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**HEALTH STATUS AND HEALTH CARE SYSTEM
AMONG THE FISHERFOLK
A MICRO LEVEL ANALYSIS**

*Dissertation submitted in partial fulfilment
of the requirements for the award of the
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New Delhi*

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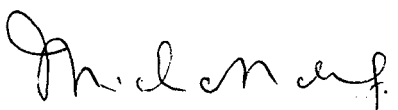
DECLARATION

I hereby affirm that the research for this dissertation titled, "Health Status and Health Care System among the Fisherfolk: A Micro Level Analysis" being submitted to the Jawaharlal Nehru University for the award of the Degree of Master of Philosophy in Applied Economics, was carried out entirely by me at the Centre for Development Studies, Trivandrum.



Charles L.

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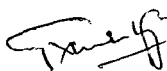


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T H A N K S


Charles L.

CONTENTS

Chapter	Title	Page
I	Introduction	1
II	The Socio-economic and Living Conditions of Fisherfolk in Kerala	9
III	Analysis of the Health Status: A Case Study of Pulluvila village	21
IV	Provision and Utilisation of Health Care	44
V	People's Perception of Health Status and Health Care Systems	53
VI	An Alternative Health Care Model	81
VII	Summary and Conclusions	93
	References	96
	Appendix	101

LIST OF TABLES

Table No.	Title	Page No.
1.1	Basic Indicators of Human Development-1991	3
1.2	Human Development Indicators : A comparison	4
2.1	District-wise Distribution of Marine Fisherfolk	10
2.2	District-wise Distribution of Mechanised and Country Crafts in Kerala	11
2.3	Various Institutions of the Church in marine villages	13
2.4	Literacy Rate among Workers in Kerala	14
2.5	Educational Attainments of the Sample Population	15
2.6	Percentage of Households and Pattern of Ownership of Land	17
2.7	Housing and Related Amenities in Kerala and Marine Fishing Villages	18
3.1	Distribution of Households by SES Characteristics	29
3.2	Distribution of Households by SES Groups	30
3.3	Distribution of Households by PES Characteristics	33
3.4	Distribution of Households by PES Groups	34
3.5	SES-PES Matrix of Distribution of Households	35
3.6	Pattern of Morbidity	37
3.7	Morbidity due to Common and Chronic Diseases	38
3.8	Morbidity Rates of Common and Chronic Diseases by SES Groups	38
3.9	Morbidity Rates of Common and Chronic Diseases by PES Groups	40
3.10	Percentages of Adult Males Indulging in Consumption of Liquor and Tobacco	41
3.11	Age at Delivery by Socio Economic Class	42
4.1	Statistics of Allopathy Institutions in the Government Sector	45
4.2	Rural Health Infrastructure (1996)	46
4.3	Percentage of Households with Knowledge and Utilisation of PHC	47
4.4	Reasons for not going to PHC	48
4.5	Percentages of Households Visited by PHC Staff	49

4.6	Percentage Distribution of Households by Method of Treatment	50
4.7	Reasons for Preferring Private Hospitals	50
4.8	Percapita Annual Expenditure for Treatment and its proportion to Percapita Income	51
5.1	Demographic, Social and Educational Details of the Participants in Group 1	55
5.2	Demographic, Social and Educational Details of the Participants in Group 2	61
5.3	Demographic, Social and Educational Details of the Participants in Group 3	68
5.4	Demographic, Social and Educational Details of the Participants in Group 4	73

LIST OF FIGURES

3.1	Map of Karumkulam Panchayat	22
3.2	Distribution of Households by SES Groups	30
3.3	Distribution of Households by PES Groups	34
3.4	Distribution of Households by SES and PES Groups	36
3.5	Morbidity Differentials of Common and Chronic Diseases across SES Groups	39
4.1	Health Care System in Kerala	44
4.2	Knowledge and Utilisation of PHC by SES group	48
4.3	Cost of Treatment as percentage of percapita income	52
6.1	Elements of Primary Health Centre	85

Chapter I

INTRODUCTION

Contribution of human capital to the overall economic growth has been widely accepted. The enrichment of this intangible form of capital through the enhancement of human capabilities has received considerable attention in recent times. Improvement of health status plays a vital role in the enhancement of human capabilities (Sen, 1987). World Health Organization's (WHO) recent declaration, "Health for All by the Year 2000 A.D", encompasses an ideal as well as a challenge in this direction. The challenge before the developed countries is to maintain higher levels of health status than what they have already achieved. For the developing countries the challenge is to attain a better health status.

In the developing countries like India which are characterised by the prevalence of many structural constraints like insufficiency of infrastructure, class inequalities, inherent weaknesses of the delivery systems etc. attainment of this goal may require a thorough reconstruction, expansion and redistribution of health infrastructure. In the case of India where 74 percent of the population live in the rural areas, such an overhauling would primarily be required in the Primary Health Centre (PHC) network which plays the key role in the rural health infrastructure. Another requirement for the attainment of the goal of 'health for all' is to 'reach out to interior, rural and tribal areas' (WHO, 1988) since the effects of various health development programmes seldom percolate into such marginalised regions and communities. Its implication is that reduction of disparities that may exist in

health status across regions and communities is a preamble for attaining universal health.

The concept of 'health' cannot be seen in a narrow sense as a state of sheer absence of diseases. Instead, it should be seen in a broad spectrum where health is viewed as an integral well being of the individuals (Madavan, 1992; Mathur, 1995; Berg, 1973). This holistic perception of health is well defined by WHO: 'health is a state of complete physical, mental (or emotional), and social well being of a person and not mere absence of diseases' (WHO, 1988). The old ways of measuring health status which included indices like mortality rates, particularly infant mortality rate (IMR), and life expectancy appear to be strongly in need of re-examination today in the context of the holistic perception of health. Thus, presently, health status indices include in addition to the aforesaid measures, variables such as drinking water, sanitation, morbidity etc (Berg, 1973; Cemper, 1984).

A comparison of the developed countries and developing countries with respect to some of these health status indicators would be revealing. It is clear from the Table 1.1 that wide disparity exist between these two groups of countries in mortality rates, particularly IMR and in life expectancy. Literacy rate differential is also very high¹. While the population of high income economies are almost literate, only 60 percent of population are literate in the low income economies.

1 *Though literacy is not a direct measure of health status, it can indirectly contribute to the enhancement of health status (Mathur 1995).*

A comparison of column 5 with columns 3 and 4 show that India is no exception to the lot of low income economies and, in addition, in certain indicators of IMR and literacy rate India's performance is still worse.

Table 1.1 Basic indicators of Human Development - 1991

Sl. No: (1)	Indicators (2)	High income Economies (3)	Low income Economies (4)	India (5)
1.	Life expectancy			
	Male	73	61	60
	Female	80	58	60
2.	I M R	8	71	90
3.	C D R	9	10	10
4.	C B R	13	30	30
5.	Population Growth Rate (annual)	0.6	2	2.1
6.	Illiteracy rate			
	Male	4	40	52
	Female	5	52	67

Source: World Development Report - 1993.

However, within the Indian Union Kerala State is an exception. The health status of Kerala is far advanced to all India average (more details, on this aspect see, Zachariah and Irudaya Rajan, 1997), and is in well comparison with the high income economies (see Table 1.2).

Table 1:2 Human Development Indicators, 1991:
Some comparisons.

Sl. No:	Indicators	Kerala	India	High income economies
(1)	(2)	(3)	(4)	(5)
1.	Life expectancy			
	Male	66.8	57.7	73.0
	Female	72.3	58.1	80.0
2.	I M R	17	79	8
3.	C D R	6.3	10	9
4.	C B R	17	29	13
5.	Population growth rate (annual)	1.34	2.14	0.6
6.	Illiteracy rate			
	Female	13.8	60.7	5
	Total	10.2	47.8	4

Source: Columns No. 3 & 4 - National Family Health Survey 1992-93.
Column No. 5 - World Development Report 1993.

In 1991, the IMR of Kerala is 17 whereas that of India is as high as 79. In the case of literacy Kerala has achieved total literacy² while the all India average is far below at 52 percent.

Notwithstanding the advanced levels of human development of Kerala, the question that arises is whether the fruits of the human development is fairly shared by all segments of population. Balanced development of a region would mean that the society gets the benefit and every member of the society enjoys the fruits of

² Though Kerala has not achieved 100 percent literacy rate still it is considered total literacy in the light of the prescriptions laid out by the Tehran World Conference on Education of 1975 under the auspices of UNESCO. The underlying logic is that no society can expect 100 percent of any benefits and therefore if a particular benefit approximates 100 percent it can be claimed to be total (Tharakan, 1990).

the benefit and every member of the society enjoys the fruits of the development process. However, there are studies which reveal that in Kerala there are communities that remain as outliers from the central tendency of human development. The fisher folk community is a classic example (Houtart and Nalini, 1988; Thomas, 1989; Kurian, 1994).

These studies discuss the backwardness of fisherfolk in the socio-cultural, educational and economic realms. Nonetheless, studies which analyze the various dimensions of the health status including the morbidity of the fisherfolk are conspicuously absent. Therefore, an analytical study on the health status of the fisherfolk which we aim at to undertake in the present research assumes relevance and importance.

Research Issues

Our major research interest is to probe into the problems and prospects in the health status of the fisherfolk who remain backward in the socio-economic and cultural dimensions. The problems of health status can be seen in the supply and demand aspects. The supply aspect represents the health care infrastructure which provides curative and preventive care to the people whereas the demand aspect points to the need for health care which arises from the incidence of morbidity and also the ability of the people to pay for health care.

A holistic vision of health goes beyond the mere absence of diseases to physical, mental, social and emotional well being.

Therefore the socio-economic conditions and the physical environmental conditions of the fisherfolk are topics of interest.

During this ninth five year plan period the country is discerning the importance of people's participation in the planning process. Kerala has taken the lead in eliciting people's planning wherein we .aspire for increased participation of the people in the developmental process, it would be of interest to see how the peoples participation can be better mobilized and adopted in the development of health status. Also if the present health care system is found to be incompetent and indifferent to foster the health status of the fisherfolk, we may have to attempt to evolve a better alternative strategy. These are the important research issues which we address in the present study.

Objectives

In the light of the above research issues, the objectives pursued in the study are as follows:

- (1). To analyze the indicators of the health status of the fisherfolk in relation to their socio-economic and physical environmental status.
- (2). To evaluate the supply and utilization of health care facilities in the fisherfolk villages.
- (3). To elicit the perception of fisherfolk themselves of their health status.
- (4). To develop an alternative health care model befitting to the fisherfolk.

Scope and Methodology

This is a micro level study based on the fisherfolk of Pulluvila village, who belong to the marine traditional fisheries sector. The study is limited to the Christian fisherfolk as there are no fisherman in this village belonging to any other religions.

The study is to depend mainly on primary data. For this a questionnaire survey is conducted in a marine village. The village selected for sample survey is Pulluvila of Karumkulam Panchayat in Trivandrum district of Kerala. This village was selected on two grounds.

- i. This is a highly populous and a typical traditional fishing village.
- ii. In the early 1990s the researcher himself had much involvement through an institutional health intervention conducted by Trivandrum Social Service Society (TSSS) in the village.

A few secondary literature are also previewed. To understand the perception of the people of their health status, group discussions were conducted with the selected groups. The details of the methodology are given in the subsequent chapters.

Chapter scheme

The study is organized into seven chapters. Chapter II describes the socio-economic condition of the fisherfolk. Chapters III and IV analyze the village level survey data exclusively conducted for this dissertation. The analysis of the health status of the fisherfolk of Pulluvila is given in the third chapter and of the health care supply and its utilization in the fourth chapter. A

brief report of the group discussion, which in effect provide an explanation for many of the findings of the study is narrated in Chapter V. Chapter VI develops an alternative health care model for the fisherfolk and describes its various components. The final chapter provides the concluding remarks.

Chapter II

THE SOCIO-ECONOMIC AND LIVING CONDITIONS OF FISHERFOLK IN KERALA

This chapter provides a brief description of the socio-economic and physical environmental conditions of the marine fisherfolk of Kerala. As we shall see later in the subsequent chapters, the living conditions of the fisherfolk are very much interlinked with the health status. Therefore, a study of the fisherfolk's socio-economic and physical environment is in order. This is mainly done on the basis of the review of relevant literature to understand the profile of the fisherfolk in Kerala.

1. The Fisherfolk of Kerala

a. Population

The fisherfolk in Kerala may be divided into marine and inland fisherfolks. According to 1995-96 estimates of the Directorate of Fisheries, the fisherfolk of Kerala is 9.95 lakhs which is 3.4 percent of the total population of the state. Of this, 7.71 lakhs (77.5 percent) are marine fisherfolk and 2.24 lakhs (22.5 percent) are inland fisherfolk. Among the marine fisherfolk 1.69 lakhs (22 percent) are active fishermen and the corresponding figure in the inland sector is 0.55 lakhs (25 percent). The following table shows the district wise distribution of marine population in 1995-96.

Table 2.1 District-wise distribution of marine fisherfolk, 1995-96 (estimated).

