Choice of services for treatment of diseases

Sl no	Choice of hospitals	Income group			Total
		Low	Middle	High	
1	PHC	10(55.56)	7(38.88)	1(5.56)	18(36)
2	Private hospitals	2(15.38)	3(23.07)	8(61.53)	13(26)
3	Government hospitals	7(50)	4(28.57)	3(21.43)	14(28)
4	Sub center	1(33.33)	2(66.67)	0	3(6)
5	Others	0	0	2(100)	2(4)
	Total	20(40)	16(32)	14(28)	50

Source: Field data

It is clear that, majority of the lower income group (55.55%) prefer PHCs, nearly 15.38 percent prefer private hospitals, and nearly 50 percent prefer government hospitals. Preference to other medical services like Homeopathy, Ayurvedic and Unani is considerably low in the study area. In the case of middle income group, 38.83 percent prefer PHCs. In the case of higher income group, about 61.53 percent prefer private hospitals, while 5.56 percent prefer government hospitals. The study reveals that middle income groups and low income groups are mainly dependent on primary health centers due to the shortage of income. Thus it proves that income plays an important role in deciding the healthcare services of the respondents.

4.11. Level of satisfaction of the respondent about the functioning of PHCs in the district

Table 11 shows the households' response to the performance of PHCs in Kannur district.

Table 11. Level of Satisfaction

Responses	No of house holds	Percentage
Satisfied	10	20
Not satisfied	40	80

Source: Field data

About 80% of the family members are not satisfied with the functioning of PHCs in Kannur. Only 20 % of them are satisfied with the functioning of PHCs.

5. Conclusion

Health transition comprises of three components – demographic transition, epidemiological transition and healthcare transition. Kerala has been going through an epidemiological transition as reflected in its morbidity profile. In brief, Kerala has made significant advances in the health field in terms of mortality and morbidity. The role of the government as the principle agent in the promotion of education, literacy and expansion of medical care facilities aimed at “health for all” has to be duly acknowledged. The study found that the inefficiency of PHCs has been diverting the attention of people to seek private medical care facilities. Even in a context of high public availability and considering the health transition factor, relying on the development of the private sector to respond to increasing health care needs could create inequalities in access. Investing in the public urban primary care system and ensuring access to quality health care for the poorest is warranted.

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