Sl. No.	Name of District	Male	Female	Children	Total
1	Trivandrum	48524	46980	66715	162219
2	Quilon	29357	26878	35063	91298
3	Alleppey	33739	32635	41986	108360
4	Ernakulam	22920	22190	25429	70539
5	Trichur	20894	21151	25827	67872
6	Malappuram	22951	23480	31413	77844
7	Calicut	30181	29088	36798	96067
8	Cannanore	16732	15890	21640	54262
9	Kasargode	13718	13214	15627	42559
	Total	239026	231506	300488	771020

Source: GOK, 1996

There are 222 marine and 112 inland fishing villages in Kerala. Trivandrum has the maximum number of marine villages (42).

b. Technological dualism and disaggregation of fishermen

Starting with the Indo-Norwegian project in the early 1950s, a technological modernization has been taking place in the marine fisheries sector of Kerala. As a result, a disaggregation has taken place among the fishermen. The traditional fishers are characterized as those who use country crafts for fishing. Nowadays the country crafts are also getting motorized. Thus there are motorized and non-motorized country crafts in the traditional sector. The mechanized sector consists of the mechanized boats which may be broadly classified into purse seine and trawling boats. District-wise distribution of mechanized and country crafts in Kerala as of 1995 is given in Table 2.2.

Table 2.2 District-wise Distribution of Mechanized and Country Crafts in Kerala.

Districts	Country crafts		Mechanised crafts
	Non- Motorised	Motorised	
Trivandrum	11832	3408	31
Quilon	1673	2588	1127
Alleppey	1589	3563	248
Ernakulam	1945	792	1325
Trichur	1588	889	131
Malappuram	2685	1427	176
Calicut	4031	2234	607
Cannanore	1600	1068	439
Kasargode	1573	1373	1222
Total	28456	17362	4206

Source: GOK, 1995

Thanks to the mechanized sector that the total fish production in the state has registered much progress. In 1980 the total marine fish landing was 279443 tonnes which shot upto 647526 tonnes by 1989 (GOK, 1990). But the negative externality of the increased mechanization on the traditional fisherfolk is very high. The lion's share of the catch is pocketed by the mechanized sector so much so, the traditional sector is increasingly getting pauperised. In 1980 the share of the traditional sector in the total catch was 51.6 percent which fell drastically to 5.2 percent by 1989 (GOK, 1990). Due to the poor catch and lower levels of income, the traditional fishermen who were avid fish eaters were forced to reduce the consumption of fish, and instead, sell the same out to buy rice and other provisions.

There is another irony that the fishermen who worked in the mechanized sector have just become bonded labourers¹ working under

1. There is a common practice in the mechanised sector that during the off-season the fish labourers borrow money from the boat owners. One of the conditions attached to such loans is

the boat owners. While boat owners amass the larger share of income, the share of the labourers become much less. Thus we see that the distribution of the income from the fishing sector is highly skewed against the actual fishermen.

c. Role of Religion

Religion plays a dominant role in the life of fisherfolk. A deep faith in God is found to be a general underlying characteristics of their life style. Sea, the source of their livelihood, is often seen as the 'mother' and the fish output as a gift. Houtart and Nalini (1988) observes that " the first major characteristics of fishermen culture is its religious aspect" (p. 21). The fisherfolk of Kerala belongs to three religious groups: Hindus, Christians and Muslims. The religion-wise distribution of fishing population across Hindus, Christians and Muslims is of the order of 40:35:25 (Vimalakumari, 1991).

In the Pulluvila village where the field study was conducted, all the fishermen belong to the Christian community and they are found to be very much religious minded. Fishing is basically a hunting and gathering activity in which the fishermen confront the raw forces of nature. There is a big element of uncertainties in deciding the outcome of their labour. This has contributed to strengthen their reliance on the "Super Natural Element" and it gives a strong sense of religiosity to the community. Due to this religious belief, they are very generous in contributing

that the fish labourers are not allowed to work with any other boat owners than the lender. Thus, in effect, they become bonded labourers.

financially towards religious activities like building of churches, schools and also for social services. The Christian church, in turn, plays a prominent role in the educational and socio-economic development of the fisherfolk. In order to understand the role played by religion in the socio-economic and educational development of the fisherfolk, let us take the example of the Latin Catholic Diocese of Trivandrum. Out of the 42 marine villages in Trivandrum district, 33 villages are predominantly inhabited by the Catholic population. Table 2.3 shows the various institutions run by the Catholic church in these villages.

Table 2.3 Socio-economic and Educational Centres of Catholic Church in the Marine Villages of Trivandrum

Sl.No.	Institutions	Numbers
1	Kindergartens	35
2	Lower Primary Schools	16
3	Upper Primary Schools	6
4	High Schools	13
5	Higher Secondary School	1
6	Colleges	2
7	Dispensaries	10
8	Social Welfare Centres	17
9	Arts & Sports Centres	32
10	Library & Reading Rooms	21
11	Social Action Units	33

Source: Diocesan Directory 1997

The church takes up the role to initiate certain movements like literacy campaign, anti-liquor campaign, etc., for the betterment of the people and to uproot the social injustices inflicted upon the fisherfolk. The Catholic church pioneered to organise the traditional fishermen for the first time in Kerala and formed an independent trade union to fight for their rights. The religious and voluntary groups were also able to influence the government to change some of the policies and to enact some reforms into the

marine fisheries sector. Banning of trawling during monsoon, educational grants to fishermen students, etc., are some of the benefits.

2. Socio-economic and living conditions of the fisherfolk

There are various problems specific to the fisherfolk and they are generally related to the living conditions of the fishermen and some of them are environmental in nature.

a. Low levels of education

Though literacy and education are the hallmark of Kerala's social development, the fishing communities lag behind in these aspects. Comparison of the literacy rate of the working population of the state with the fish workers shows that the latter is far behind in the levels of literacy (see Table 2.4).

Table 2.4 Literacy rate among workers in Kerala (1981)

Category	Male	Female	Total
All workers	89	70	85
Fish workers	67	44	66

Source: Census of Kerala, 1981

Level of education is also very low in the fishermen community. A sample study of Kattamaram fishermen in Trivandrum conducted in 1991 revealed that between fishermen who had fishing experience as wide as a range of 12 to 50 years was just 3 years the average time spent in school (Kurian, 1994). The educational attainments of the sample population of three fishermen villages as given by Thomas (1989) shows that the proportion of population below secondary

level is much larger than that of the higher levels (see Table 2.5).

Table 2.5 Educational attainments

Educational Attainments	Anjengo	Purakkad	Parappanangadi
Below Secondary	65	66	87
Secondary & Matriculation	29	30	11
Above Matriculation	6	4	2
Total	100 (170)	100 (148)	100 (203)

Note: Figures in brackets represent absolute number of persons

Source: Thomas (1989)

Our sample study at Pulluvila reveals that among the hundred households, only one percent is having more than one member above high school level of education. Sixty percent of the households do not have any member with education above elementary school (more details, see Chapter 3).

This low level of educational attainments of the fisherfolk is really disturbing when we place this finding against the historical fact that it is the Catholic Church and other religious groups that have taken a major role in the diffusion of educational institutions in the state. There can be various reasons for this predicament.

According to Thomas (1989), the compelling reasons seem to be the grossly inadequate associative conditions which is required to do well in the school, financial constraints, poor habitat, and lack

of proper parental attention and encouragement. Compulsion from the fishing job itself can be another reason. To go to school, implies keeping away from fishing. It is all the more true when we learn that most of the techniques of fishing, especially the use of traditional crafts and gear could be picked up only through the process of 'learning by doing' from a very young age. Consequently, going to school and job learning are looked at by many of the fishermen as competing ends rather than as complimentary in nature. Another factor that is contributing to the low level of schooling is the unsteady time schedule of their work and the labour immobility and the resultant situation wherein they seldom come across the 'need' for reading and writing. Consequent to this there are also cases of fishermen who were earlier literate, but have gradually lost touch of reading and writing.

Knowledge being power, the low levels of education and literacy can turn to be a very serious impediment in the path of their socio-economic development.

b. High density of population and low levels of land holding

The fishermen are living in the geographical margins of land - on the narrow strip of coastline. Occupational and cultural constraints have bonded them to the sea shore. Moreover, many of them do not have their own land and therefore live in the 'puramboke'² land. The net result of this phenomena is the extremely high levels of population density. According to 1981

2. *'Puramboke' land refers to the unregistered land which de jure belong to the public authority*

census, population density of the marine fishing villages was around 2113. The contrast is clear when we compare it with the all Kerala figure of 655. The classic example for the huge density of population of marine fishing villages would be the case of Pulluvila village of Karumkulam panchayat, our micro study area (Details, see Chapter 3).

Because of the over-crowding, many of the fishing households do not possess even their homestead. As per the Kerala State Homestead Act every household is entitled to a piece of homestead land. In the Table below, the pattern of ownership of land of Kerala as a whole and of fishing villages is given.

Table 2.6 Percentage of household and pattern of ownership of land (1981)

	No Land	< 5 Cents	5-10	11-100	101-500	> 500
Kerala	?	9	73		15	3
Fishing Villages	16	32	28	23	1	-

Source: Kurian (1994)

It is alarming to note that 16 percent of the fishermen households possess not even a single cent of land and 32 percent of the fishermen households come under the category of less than 5 cents, as against 9 percent in the state as a whole. In Pulluvila 40 percent of the sample households live in 'puramboke' land and only 2 percent households have land above 10 cents (see Chapter 3). This 'landlessness' has severe negative impact on the housing and hygienic conditions of the fishermen.

c. Poor housing

It is natural that when the fishermen do not have land of their own to build houses, and have to depend on 'puramboke' for shelter, the houses being erected would be some temporary structures like thatched huts. Even though thatched huts are not uncommon in Kerala, its proportion is much larger in the marine fishing villages. Only 16 percent of the houses in the fishing villages could be considered 'pucca' houses as against 72 percent in the all Kerala level (see Table 2.7).

Table 2.7 Housing and related amenities in Kerala and in Marine fishing villages (1981)
(Percentage of Households)

Types of Houses	Kerala	Fishing villages
Thatched huts	24	48
Mud and semi-thatched	4	36
Pucca	72	16
Electrified	24	10
With latrines	19	5
Water easily available	61	33

Source: GOK 1980 and 1988

In the housing related amenities, we observe lower standards in fishermen households. The percentages of houses with latrine and electrified houses are just 5 and 10 for fishermen, whereas the corresponding all Kerala figures are 19 and 24 respectively.

d. Drinking water and Sanitation

Two vital factors that affect the health are drinking water and sanitation. However, many of the marine villages are severely constrained in these two aspects. The drinking water problem is very acute and it prompts to comment that 'water, water everywhere, but not a drop to drink'. The surface water available in the

coastal areas suffers from salinity and other contamination. A few villages which have water supply schemes miserably fail to function properly.

The Secretary, Fisheries Department of Government of Kerala acknowledges in his report on the draft "Coastal Development Authority" 1996, that most of these water supply schemes have failed due to the problem of inadequate storage capacity, damages, rust and holes in the pipe lines, lack of maintenance and all the more, the insufficiency of the quantity of water in proportion to the demand. As a consequence, the fisherfolk mostly consume water from the open wells or the dug out pits which are largely impure sources.

According to the statistics given by the above report, only 33 percent of the marine fishery households have access to safe drinking water compared to the 61 percent in all Kerala. Of these households having access to drinking water, 53 percent depend on public taps and 42 percent on wells. The severity of the drinking water problem is well testified by figures from Pulluvila, where 91 percent of sample households depend on public wells for drinking water.

The sufferings of the fisherfolk is compounded with the absence of sanitary facilities. As it is commented in the Fisheries Planning and Development document that the lack of sanitary facilities in the coastal region especially of the Southern region causes misery to the fisherfolk particularly of women. And the absence of proper

technology of toilet constructions suitable to the water logging physiography of this region makes the problem still worse.

In the marine villages only 20 percent have sanitation facility and for the rest the sea shore is the only toilet.

e. Health Hazards

Proliferation of health hazards is another feature of marine villages. Almost all the above mentioned problems like overcrowding population, poor housing and sanitation, absence of safe drinking water, etc., become major health hazards to the fisherfolk. Thus these villages are prone to epidemics. Even the eradicated diseases like malaria, small pox are reappearing in the fragile marine villages (Malayala Manorama daily, 12th August, 1996; Indian Express, 12th June, 1996)

Apart from these, some occupational health hazards also affect their quality of health. The nature of work itself is very hard both for fishermen and fish vending women. Often they cannot take their food on time. In addition to these physical hazards, there is an element of mental agony caused by the higher levels of uncertainties regarding the output of their fishing effort. All these factors do contribute to the health problems of the fisherfolk. In the coming chapter, we would see more of the health and health problems of fisherfolk.

In short, the studies on socio-economic and cultural life of the fisherfolk well testify that they remain at the lower rungs of development.

Chapter III

ANALYSIS OF THE HEALTH STATUS: A CASE STUDY OF PULLUVILA VILLAGE

In the previous chapter we have identified some important problems faced by the fisherfolk of Kerala and have seen that most of the socio-economic and environmental variables have a cumulative effect on the health status of the fisherfolk. Our next attempt is to make an analytical study of the health status of the fisherfolk. This analysis is based on the survey conducted in the marine fishing village of Pulluvila in the district of Trivandrum in the Kerala State. The analysis is preceded by a brief description of the village.

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The Village Profile

Pulluvila is a narrow strip of land, lying between the Arabian sea and the Vizhinjam-Poovar road, 25 kms south of Trivandrum city, in the Neyyattinkara Taluk of Trivandrum district of Kerala. This is a typical fishing village and the fishing operation in this village is restricted to a coastline of one kilometer. This village is in the Karumkulam Panchayat which is considered to be the most densely populated panchayat in India with a population density of 10260 persons per square kilometer. The total area of the panchayat is 3.2 sq km. and total population is 32830 as per the 1991 Census. There are eleven wards in this panchayat and the three northern wards (IX, X, XI) form the Pulluvila village (see Figure 3.1 for the map of Karumkulam panchayat). This narrow strip of village is

FIGURE 3.1 MAP OF KARUMKULAM PANCHAYAT

KARICAL LAKE

 DULLUVILA VILLAGE

VIZHINJAM

POOVAR EAST BRANCH CANAL

KAKKATHOTTAM ROAD

VANDAZHANINNA ROAD

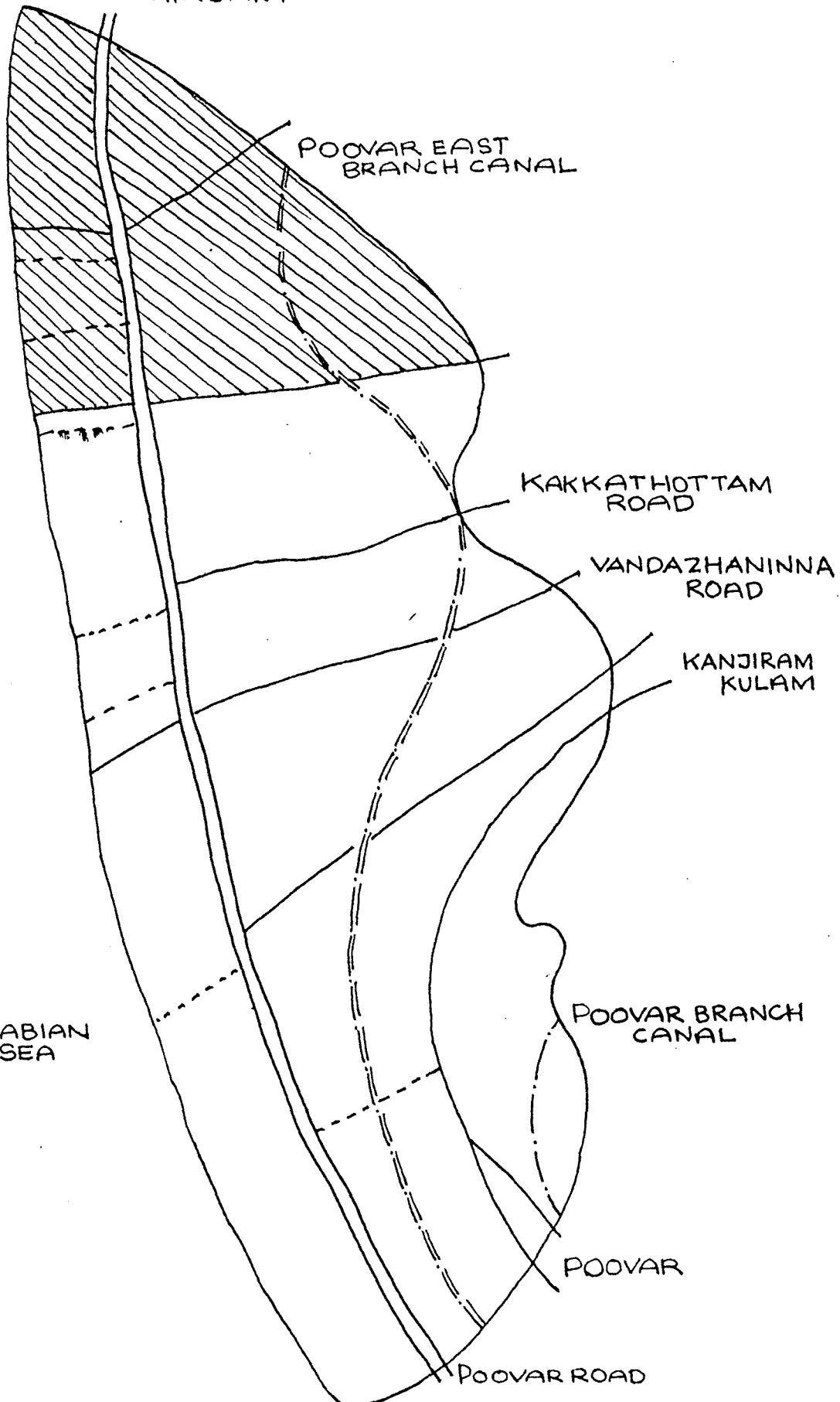
KANJIRAM KULAM

ARABIAN SEA

POOVAR BRANCH CANAL

POOVAR

POOVAR ROAD



only 0.25 km wide and 0.80 km long. There are 6522 households with a population of 32830 in this panchayat of which 2136 households with a population of 10165 is in the Pulluvila village. In this village there are 49 Hindu households (2.3 percent), 32 Muslim households (1.5 percent) and 2055 Christian households (96.2 percent). Seventy percent of the households in Pulluvila are fishermen households and they are all Christian. The Hindu and Muslim population engage in agricultural and allied activities and in the service sector.

Living Conditions of the People:

The general picture of the living conditions of the people of this village looks poverty stricken and is very clear from the data given by the 'Vikasanarekha 1997'¹ of Karumkulam panchayat. As per the data, out of 2136 households in the Pulluvila village, only 290 households have land ownership (13.5 percent). Sixty percent of the households do not have proper houses to live in. The housing conditions are very poor and inferior in every respect. Walls are made of mud or coconut palms with thatched roofs. Out of 2136 houses only 634 are electrified (just 30 percent).

Two main sources of water supply exist in this village. They are public wells and public taps. However, the well water has been found to have a very high level of salinity and it is not safe in many respects. Even then the people depend mainly on public wells due to frequent water supply failures.

1. *As the ninth five year plan is declared a 'people's plan' every panchayat in the state has prepared a developmental approach paper, titled 'vikasanarekha'.*

The panchayat as a whole and this village in particular, lacks sufficient toilet and drainage facilities. Out of 2136 households only 175 households have toilets (8 percent). Women of the rest of the households solely depend on one community latrine managed by a voluntary organization. For men the sea shore is the toilet!

In the matter of education facilities, there are 8 primary schools in the panchayat and one Higher Secondary School of which the latter is situated at Pulluvila. The fact that fisherfolk are backward and that their literacy rate lower than the state average is further confirmed because this panchayat had only 70 percent literacy when Kerala was declared as a total literacy State. Continuous literacy campaign was launched and as per the panchayat records, still there are 20 percent illiterate in the panchayat. Though most of the children join primary schools as they pass on to the high school levels, percentages of drop outs are also very high (see Vikasanarekha, 1997).

The health status of the people too remain low. It is a contagious disease prone area. Almost every year diseases like cholera, diarrhoea, skin diseases etc break out. Morbidity rate with respect to common as well as chronic ailments is high. The poor sanitary facilities, prevalence of unhealthy habits of smoking, drinking etc and the abject poverty might be aggravating the situation. Further more, the lack of supply of adequate health care limits the villagers' access to health care. There is only one PHC for 32830 persons and that is the only health care institution in the panchayat! The following section of this chapter is a

detailed analysis of the health status of the fisher population of this village.

Analysis of the Health Status

Methodology

Data base on health status of fisherfolk is rather scanty. Therefore the study was based on the primary data generated through a sample household survey conducted at Pulluvila village. A detailed questionnaire was prepared for the survey (a copy of the same is given in the appendix). The questionnaire was addressed not only to the health aspects but also to the socio-economic profile of the household and the environmental aspects.

As a preparation for the selection of the sample, a listing of all the fisherfolk households of the village was done. It was found that out of the 2136 households 2051 were fishermen households. The sample size was limited to 100 households. The sample was selected according to systematic random sampling in which the sample consisted of the units numbered as

$$1, i+k, i+2k, \dots, i+(n-1)k$$

where $i = 1$, $k=20$ and $n=100$.

The first part of the analysis was to select a few important socio-economic and environmental characteristics of the households in order to divide the households into different groups for our analysis. The grouping of the households and the selection of the characteristics were in line with the criteria followed in the study conducted by Kerala Shasthra Sahitya Parishat (KSSP) in 1991

(see Kannan et al, 1991) and accordingly the households were divided into Socio-Economic Status (SES) groups and Physical Environmental Status (PES) groups. The characteristics selected to capture socio-economic status were percapita income, level of education, ownership of land and housing condition. PES characteristics considered are drinking water, sanitary facility, cooking device, waste-water disposal, solid waste disposal and existence of stagnant water. Most of these characteristics were ranked in an ascending order from 1 to 4, the former denoting the bottom position and the latter denoting top position. Rank 2 would be just above one and hence closer to the lower position and rank 3 would mean nearer to the higher position. In certain cases only two ranks were considered, 1 and 4 indicating a positive or negative answer. These individual ranks were used to construct a weighted average in order to construct four groups within SES and PES. The details of the construction of SES and PES will be discussed later.

Characteristics of Socio-Economic Status

1) *Percapita Income:* The rationale for selecting percapita income is that it may have an influence on health status because to be poor means to have low purchasing power for buying goods and services including health services. Percapita monthly income is calculated from the data reported by the respondents. Notwithstanding its imperfections, we accept the figures on the presumption that the problem of under-reporting bias is evenly distributed across households. The households were ranked into four categories. The percapita income limit of rank 1 was estimated as Rs 193. According to Bardhan (1973), Rs 16.10 per month per

person is the poverty line limit. It was inflated by the consumer price index for agricultural labourers for the year 1995. The other 3 rank limits were arbitrarily fixed as follows:

1. Percapita monthly income less than Rs 193
2. Percapita monthly income Rs 194-Rs 250
3. Percapita monthly income Rs 251-Rs 300
4. Percapita monthly income greater than Rs 300

Our result shows twenty-six percent of the households are below poverty line (see Table 3.1).

ii) Level of Education: Education and health were given very much emphasis in Kerala even from the time of princely states. Progress in education and especially female education has contributed significantly towards the progress in health status of Kerala (Kannan 1988; Mari Bhat and Irudaya Rajan, 1990). Therefore we have introduced this variable in the study and ranked as follows:

- 1) At least one member of the household attended elementary school and none having education above that
- 2) At least one member studied in the high school and none above high school.
- 3) More than one attended high school and/or at least one above high school.
- 4) More than one member having education above high school.

The results given in Table 3.1 is an eye opener. Eighty-five percent of the households do not have anybody with education above high school.

iii) Ownership of land by the households: One of the most deplorable conditions of this as well as many other marine villages

is the "landlessness". We have already seen that the density of population of this Panchayat is very high. A piece of land owned not only adds to the self respect but may also help to enhance physical environment of housing and sanitation. So we have introduced this variable under four ranks.

- 1) Landless households (living in "puramboke" land)
- 2) Land owned is less than two cents.
- 3) Land owned between two and ten cents
- 4) Land owned greater than ten cents.

The results are alarming (see Table 3.1). Forty percent of the households have no ownership of land at all. Only two percent of the households have land above ten cents.

iv Housing Condition: The house provides the primary physical environment for health. Since the space within the house and the type of roof are the major features of the housing condition, we have taken both these features in the analysis. Ranking is as follows:

Roof	Floor Area(sq.ft)
1) Thatched	1) 0-200
2) Made of sheets	2) 201-500
3) Tiled	3) 501-1000
4) Concreted	4) greater than 1000

Though nowadays thatched houses are becoming rare in Kerala, fifty one percent of the houses here remain thatched.

The results of the analysis of socio economic characteristics is summarised in the Table 3.1. Since the total number of households being 100 the proportions represent percentages as well. Cumulative percentages are also given.

Table 3.1 Distribution of Households by SES Characteristics

Rank	Per capita Income		Land Owned		Education		Roof		Floor	
	Number	Cumulative percentage	Number	Cumulative percentage	Number	Cumulative percentage	Number	Cumulative percentage	Number	Cumulative Percentage
1	26	26	40	40	60	60	51	51	10	10
2	15	41	10	50	25	85	7	58	53	63
3	18	59	40	90	14	99	24	82	27	90
4	41	100	2	100	1	100	18	100	10	100

Construction of Socio Economic Status (SES) Groups

Having traced the important characteristics related to the socio economic conditions which could influence the health status, we require a composite index to capture all these characteristics. Therefore, as we have mentioned earlier, we should construct a SES index. For this, a weighted average of the four SES characteristics is taken. The value judgement for assigning weight was to give more weight to the variable that may have an impact on health status more. Per capita income was considered most important for health status for it determines the purchasing power and hence it was given the highest weight (0.35). Education was assigned the weight 0.25. Housing condition was given the weight 0.25 of which floor area was given 0.15 and roof 0.10 weight. Land ownership was assigned a weight of 0.15. The ranks obtained thus were further classified into four SES groups according to the quartile values. The groups would mean that:

SES1 = Poor

SES2 = Somewhat Poor

SES3 = Not poor

SES4 = Relatively better off

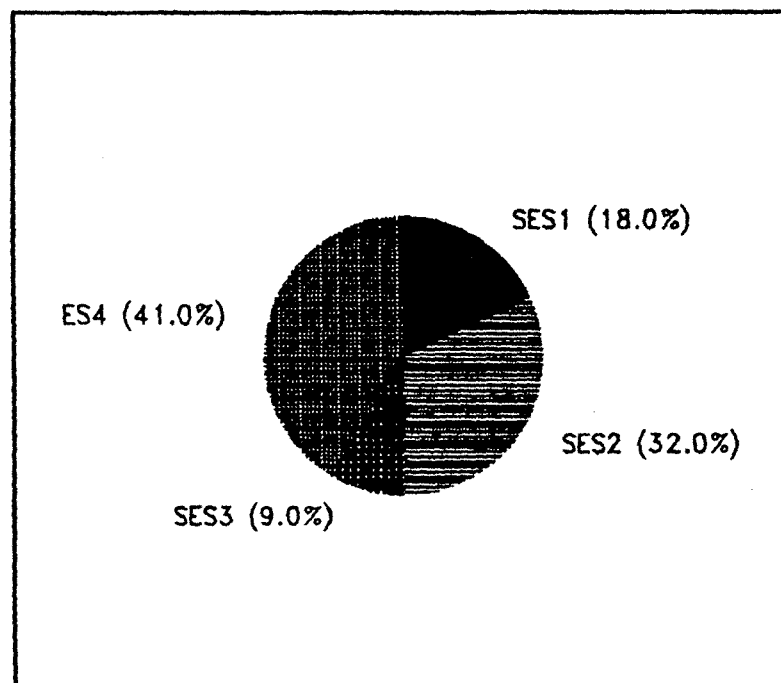
The distribution of the households in terms of Socio Economic Status is given in Table 3.2

Table 3.2 Distribution of Households by Socio Economic Status (SES)

Status	Number of Households	Cumulative Percentage
SES1	18	18
SES2	32	50
SES3	9	59
SES4	41	100

It is interesting to observe that the proportion of households in the lowest SES group are smaller than the proportion in the lowest in the lowest ranks of individual characteristics. It means that the poor are not equally poor with respect to all the individual characteristics. The same logic follows the higher proportion of households in SES 4. A graphic representation of the SES distribution of the households is seen in Figure 3.2.

Figure 3.2 Distribution of households by SES groups.



Characteristics of Physical Environmental Status

We have already discussed the relevance and need for considering the physical environment in the analysis of health status. Six variables are selected for the same

1) Source of Drinking Water: Drinking water being considered an important factor contributing to health status and this factor is included with the following ranks:

- 1) public well
- 2) own well
- 3) public tap
- 4) tap water at home

Interestingly there were no observations under ranks 2 and 3. Ninety-one percent of the households were depending on public well for drinking water (see Table 3.3).

ii) Sanitary Facility: Regarding sanitary facility, the stress was given on the type of latrines used by the people. Only three types of latrines were relevant in the Pulluvila village and they were ranked as:

- 1) Open ground /sea shore
- 2) Community latrine
- 3) Own latrine

Even though most of the women use community latrine, the men and children use the seashore. As a result, the observations are concentrated in rank 1 and a few in rank 4 (Table 3.3).

iii) Cooking Device: Cooking devices like wood-burning that generate more smoke can cause negative externality on health and therefore we consider this variable with the following ranks.

- 1) Wood-Burning
- 2) Smokeless Choola
- 3) Kerosene Stove
- 4) Gas Stove

The results show that ninety-six percent of households, including the majority of the relatively better off households, depend on wood burning than on kerosene or gas stoves and that too in a place where firewood is rare and costlier.

iv) Disposal of Waste Water: Since drainage is essential for environmental hygiene, how the waste water from the house is disposed of assumes importance. This variable was ranked as

- 1) No separate arrangements for disposal
- 2) Directed to kitchen garden
- 3) Disposal into a pit
- 4) Drainage facility used

It was found that for eighty-eight percent of households there was no arrangements for disposing waste water.

v) Disposal of Solid Waste: This characteristic was also considered as a feature of environmental hygiene and ranking was done in the following manner.

- 1) Simply thrown out
- 2) Deposit in a pit
- 3) Convert to manure
- 4) Waste is burnt

It was heartening to observe that ninety-one percent of the household disposes solid waste by burning and only nine percent household just throw out solid waste.

vi) Existence of Stagnant Water: Water stagnation in the surroundings can cause severe health menace and therefore the households were classified into two groups: those having this problem and those who do not have

- 1) Stagnant water exists
- 2) Stagnant water does not exist

Sixty-three percent of the households suffer from the problem of stagnant water. The results of the analysis PES characteristics is summed up in Table 3.3.

Table 3.3 Distribution of Households by PES Characteristics

Rank	Drinking Water		Sanitary Facility		Cooking Device		Drainage		Solid Waste Disposal		Stagnant Water	
	No of HH	Cumulative %	No of HH	Cumulative %	No of HH	Cumulative %	No of HH	Cumulative %	No of HH	Cumulative %	No of HH	Cumulative %
1	91	91	84	84	96	96	88	88	9	9	63	63
2							6	94				
3							3	97				
4	9	100	16	100	4	100	3	100	91	100	37	100

Construction of Physical Environmental Status (PES)

The aforesaid six characteristics were combined to form a weighted average so as to form an index of environmental status. The weights were given in the following order. Source of drinking water was given the highest weight of 0.35 which was followed by sanitary facility with weight of 0.10 each. The weighted averages

were grouped into four groups of Physical Environment Status according to the quartile values. The four PES groups would mean:

PES1 = Poor (Quite unsatisfactory sanitary environment)

PES2 = Somewhat Poor (Not that unsatisfactory)

PES3 = Not poor (Not unsatisfactory)

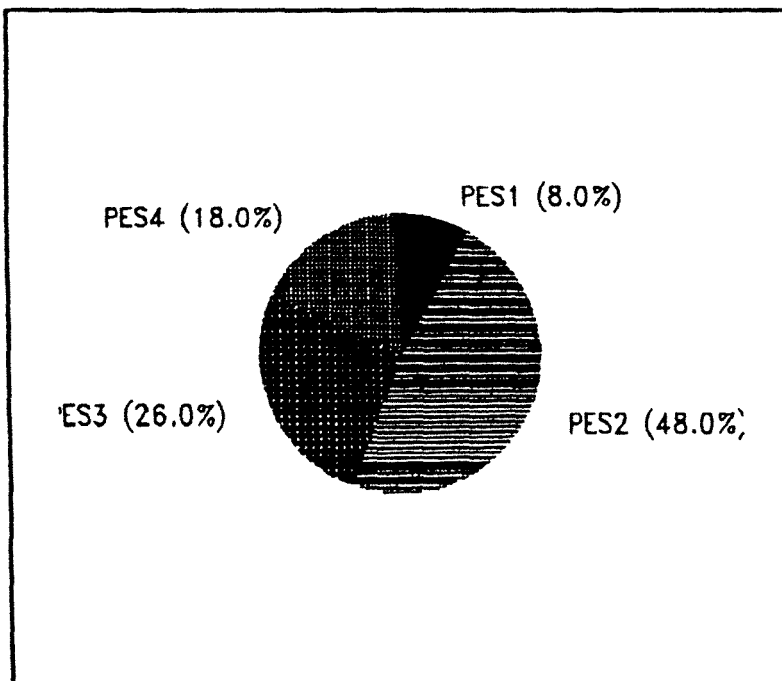
PES4 = Relatively better off (Satisfactory)

The distribution of households into the four PES groups are shown in Table 3.4 (See also Fig 3.3).

Table 3.4 Distribution of Households by PES Groups

Status	Number of Households	Cumulative Percentage
PES1	8	8
PES2	48	56
PES3	26	82
PES4	18	100

Fig 3.3 Distribution of households by PES Characteristics



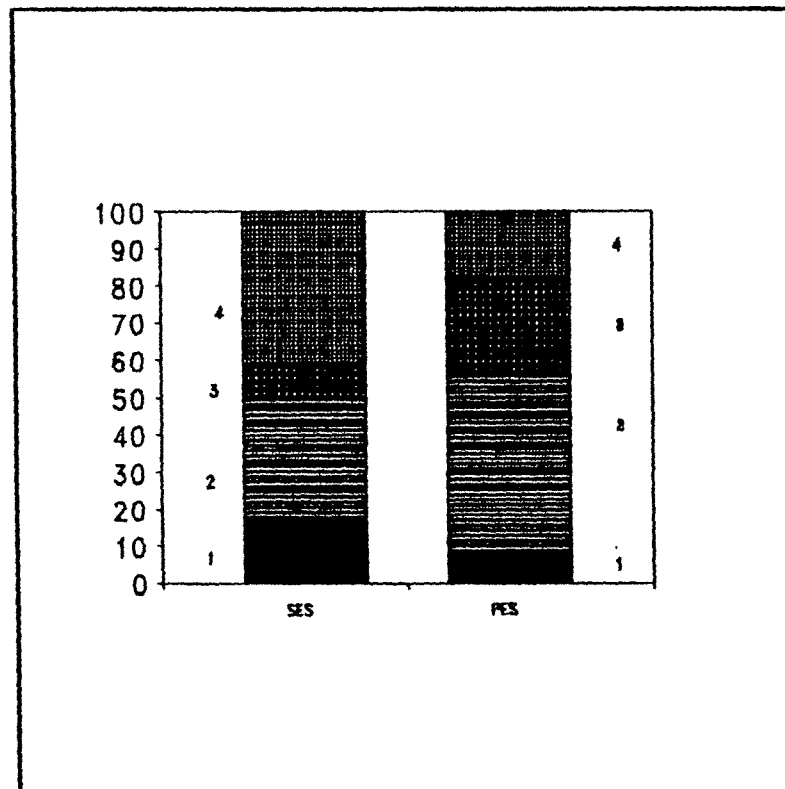
An interpretation of this result would be more revealing when it is associated with the SES distribution. Table 3.5 would provide a SES-PES matrix.

Table 3.5 SES-PES Matrix of the Distribution of Households

SES/PES	PES1	PES2	PES3	PES4	Row Total
SES1	3	10	5		18
SES2	2	16	9	5	32
SES3		4	4	1	9
SES4	3	18	8	12	41
Column Total	8	48	26	18	100

If there was a perfect association between SES households and PES ones the cent percent distribution would have been through the diagonal and the rest of the cells would be zero. But the result is far away from that. The most interesting thing is that out of forty-one percent households who are 'relatively better off' in Socio-Economic Status, only twelve percent are in environmentally 'relatively better off' condition where as out of the eighteen percent 'poor' households in SES, fifteen percent are above 'poor' in environmental sanitation. This means that to be better off in socio-economic status is no guarantee for an improved sanitation. It would require many other factors including the physical infrastructure. The discrepancies across SES and PES distribution is further visualised in the Figure 3.4

Figure 3.4 Distribution of Households by SES and PES groups



Morbidity

Morbidity refers to the incidence of illness or we may say that it refers to the "disease load". A condition of low morbidity logically follows that the health status is better. However this logic need not necessarily be true. Low morbidity can occur from the actual reduction in incidence of illness. But it can also occur due to under-reporting or due to the lack of disease consciousness.

Now let us come to the Morbidity rate of our sample households. Morbidity rate is estimated here as the prevalence of sickness per thousand persons during the two months of the survey. The pattern of morbidity can be seen from the Table 3.6.

Table 3.6 Pattern of Morbidity

Sl No	Illness	Frequency	Morbidity Rate (per 1000 persons)	Percent to Total Illness
1.	Arthritis	1	1.7	1.3
2.	Asthma	21	35.5	27.6
3.	Blood Pressure	5	8.4	6.6
4.	Diarrhoea	1	1.7	1.3
5.	Fever	10	16.9	13.2
6.	Jaundice	1	1.7	1.3
7.	Kidney Ailments	1	1.7	1.3
8.	Leprosy	1	1.7	1.3
9.	Mumps	1	1.7	1.3
10.	Tuberculosis	3	5.1	3.1
11.	Gynecological	1	1.7	1.3
12.	Others	30	50.7	39.5
	TOTAL	76		100

It deserves notice that morbidity rate of asthma is higher than any other disease. Though the morbidity rate of diarrhoea is found to be low, it should be borne in mind that it is during the monsoon months its incidence increases. About 20-30 percent increase is seen in the incidence of diarrhoea during that season in rural Kerala (Kannan et al, 1991). Our survey was conducted during the summer season. Incidence of tuberculosis might be more than our estimate. In this region there is too much of a stigma attributed to this disease that people are very reluctant to reveal its incidence.

It would of be of interest to divide the diseases into common and chronic and see the morbidity pattern. Let us have a look at Table 3.7.

Table 3.7 Morbidity due to Common and Chronic Diseases

Common Diseases	Morbidity Rate	Chronic Diseases	Morbidity Rate
Diarrhoea	1.7	Leprosy	1.7
Fever	16.9	Tuberculosis	5.1
Mumps	1.7	Asthma	35.5
Jaundice	1.7	Blood Pressure	8.4
Others	18.6	Kidney Ailments	1.7
		Gynecological	1.7
		Arthritis	1.7
		Others	32.1

The people are found to be more prone to chronic diseases. Incidence of asthma, tuberculosis and blood pressure is more prevalent. Among the common diseases, of course, fever dominates.

Morbidity According to Status Groups

Now our interest is to see how the socio economic status and physical environmental status of households is associated with prevalence of sickness. Table 3.8 depicts the morbidity rates for common and chronic diseases according to Socio Economic Status.

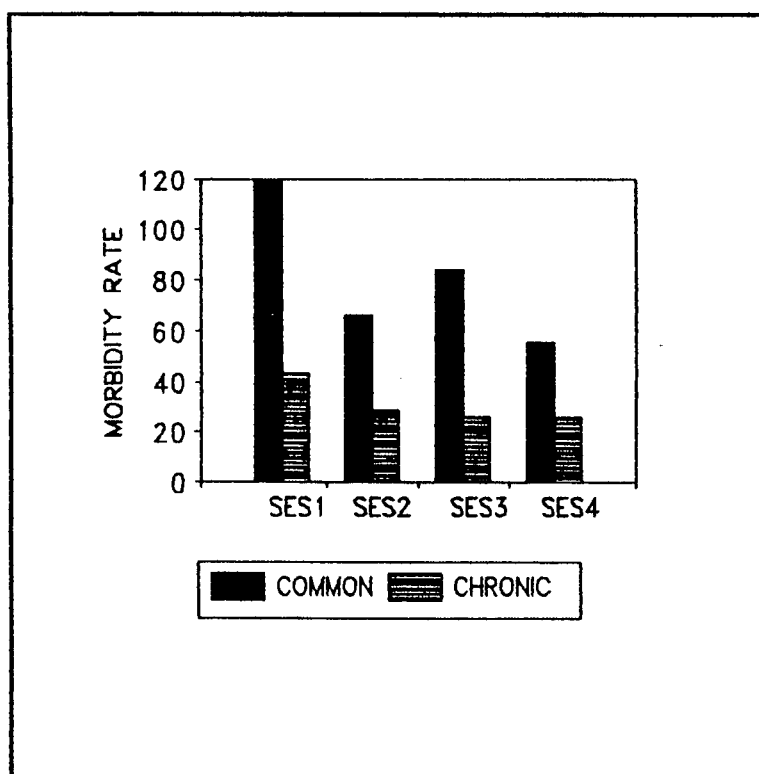
Table 3.8 Morbidity Rates of Common and Chronic Diseases by SES Groups

Status	Morbidity Rates	
	Common Diseases	Chronic Diseases
SES1	119.57	43.48
SES2	66.35	28.44
SES3	84.21	26.32
SES4	55.78	25.70

It is clear from the table that as the people rise up in socio economic status their morbidity comes down. With regard to common diseases, it is more prominent. Moving from SES1 to SES4

morbidity is more than halved. In the case of chronic diseases, though there is reduction in morbidity as we climb up the SES, the difference between SES1 and 4 is not that high. This might be due to the fact that the chronic diseases are a mixture of 'poverty diseases' like tuberculosis and 'affluent diseases' like hypertension. The morbidity differentials between common and chronic disease across SES groups is illustrated in figure 3.5.

Fig 3.5 Morbidity Differentials of Common and Chronic Diseases across SES Groups.



Morbidity and Physical Environmental Status

Association of morbidity with physical environmental status of the households is the next topic of our interest. PES group-wise distributions of morbidity is given in Table 3.9.

Table 3.9 Morbidity of Common and Chronic Diseases across PES Groups

Status	Morbidity Rates	
	Common Diseases	Chronic Diseases
PES1	-	108.11
PES2	97.64	47.14
PES3	94.12	29.41
PES4	11.36	29.55

The data reveals that improvement in physical environment reduces the morbidity with regard to both common and chronic diseases. The incidence of common diseases is very low in the group of PES 4. It is surprising that no observation of common disease was there in PES1. One reasonable explanation would be that people of PES1 who are used to very poor sanitary conditions would seldom become aware of common illnesses. They may live with those diseases and hence would not report their incidence. However, highest morbidity of chronic diseases is reported in the PES1 group.

Consumption of Liquor and Tobacco

It is a well established fact that habits like drinking, smoking etc. contribute to a number of diseases that affect liver, lungs, heart etc.. We are interested to see whether such practices are prevalent among the people, especially among the adult males of our sample households. We could collect some data regarding the consumption of tobacco by beedi and cigarettes. Data on consumption of liquor was not disaggregated. The following Table crosstabs the data by SES groups.

Table 3.10 Percentages of Adult Males Indulging in Consumption of Liquor and Tobacco

Status	Beedi	Cigarette	Chewing	Snuff	Liquor
SES1	35	18	59	6	24
SES2	14	16	70	16	28
SES3	25	37	75	-	37
SES4	13	39	64	18	45
All	22	28	67	10	34

Surprisingly, chewing is found to be the most prevalent habit among the adult males. Sixty seven percent of them indulge in chewing. Fifty percent of the adults do smoking. Proportion of cigarette smoking exceeds that of beedi. Thirty four percent indulge in liquor consumption. Of course, the duration and quantity of consumption would vary. One notable finding is that percentage of adults indulge in drinking is highest in the SES 4 group. The corresponding proportion in SES 1 group is just half of it ! As it goes against the common conception that it is the workers from lower income groups that indulge more in drinking, it would be of interest to probe into the situation. The prohibition of arrack by the State government might be a positive factor towards this. Smoking of beedi is more prevalent in the lowest SES class while the highest percentage of cigarette smokers are in the highest SES class. Surprisingly chewing is also more in SES4 class. In short, apart from beedi smoking, all other practices more in the highest SES group. Deriving inferences on the causality of sicknesses from this analysis would be unwarranted because cause and effect relationship is temporal whereas our analysis do not capture the time dimension perfectly.

Maternal and child health

Health of the mother is an important determinant of child health. Maternal factors like age at time of delivery, birth intervals etc influence greatly the health of children (Moseley and Chen, 1984). In India, Kerala is the state having the highest age at first delivery (Zachariah et.al, 1994; Kannan,1991). Teenage pregnancies (pregnancy before 20 years of age) as well as deliveries over the age of 40 years have greater risk factor. In this context a Socio Economic class-wise analysis of the age at delivery of our sample households is attempted (see Table 3.11).

**Table 3.11 Age at Delivery (Percentage)
by Socio Economic Class**

Age	SES1	SES2	SES3	SES4
< 20	-	8	-	-
20 -	67	46	100	63
25	33	15	-	-
25 -	-	31	-	37
30				
> 30				
Total	100	100	100	100

An interesting observation is that SES group specificities do not have much bearing on the age of delivery. Larger percent of deliveries took place in the age group of 20-25 years in all the SES groups. Age at delivery exceeding 30 years is more in the highest SES group.

Infant Mortality Rate

Infant Mortality Rate (IMR) is considered to be an important indicator of health status. Having a low IMR can be a pointer towards a better health scenario that cares for the infants. Kerala

is famous for its low infant mortality rate. As per the NFHS data (NFHS,1992-93) the IMR of India as whole is 79, whereas the corresponding figure for Kerala is just 17 (see Table 1.2). The IMR of our sample households calculated from the survey data based on recall of last year's births is was found to be 18.34 which is comparable to the state average. 92 percent of women were delivered in the hospital, and too in the private hospitals. . This might have been an added advantage to reduce the risk at child birth.

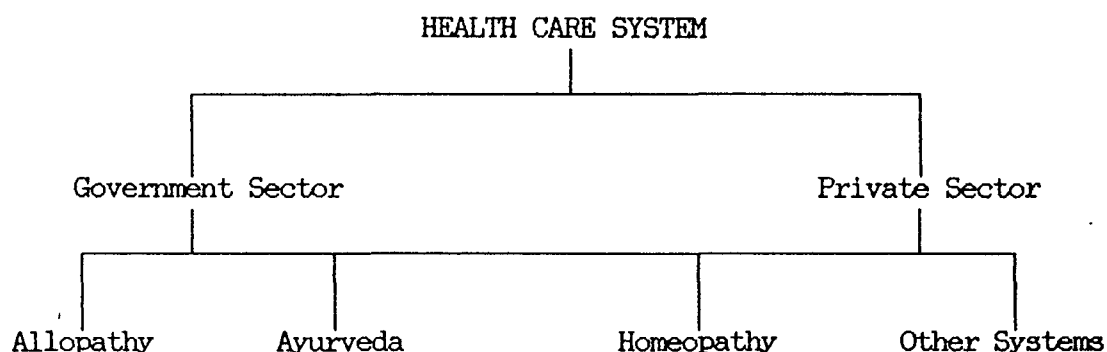
So far our analysis was centered around the various aspects of health status of the fisherfolk. Some of the findings are very important and they do demand further explanations. In chapter V we shall present some more explanations in the light of the group discussions with the fisherfolk. In the next chapter we shall extend our analysis into health care system that exist among the fisherfolk and into the utilisation pattern of the system.

Chapter IV

PROVISION AND UTILISATION OF HEALTH CARE

Having discussed the morbidity dimensions of the fisherfolk, an analysis of the supply of health care and its demand (utilisation) by them is in order. There are three major health care systems exist in Kerala; Allopathy, Ayurveda and Homeopathy. An important feature of the health care system of Kerala is that the state's intervention on the supply side is very prominent. At the same time there are very many private institutions providing health care. There are also a few cooperative institutions which we include under the private sector in the present study. Therefore, our health care system can be charted as in Figure 4.1.

Figure 4.1 Health Care System in Kerala



In the State level there are Medical College hospitals and in the districts there are district hospitals and Taluk hospitals. However, as far as the rural health service is concerned, the core institution is the Primary Health Centre (PHC). Starting of PHCs

in our country was as a part of the Community Development Programme (CDP) by the year 1952. The Five Year Plans have given much importance to the concept of PHCs. From the fifth Plan onwards rural health care was made a part of Minimum Needs Programme (MNP). The Sixth Plan envisaged the starting of Community Health Centres (CHC) by upgrading some of the PHCs into 30-bedded rural hospitals to cover a population of 1 lakh each for providing mainly specialised services in gynaecology, paediatrics, surgery and medicine.

One PHC is to give a coverage of 30,000 rural population. In hilly and tribal areas the coverage is reduced to 20,000. The PHCs would have sub centres and each one serves a population of 5,000 (and 2,000 in hilly areas). The present statistics of Allopathy institutions in the state (in government sector) is given in Table 4.1. As per 1996 data the rural health infrastructure is as follows (See Table 4.2).

Table 4.1 Statistics of Allopathy Institutions in the Government Sector

Institutions	Number	Bed Strength
Hospitals	149	29581
CHCs	60	3007
PHCs	961	5338
Dispensaries	53	154
TB Clinic Centres	21	268
Leprosy Control Units	15	-
TOTAL	1259	38348

Source: GOK, Economic Review, 1996

Table 4.2 Rural Health Infrastructure (1996)

Institutions	Number	Beds
Primary Health Centres	961	5338
Community Health Centres	60	3007
Sub Centres	5094	-

Source: GOK, Economic Review, 1996

Health care facilities in ayurveda is very limited. In the Government sector, there are about 100 ayurvedic hospitals and about 500 dispensaries to cater to the needs of rural people in the state. Homeopathy hospitals and dispensaries are still less.

In Kerala, private medical institutions play an important role in the provision of medical services. According to the survey conducted by Department of Economics and Statistics (1995) there are 4288 private allopathic medical institutions with 67517 beds in the state.

Compared to other states in India, the rural urban disparity in the health care provision is very much less in Kerala. Kerala has a higher proportion of health institutions in the rural area than in the urban. As per the 1987 KSSP survey, 86 percent of the allopathy institutions of government sector and 66 percent of the private sector are located in the rural area (Kannan et.al, 1991). However in terms of population covered and area coverage per health care institution, rural Kerala is far behind urban centres. While the area covered by an allopathic medical institution in rural Kerala is 9.8 sq.km, in the urban area every 0.8 sq.km is covered by an allopathic institution. Population coverage per allopathic institution are 5741 and 2388 for rural and urban areas respectively (Kannan, et.al, 1991).

The Case of Pulluvila

Against this general picture let us have a look at Pulluvila. As far as the Pulluvila village and Karumkulam Panchayat are concerned the health care institutions are practically absent. The only health institution in the Panchayat is one PHC which is situated in the Pulluvila village. That means, for a population of 32,830 there is only one public health care institution. Impact of this PHC on the health care of the people is found to be negligible. Knowledge about this PHC itself eluded many of them. Consequently utilisation rate also would be very low. Table 4.3 gives the data regarding the knowledge and utilisation of the PHC service for the sample population.

Table 4.3 Percentage of Households with Knowledge and Utilisation of the Nearest PHC

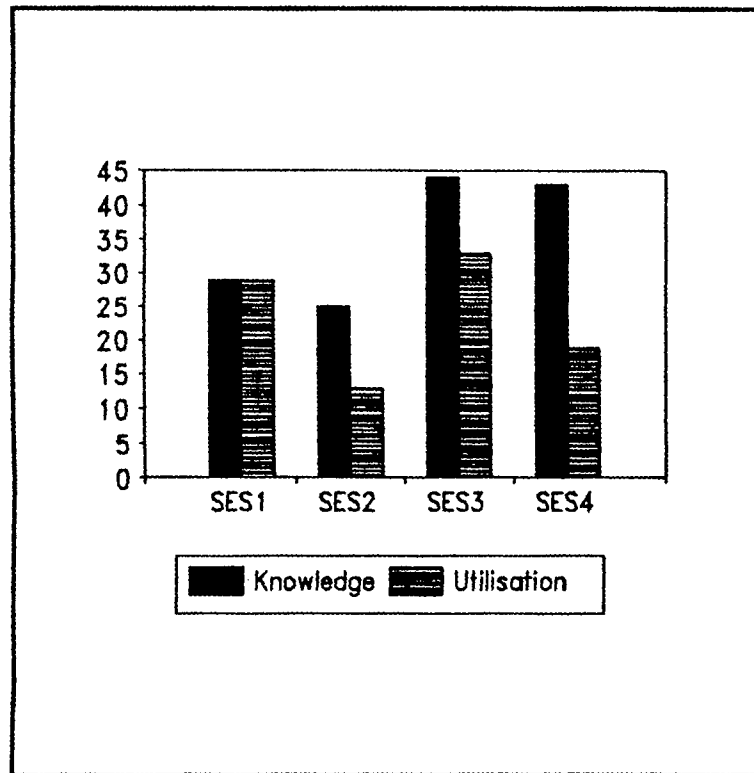
SES	Knowledge			Utilisation		
	Yes	No	Total	Yes	No	Total
1	29	71	100	29	71	100
2	25	75	100	13	87	100
3	44	56	100	33	67	100
4	43	57	100	19	81	100

It is surprising to see that the proportion of people who do not even know about the PHC is considerably high. It is the lower socio-economic groups that are more ignorant about the PHC. Nevertheless, the rate of utilization is lower in the highest SES group than in the lowest SES group. This finding is in conformity with the rural Kerala trend.¹ Level of utilization of PHC

1 For instance in the KSSP study we mentioned earlier, 19 percent of the rural households of SES 1 do not have knowledge of the nearest PHC while corresponding proportion in the SES 4 group is 15 percent. Regarding utilisation of PHC, 52 percent of the SES1 households avail while in SES 4 only 14 percent utilise PHC service.

remains, in general, lower than the level of knowledge of PHC (see Figure 4.2).

Figure 4.2 Knowledge and Utilisation of PHC by SES groups



In the survey we enquired from the people about their reasons for not going to PHC. Their responses are summarized in Table 4.4.

Table 4.4 Reasons for not going to the PHC

Reasons	Respondents (Percent)
No Doctor	22
No Medicine	47
No Treatment	23
Too Far	2
No Confidence	6
Total	100

23 percent of the people do not go to PHC on the ground that they will not get any treatment like a proper checkup, laboratory facilities, in-patient treatment etc. 47 percent people complained that no proper medicine is available there. Frequent absence of doctor discourages 22 percent of the people. 5 percent have no confidence in PHC and 2 percent consider it too far. Though PHC staff are supposed to visit the households, only 14 percent of the households have been visited by them (See Table 4.5). Proportion of households visited is lowest in the SES1 group where such visits are more needed and required.

Table 4.5 Percentages of Households visited by the PHC Staff

SES	Visited	Not Visited
1	1	16
2	5	27
3	2	7
4	6	36
Total	14	86

Despite their aversion to the PHC the vast majority of the people go for allopathic treatment irrespective of their socio economic status. In SES1, 2 and 3 groups cent percent of the households depend on allopathic treatment except a meager proportion of SES1 who depend on home remedies. Only in the highest socio-economic groups there are at least a few households which make use of ayurveda and homeopathy systems of treatment (Table 4.6).

**Table 4.6 Percentage Distribution of Households
by Method of Treatment**

SES	Allopathy	Ayurveda	Homeopathy	Home Remedies	Total
1	75	-	-	25	100
2	100	-	-	-	100
3	100	-	-	-	100
4	85	5	5	5	100

Another interesting thing is that most of the people go to private hospital for better treatment and almost all prefer private hospital to government hospitals. Their reason for not preferring Government hospitals are listed in Table 4.7.

**Table 4.7 Reasons for preferring Private Hospitals
to Government Hospitals for treatment**

Reasons	Percentage of Households
In Government hospitals:	
Doctors not available	19
No proper medicine	24
No treatment facilities	28
Lack of hygiene	1
Government hospitals are farther	28

Money Spent for Treatment

In the survey we also collected data concerning the cost of treatment which included cost of medicine, fee to doctors and travel cost etc. It is found that percapita expenditure for treatment is rather high. Travelling far distances to the hospitals and undergoing treatment in private hospitals would have, naturally, increased the cost. Two important observations are that there is a positive correspondence between socio economic status and cost of treatment on the one hand and on the other there is an

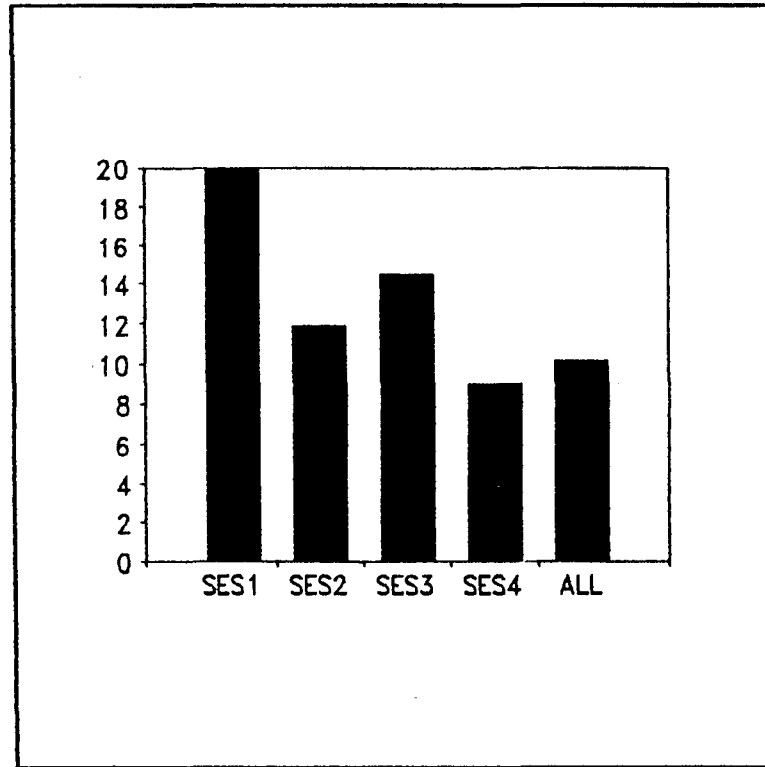
inverse relationship between status and the cost as percentage to percapita income (see Table 4.8)

Table 4.8 Percapita Annual Expenditure for Treatment and its Percentage to Percapita Annual Income by SES

STATUS (1)	Percapita Expenditure (Rs) (2)	Percapita Income (Rs) (3)	(2) as percentage share of (3) (4)
SES1	410	2038	20.0
SES2	391	3286	11.9
SES3	570	3916	14.5
SES4	564	6249	9.0
ALL	486	4389	10.1

The percapita expenditure on treatment as well as the percentage share of it to percapita income are found to be pretty high. For instance, in the study we have already quoted (Kannan et.al, 1991) average percentage of income spent for treatment for rural Kerala was 7.17 while our average estimate is 10.1 percent. In absolute terms, percapita expenditure for treatment is Rs 410 for SES1 group and Rs 570 and Rs 564 for SES 3 and 4 groups respectively. It raises much concern that the lowest socio economic group spends 20 percent of their percapita income for treatment! Perhaps they are in a vicious circle. Since their morbidity rate is higher (see chapter 3) and they are forced to spend a larger share for treatment and since they thus spend a larger share, their spending on food and other services get curtailed which in turn leads to malnutrition and sickness. As against this the highest SES group spends only 9 percent of their percapita expenditure on treatment (see Figure 4.3).

Figure 4.3 Cost of Treatment as percentage of Percapita Income



In short, health care supply in Pulluvila is far below the demand, nay, practically nil. So the people are forced to travel far and spend more on treatment. The poorest households are spending even 20 percent of their income on treatment which results in a vicious circle of poverty and sickness. Such a situation makes an urgent call for evolving a better strategy that befits and benefits the poor fisherfolk.

Chapter V

PEOPLE'S PERCEPTION OF HEALTH STATUS AND HEALTH CARE SYSTEMS

This chapter is devoted to present the group discussions conducted among the fisherfolk in Pulluvila. In Chapters III and IV we have analysed the health status of fisherfolk and the provision and utilization of health care infrastructure in Pulluvila. The major findings are taken for group discussion in order to understand the people's perception on these issues. The group discussion as a research methodology is relevant due to the following reasons:

- 1) The survey questions are very much structured and framed from the academic point of view.
- 2) It avoids any sort of bias from the researcher's side and helps to reach down to earth realities and recommendations.
- 3) The questions are often subjective and not comprehensive in the survey but group discussion is more objective and it reveals people's level of understanding of their own problems.

Objectives of Group Discussion.

The objectives of the group discussion are to know the perception of the fisherfolk about their own health status and the physical quality of life. In particular, the study intends to understand the following:

- : meaning of health and health status:
- : density of population
- : housing condition & hygiene
- : environmental issues

: drinking water
: morbidity aspects
: the Primary health centre and its utilization
: the private hospitals and their utilization
: wide usage of allopathy
: need of an alternative health care model.

Though we have designed the group discussions on the above issues, the people themselves turn the discussion into different areas such as abortion, practice of family planning, alcoholism, women torture, gender status in the family etc.

There are four groups of people and each group consists of 10 persons and the people in the neighbouring families also joined in the group as listeners. The discussions were carried out at the residence of a fish vending woman and in the office of a voluntary organization on the beach. Each group discussion lasts for 90 to 120 minutes.

Group I

Background:

This group consists of 10 males who are active fishermen within the age range of 22 to 50 years. Among the ten, four of them have their own fishing equipments while the rest are fish labourers. Except one, all are literate but their educational status is up to a level of upper primary and high school. Only one, who is also the youngest in the group, passed tenth standard and is studying in an ITI. He knows driving but he goes for fishing one or two days in a week in order to find the means of livelihood. Except one all

are married and having 3 to 6 children in the family. The characteristics of the individuals presented in the group discussion I are presented in Table 5.1.

Table 5.1 Demographic, social and educational details of those who participated in Group I

Age	Sex	Marital Status	Education	Occupation
42	Male	Married	VIII	Fishing & owner
47	Male	Married	VII	Fishing & owner
50	Male	Married	IV	Fishing & owner
27	Male	Married	VI	Fishing & owner
28	Male	Married	VIII	Fishing & owner
22	Male	Unmarried	ITI	Fishing labourer
30	Male	Married	VI	Fishing labourer
27	Male	Married	IX	Fishing labourer
28	Male	Married	Illiterate	Fishing labourer

Observations:

All members participated in the discussion and have made their own contributions. Respecting the other's views, each one tried to explore new insights. Though they are not educated, they are in touch with the recent developments in the country especially of socio-economic and political changes. They opined that the newspapers, television and radio play a major role in updating their knowledge and they try to watch and learn from the educated people within the community. They engage in informal discussion when they mend their nets. The people were open and cooperative in the group discussion.

Meaning of Health & Health Status:

Most of them understand the terms "health" and "health status" in relation to food, environment, fresh air, drinking water, sanitation. They perceive that the health status is declining among them because of the environmental pollution, lack of

nutritious food, disease prone situation, lack of sanitation, non availability of drinking water, unhygienic surroundings, non earlier detection of diseases, lack of health awareness, high density of population etc. Since the PHC failed to respond to the health demands of the village, for any minor ailments people depend on private hospitals. When they started talking of PHC some members became quite angry and agitated. The use of fertilizers in the cultivation of food grains is also mentioned as a causative factor for ill health and declining of health among them.

Density of Population

The members present in the group have the opinion that there is scarcity of land and people are geographically bound. Since the majority are not educated, almost all are engaged in fishing and the nature of job forces them to settle within that strip of land.

Due to lack of education, there is no job diversification. Till the beginning of 1980's, each couple will have 8 to 12 children and that multiplied so extensively at present. The members hold the view that it is strongly believed by their parents that the children are given by God and it is a blessing. Some even quote the promise of Yahweh to Abraham in the Bible that "I will increase your descendants like sand on the sea shore and stars in the sky".

The elder in the group pointed out that there was a 'psychological conditioning' in this region, inherited from their ancestors. Towards the southern and northern ends of the village, there were bushes and the land was barren. The ancestors believed, it is the place of satan and therefore, it was the den of thieves and a place of robbery. This hindered them from encroaching that land and to settle within this strip of land. Geographically it seems to be

true that at present there is less population in this region and other communities are also living there.

Another reason is that people of this village are so homogeneous and therefore they are warned by their ancestors that they should live within that village. The parents wanted their children to settle very close to themselves and even after their marriage they were not allowed to go to a distant place. It is quiet interesting to learn that all the in-laws find a place within this village and do not go outside or to their respective places. It is also opined that formerly they were not adopting family planning methods.

On discussing the high density, the members entered into the question of abortion and adoption of family planning methods. As Catholics, they knew that abortion and adopting artificial family planning methods is a sin and they feel that they are helpless in the new socio-economic life. The females are forced to undergo tubectomy, but abortion is not very common. They replied that earlier no one was willing to reveal that they undergone family planning, buy today there were no such inhibitions. Though this has become a common practice among the females, the male do not support this practice of family planning.

Housing and Hygiene: The members feel the abject poverty among the fisherfolk is the prominent reason for the poor housing and unhygienic situation. The people do not have land and the government is not giving title deed to own land. Since they do not have title deed, the different government departments and banks do not give loans. Sometimes banks avoid loan due to irregularity

and non-repayment of loans. Often the housing is not a priority in their life because they struggle to meet the daily expenditures of the family. It is pointed out that there is a general understanding that to invest money on housing is unproductive. If the money is given for interest, it is productive. The people were found to be accustomed with this. Often people consider the present housing condition and the deprived situation as normal. Since they are active fishermen, they want their houses to be nearer to the sea and due to scarcity of land, they have come to accept the present situation as their fate.

Sanitation: Even though the males go to the sea shore for excretion, they are quite aware of the difficulties and agony of the female. They all agree that the present phenomenon of the need of a toilet is an outcome of the high density of population and the congested housing. Formerly, there were not many houses and there was vacant land and coconut farms. The people made use of such places for excretion. So they did not think of the need for a toilet in the house. About a decade ago, individual toilets were constructed under the Blocks but none of them are in a good condition for use because the materials used for construction are of low quality; and ignorance of the people to maintain it properly etc. Most of them are used to dump the waste. They appreciate the community latrine, but feel that it is not sufficient to satisfy their demands.

Drinking Water: Though there is no proper water supply scheme, the members do not have much complaints. They are quiet satisfied with the common well water. Though there are public

taps, they get muddy water which is not at all good to drink. The water is not chlorinated and purified. Even this water is supplied very rarely. They suggested that it is better not to supply water through the public taps because the women wait for hours near the tap and they fight with each other when water comes, which sometimes even leads to the disruption of harmony in the village.

It is interesting to note that more than 500 families fetch water from the public well for all purposes inclusive of drinking, bathing and washing of clothes. Both men and women take bath near the well premises and even then they consider the water good to drink. Their statement "our helpless situation forces to satisfy with what we get and we are immuned to all unhygienic factors, so we do not get sick" is notable.

Morbidity: A common opinion of the people is that they are immune to diseases even though the environment is unhygienic. Since they look for immediate results in every sphere of life, and the adverse situation exists in the village, minor ailments are simply ignored. Though chest diseases dominate, the group rejects this and they comment that it is due to poor identification of diseases. As the weather changes, the rate of morbidity also changes. Fever, cough, cold, sore eyes, diarrhoea are very common.

Occupational health hazards are also pointed out by the group and as a relief, consumption of alcohol is justified.

Public Health Services: The whole group unanimously agrees that the only PHC in Karumkulam Panchayat which is situated at Pulluvila, failed to respond to the health needs of the people. The investigation and medical treatment in the PHC are not

satisfactory and often people are asked to purchase medicine from outside, therefore they feel it is better to go to private hospitals, for it makes no difference. Even though all the facilities and quarters are provided, it seems that the staff prefer not to work here on account of their personal interests.

More than the usual complaints like no medicine, no doctor, no treatment etc, the group pointed out that the doctors and staff are not punctual and the villagers wait for hours and hours and at the end they curse and go to private hospitals. The main reasons are:

- : the non-commitment of the doctors & staff
- : there is no monitoring system and the people are not given any participation in its functioning.

Once the medical officer is committed, the hospital serves the need of the people. Formerly it was functioning to the greater satisfaction of the people. Since the PHC's function is deteriorating, the people started agitative and this still continues. It is mentioned that the doctors do not prefer this PHC & the village because it is a remote area. The health inspector does not visit the village but the health worker of the family Welfare department visits the houses and forces the ladies to undergo the family planning methods. Though they are dissatisfied, still they are hopeful of reviving this centre. They opined that the government policy is also very important. Once the government suspended the supply of medicine and later it was resumed, which helped the staff to sell the medicine outside. They have great appreciation of private clinics because they function for 24 hours and are comparatively cheap.

The people prefer allopathic treatment because they get immediate relief and speedy recovery. They are also quite aware of its bad effects. They prefer home remedies and herbal medicine. They have better experiences of using the home remedies and herbal medicine. Since there is no proper personnel to impart health awareness classes, the curative aspect of health is in wider use.

Group II

Background:

This group consists of ten fish vending women within the age range of 26 to 65 years. Except two illiterates, all have completed either lower or upper primary school level. All are married women. Most of them travel 20 to 35 kms a day during day time and most of them are out of their houses. Almost all have more than five children and they live with their husband and children. The following table gives the details of the participants.

Table 5:2 Demographic, social and educational details of those who participated in Group II.

Age	Sex	Marital Status	Education	Occupation
32	Female	Married	Illiterate	Fish Vending
45	Female	Married	IV	Fish Vending
35	Female	Married	V	Fish Vending
26	Female	Married	VII	Fish Vending
60	Female	Married	Illiterate	Fish Vending
51	Female	Married	V	Fish Vending
65	Female	Married	IV	Fish Vending
48	Female	Married	VI	Fish Vending
45	Female	Married	V	Fish Vending
46	Female	Married	VII	Fish Vending

Observations:

It is a surprise to see that once the male group left the house after their discussion, the female group entered the same room and

they removed the mat on which the men were sitting. The reason for removing the mat is that the males were given the mat as a sign of respect and women are satisfied with sitting on the bare floor. Most of them are in their middle ages, but look much older and project an age of 60 to 70 years. During the group discussion, a few were hasty to comment on the others' view point and sometimes quarrel with each other on certain issues. They refuted certain statements of the male group too. The females were found to be very submissive to their husbands, though they manage the family.

Health and health status: On perception of health, it is the absence of diseases and once someone is sick, his or her health declines. It is opined that the anxieties and worries darkens their future. This statement is elaborated logically that it is the womenfolk who manage the family. The meager income they earn from fish vending hardly satisfies the needs of the family. Often they borrow money from the money lenders and meet the family expenditure. They complain that menfolks totally ignore the financial constrains in the family. This pauperous situation in the family causes them always worries and tension. This brings unhealthy relationship in the family, which leads to mental agony and there by a lot of physical ailments and the declining of health among the women. The low quality of food, starvation, unhygienic surroundings, financial debt etc. also cause diseases and so also the low health status. Though this is the situation, they all agree that present situation is an improved one and much better than the past. This cultural change takes place because of education and mingling with other people. It is due to their helplessness, the low status continues.

Density of Population: The geographical immobility is said to be the prominent reason for high density of population. Most of them marry within this village and their low educational status causes this geographical immobility. Since it is not advisable as per their religious belief to adopt family planning methods, more children are born and this makes the situation more acute. They also believe and comment publically that children are God's gift and that they accept this. They show their helplessness. They are aware of this fact and ascertain that recently the situation has changed very much due to education. Early marriage and lack of spacing between deliveries were reasons for more children. It is surprisingly revealed that women do not want to deliver many children but they are forced by their husbands. The women show reluctance because of the poverty in the family and again she has to earn money for their livelihood. The land is very costly and therefore they are not able to purchase land outside the village in order to settle there.

Abortion and family planning methods: The discussion on density has led to the question of abortion & family planning as in the case of the male group. The group unanimously agree that there is no incident of abortion but artificial family planning methods are adopted very extensively, though they are aware, their Church considers it a sin. Most of the women adopt tubectomy without the knowledge of their husbands, because their husbands do not permit that. In certain cases women are beaten up on account of this. They opined that they gained this knowledge either from the health worker of PHC or from the neighbour. The reasons for adopting tubectomy are mainly because of their helplessness,

poverty, inability to bring forth the children, women become very sick due to continuous delivery etc. If more children are born, then it becomes the mothers' responsibility to bring them up and the fathers do not look into this. This makes them overburdened and therefore women adopt family planning methods.

Housing and Hygiene: It is generally understood that good housing is not a priority in their life. The thatched huts are found not because of their economic backwardness but they do not want to invest money in constructing a house. It is said there will be only 10 percent who do not have money to construct a house and the rest have, but have given it to different chit funds for interest that it brings. When there are female children in the family, the mothers are preoccupied with saving money in order to give as dowry. They commented that two to three lakhs of rupees is needed to send a girl in marriage. Since the houses are clustered around, the women are jealous of each other and therefore they hide their financial deposits and want to give a poor picture. One elderly member in the group pointed out that even if an average house is to be constructed, it is a risk because the husband sometimes destroys the house once he becomes drunk.

The people are conscious that they should be hygienic. This consciousness is created because of their public contacts and intermingling with other people when they go for fish vending. The children's friends of other communities visit their houses and thus they are forced to keep houses clean. Most of them want to keep house and premises clean, but they do not succeed mainly due to the lack of drainage facilities and no public place to dump the wastes.

Most of them agree that the situation is improving due to collective action of the voluntary groups and local health clubs.

Morbidity: There is wide spread of chest diseases due to humidity, polluted air etc., and many women have asthma. Two reasons are mainly mentioned:

- i) they carry fish and travel far and wide. They do not eat in time and are affected by malnutrition and starvation.
- ii) Once the husband is drunk, for no reason the women are beaten up and chased out.

The common diseases are fever, cold, cough, scabies, diarrhoea, sore eyes etc. Even these diseases are considered as something usual and normal. For such diseases they do not go to PHC but only to private clinics. They do not want to waste their time waiting in PHC for long hours because it will affect their job. With much distress they said when one is sick, the mother has to attend to the patient and never does the father takes the child to the hospital. The reasons for high morbidity are mainly due to lack of sufficient nutritious food, unhygienic surroundings, polluted air and lack of personnel cleanliness. A combined action can remedy the situation but "people compete and fight each other which is the curse of this village", one member in the group furiously commented.

Sanitation: It is a great surprise and wonder to hear that a good number of women do not take food during day time as a precaution not to go to toilet. Since there is no toilet facilities, many women wait for sunset in order to go for excretion on the seashore. There is only one community latrine in this

village and they will have to stand in the queue for 10-45 minutes. This is said to be a great tension to the individual. One lady cried out that at times her drunkard husband has beaten her, thinking she has gone to some other place. They doubt whether this crisis situation will cause any other diseases among the women.

Drinking Water: Since this village is very remote and neglected, they do not have any hope of getting safe drinking water. They all depend on the common well. It is felt that the common well water is much better than the contaminated muddy water through the public taps. Since there are common wells people believe that they do not have scarcity of drinking water and they will not get sick because the well is God's gift. They raise the question that even though all the males and females fetch water from the common well for bathing and washing, even then the water is not contaminated.

IMR and Sex ratio: They uphold that the present health awareness programme helped to reduce infant mortality in the village. The mothers make use of the health check up facilities during their pregnancy period. The delivery takes place in the hospital and the births are registered only in the Church at the time of baptism and not in the Panchayat. If the child dies before baptism, it is not registered. But no such incidents occur at present.

They unanimously agree that there is no sex difference and discrimination existing in the families and both male and female are given equal concern. Some of the elders prefer girls to boys

because once the boys are grown up, they create problems and crisis in the family. It is generally said that women are tortured only when the husband is drunk and otherwise the men do not interfere into the family affairs. There are many cases of women torture. This is all because of alcoholism.

PHC and Private Clinic: Except the propagation of family planning and inducing the female to adopt family planning no service is received from PHC. Since one cannot depend on PHC, they always go to private clinics. The mothers attend to them when one gets sick in the family. Once they go for fish vending and come back in the afternoon or late evening, the PHC will be closed. So also they prefer private clinics. The staff in PHC do not have any punctuality and do not listen to the patients. They asked, "even if we go to PHC we will have to purchase medicine from outside, then it is better to go to private clinics". In the discussion, the common feeling was that the people lost confidence in the government health care infrastructure and programmes. Since the patients get immediate attention and relief in the private clinics, they are satisfied. They have the opinion that if the PHC is upgraded to Community Health Centre and operates for 24 hours then it will serve the society. Otherwise the hospital and other health programmes become a source of livelihood for the staff at the cost of fishermen.

The womenfolk agree to give more emphasis to health education and awareness building programs. The mothers health clubs organised by voluntary groups helped them to apply home remedies and herbal medicine to a wider use. They have the opinion that in the long

run allopathy will degenerate health because sufficient food is not taken.

Group III

Background:

This group consists of 10 people both male and female, who are within the age range of 42-72 years old. Among the six men, there are three illiterates and two had completed SSLC. Among the four women, only one is illiterate and all others are below upper primary level schooling. All are married and have more than four to seven children in the family. Further details are given in Table 5.3

Table 5.3 Demographic, social and educational details of those who participated in Group III

Age	Sex	Marital Status	Education	Occupation
55	Male	Married	X	Military
57	Male	Married	Illiterate	NA
45	Male	Married	Illiterate	Fishing
72	Male	Married	Illiterate	NA
43	Male	Married	X	Fish sales man
67	Male	Married	V	NA
58	Female	Married	III	House wife
55	Female	Married	Illiterate	Fish vending
42	Female	Married	VI	House wife
42	Female	Married	V	House wife

NA Once they were active fishermen and at present they do not go for any work.

Health and health status: The group perceives health and health status in relation to the quality of food they take. One's health declines mainly because of the lack of nutritious food and sometimes due to the unhygienic preparation of food. It is also said that when one gets old then there is degeneration of health.

The factors which contribute to good health is personal environmental hygiene.

Morbidity: There is higher incidence of diseases in village and they are mainly due to change in the weather. group agrees to the findings of the survey that chest diseases very common. The reason for this is mainly due to the high level of humidity and the personal habits like smoking, chewing and liquor consumption. One participant commented it is because of cooking in the aluminum vessels. The people suffer from congestion as there is no fresh air. Since there are very many T.B patients and all mingle with each other, T.B. spreads very fast. The incidence of fever, scabies, cough, diarrhoea are seasonal. Due to the lack of safe drinking water, water-borne diseases are also spreading faster. There are so many petty shops and edible things are sold in an unhygienic surroundings. It is understood that the members have health awareness and because of this, when there are symptoms of a disease, medicine is given. Finally it is mentioned that since most of them are poor and backward in every sense, communicable diseases are very common and therefore they suggest, in order to maintain good health, the preventive and promotive measures are to be given more emphasis.

Density of population: The group had the opinion that more children are born among the poor, especially those who are illiterate. Till the advent of this decade and the wide spread of health care infrastructure, there was a risk of child death. No parent is certain of how many children will survive. So there was a tendency to have more children. This is a contributive factor for high density. Most of the parents believed that when they

become old and if there are many children in the family, then they will take care of them. If there are only two or three children, they may be abandoned. It is for their old age security that more children are given birth. This group also mentioned the reasons put forward by other groups on the question of family planning. The group has the opinion that since medical science is growing very fast, there is no hesitation in adopting the family planning methods. It is very common among the women to undergo tubectomy. The economic backwardness and financial constraints induce people to adopt the family planning methods. Otherwise they are helpless. It is also brought to the attention that parents are over conscious of the amount to be given as dowry for their female children. It is felt that the complexity of the high density of population worries the womenfolk because they carry the financial burden of the family

Housing and Hygiene: The income is very meager because almost all are coolie fishermen and fish vendors. The cost of living is very high and even if one wants to construct a moderate house, materials are very costly. So they satisfy with what they have. It is opined that the present housing (thatched huts) condition is not at all a botheration. If the Government or other agencies support with finance, they are ready to put up a new house. Even then it is not a priority. In certain cases the thatched huts are given as dowry to the female child and later they put up another hut in the public land. So the number increases and they are in a vicious circle. The group knows that hygienic condition is a necessary factor but in the given present situation, where there is little place people dump waste.

Sanitation: The difficulty and agony faced by the womenfolk is beyond one's imagination, one participant opined. Lack of sanitary facilities for women is the vital problem of this village. Waiting for the sunset is very common among the women in order to go to the seashore for excretion. Even if one wants to construct a toilet, it is not possible because of the overcrowding and the neighbours object. Community latrine is suggested as the only solution to this agony of women.

Drinking Water: It is noted in the group that they became angry and raise the question "Are we not citizens of this country? Why are we deprived of the minimum and basic necessities of existence?" They opined that people are given false hopes during the election and they are cheated by the government officials. The people depend on a common well for all purposes and even for drinking water. This group felt that this water is also contaminated and in their helpless situation they are forced to drink.

Public health care systems: The group expressed their feeling that instead of going to the PHC, it is better to go to the medical shop and get medicine. There will be only one doctor for two hours in the PHC and the over crowding compels him to get rid of the people at the earliest. Even though there are facilities in the hospital, the doctors do not make use of it for investigation and treatment of the patients. Sometimes the doctor and staff ask for fish in order to render medical care. One participant in the group narrated his experience of providing fish everyday to the doctor for the treatment of his son.

The private clinics are said to be more approachable to the people than the government hospital. The private hospital functions according to the convenience of the people. Allopathy medicine is available and therefore they prefer this. They are quite aware of the bad effects if proper food is not taken. They all appreciate the health education classes of voluntary groups and opined that self reliance devices in the health care is to be planned out which will be the solution of coastal health hazards.

Group IV

Background:

This is a youth group comprising of 11 members, both male and female with in the age ranging from 17 to 25. All the participants are unmarried and most of them studied up to high school level. This group is convened in order to understand their perception of health and health status of their village, as they step into the next century. Though all are given equal chances to respond to the issues, those participants who were either members or workers in any association or agency responded critically. It is generally found that the attitude and approach of the elder generation towards the younger generation is to be changed in order to mould a new social order. The details of the participants are given in the following Table 5.4.

Table 5.4 Demographic, social and educational details of those who participated in Group IV

Age	Sex	Education	Occupation
17	Female	X	Tailoring student
19	Female	X	Nursery teacher
17	Female	VII	NA
19	Female	X	Tailoring student
17	Female	IX	Tailoring student
21	Female	PDC	NA
18	Male	X	Tailoring student
17	Male	VIII	NA
25	Male	X	Fishing
22	Male	PDC	ITI student
23	Male	PDC	Technical trainee

NA: Those who are not engaged in any activity.

Health and health status: One's growth itself is an indication that one has health. And one grows healthier by one's labour. The total growth of the person is viewed as health and economical aspect plays an important role in maintenance of health. It is true that the health status declines among the fisherfolk but only among those who are poor and those who are addict to alcohol. The group found to be convinced that if the life style of poor people is changed, a better health status can be brought among the fisherfolk. Since the social evil is perpetuated very fast, the consequences are reflected in the society . By imparting health awareness programme to all groups in the village, better health status can be attained.

They also fall into the discussion of morbidity and there is occurrence of communicable diseases through water and air. There is higher incidence of diseases because those who are conscious of health do not promote and share with others. As a consequence all are affected so the less privileged become more under privileged and become an agent for spreading of diseases. In the crowded

situation of the village, a massive continuous education and cleaning will be the only means of bringing up health status and reducing morbidity rate.

Density of population: The selfish interest and the anxiety with regard to future security of the parents prompted them to have more children which has resulted in the high density of people. The parents expect more love and concern from their children and therefore do not permit them to go to far places even after the marriage. There is no mingling of culture due to the geographical condition of this village. There was also fear among the parents whether the child will survive or not because they are ignorant of medical care. The elders even today discourage the younger generation in adopting family planning methods. Lack of education is the prominent reason for high density of population in the village. These are the major observations of the youth group. They are anxious and concerned that majority of the younger generation do not get higher education and therefore there is no diversification of jobs and as a consequence the geographical immobility will continue. The financial backwardness does not allow to go them for higher education and more over the unemployment justifies the parents action of sending them for fishing.

There is no sex discrimination but the mingling of boys and girls is viewed with suspicion. The attitude and approach of the elder generation is found to be a great obstacle for the change in the society. Male domination is decreasing and equal status is also given to women among the younger generation. The infant and child

mortality is very rare because of the development of medical facilities like antenatal and postnatal care, hospital deliveries etc. They consider alcoholism as a major destructive factor of the families. The liquor consumption is increasing in the younger generation especially for those who go for fishing. Due to this, there are a lot of broken relationships and as a result many children end up as orphans living in orphanages.

Housing and Hygiene: The present housing and hygienic conditions are vulnerable to high rate of morbidity. The people do not have a sense of budgeting and the people are under the clutches of poverty. Poverty can be alleviated with the income they get from fishing if it is properly budgeted. By nature, the fishermen are always in need of external initiatives. If the government and voluntary agencies propose certain initiatives by way of giving loans and subsidies, as a planned action, their thatched huts can be reconstructed. Even if the poor borrow money, by reducing their expenditure they will be able to save money and close debts. The unhygienic condition is the source of all diseases and very strong measures are to be taken to rectify this on a war footing. The youth believe that external agencies intervention will have many limitations and therefore people themselves can bring a hygienic condition in the village. They propose massive conscientisation and collective cleaning programme. A sense of cleanliness is to be taught among the people.

Sanitation and drinking water: These are the two main issues to be addressed urgently in this village. They hold the view that construction of community latrines per 200 people (female) will be

the best solution for sanitary problems. Considering the peculiarities of this village, government and the voluntary agencies have to adopt new devices of sanitary facilities, applicable to this area. Individual latrines will not bring any improvement in this village, because this had failed in totum.

Though there are common wells, the potable water is to be supplied. Though people drink the water from the well is not safe drinking water. They hold the opinion that the government has to purchase land in the eastern side of the village and should construct a long term drinking water scheme because water from there is of good quality.

Public health Care System: The youth group opined that the common people have lost faith in the present health care system of the government on account of the PHC at Pulluvila. It does not satisfy the health needs of the people because of the negligence of the staff in the hospital. Since the government does not supply medicine to PHC the patients are asked to purchase medicines from outside. Without understanding the government policy, people quarrel with the staff and spread a lot of allegations against the hospital authorities. The hospital does not have the sufficient staff and therefore all the units are not functioning properly. Due to the negligence and pathetic condition of PHC, people depend on private clinics. The group expressed their opinion that long term measures are to be planned out for the better and improved health infra structure like imparting massive health education and the target group approach should be taken in the delivery of services.

They do recommend the low cost medicines and treatment propagated by the voluntary agencies in this village. The life style of the people is to be changed and personal and environmental hygiene is to be taught to the people. The youth is very optimistic of a bright future provided the bottom level planning of the government succeeds and the people respond positively.

Conclusions

We have learned about the perception of the four different groups on some of the findings of our study. To a large extent, their perception remain similar but a few divergent options are also seen. It is not surprising to see that the perception of the fourth group remains in a realm of ideals and an urge for group action while the elders outlook remain lightly deterministic.

Regarding health and health status all the groups perceive an intimate relation of health with the quality of food intake and environment. Declining health status is seen by them in terms of increasing morbidity. The groups confirm our finding that chest diseases like asthma are most prevalent at Pulluvila. Apart from the humidity problem, the women in groups attribute the cause of asthma to the beatings and torture by the drunkard husbands. Naturally, the men, to defend themselves, attempt to show that evidence of such sickness is low. Hiding of incidence of TB on account of social stigma and lack of proper treatment perpetuate cases of TB. At the same time interaction with TB patients lead to spread of the diseases. The low rate of IMR is attributed by all the groups to the prevalence of pre

natal care and hospital deliveries. Regarding the causes of ill health, while group 1 points out that it is the carelessness of housewives, group II argues that it is due to the mental tension and worries suffered by women on account of financial constraints that is the major cause. All the groups unanimously expressed their dissatisfaction with the performance of PHC, the only health care institution existing in their village. Lack of staff, medicine, treatment, visits by PHC staff etc.were highlighted. Lack of respect by PHC staff to the fisher folk was an issue of concern for group II.

All the four groups are very much pained and worried at the practical absence of sanitary facility Men, conveniently make use of the sea shore for excretion. It is the women who suffer terribly. It is said that they remain in fasting till evening to prevent the need for bowel emptying, such a practice makes many of them victims of gas trouble. In fact, one of the most crucial problems to be attended to is this. However, they themselves agree that due to want of space, individual household latrines are not possible. Therefore the only alternative they find is the community latrines. Here too, the waterlogging and its resultant externality on the functioning of such latrines causes problems. As such, the sanitary facility question remains unanswered.

The problem of drinking water affected them in two ways. One, is that often there is no water supply. Two, the water supplied is unchlorinated muddy water pumped directly from the river. That is why they all depend on the public well. It is strange to see men

and women all standing around the same well washing clothes as well as bathing. The groups have given a myriad of reasons to explain the high population density. Lack of labour mobility and the psychological attachment to sea is a major reason. Interestingly, some socio cultural reasons were unraveled such as ancestral warnings about maintaining the homogeneity and tabooing other parts as satanic places etc. Family planning methods, though some women employ, is considered as something wrong and their belief that children are God's gift preclude many from adopting such practices. However, the group IV perceives family planning as a must and views the elders option for large families as a coverage of their selfish interest of old age security. And the uncertainty and fear of parents with regard to the survival of children before 1970's is also a contributive factor for more child births in the family.

The status of poor housing is mainly attributed to the absence of land ownership and title deeds. For some of them housing is not their priority and they see such investments as unproductive. Some are satisfied with the small huts on account of lower income. The youth, however, see this problem as caused by lack of family budgeting and due to the absence of adequate government assistance for housing.

They are all aware of the unhygienic environment. One big problem they all perceive is the inadequacy of having a drainage system due to lack of space. Laziness and carelessness of house wives is also contributing to this problem.

In short, most of our findings are underscored by the groups. The discussion helped to get the true picture of how the people look at these problems. All the groups look for some institutional intervention that takes into account a holistic approach to the development of health status. In the final chapter we shall be attempting to evolve a strategy of health care that would be more befitting to the life-situations of the fisherfolk.

Chapter VI

AN ALTERNATIVE HEALTH CARE MODEL

In the previous chapters we have analysed the socio-economic and environment conditions that affect the health status of fisherfolk and the perception of people with regard to these vital issues. The supply side of health care, namely the health care institutions do have a key role to play in the maintenance of a better health status of the people. But there is only one Primary Health Centre in the Karumkulam Panchayat to serve the population of 32380 and the lack of health care institutions inhibits the health development of the village. More over the socio-economic variables like the percapita income, educational status, ownership of land, housing conditions etc. have tremendous influence on the health status. Also the physical environmental factors like safe drinking water, sanitary facilities, cooking device, disposal of waste water and solid waste etc. contribute significantly to the health of the fisherfolk. Thus we arrive at an important matter that the supply-short of health care is not the only cause of low health status but also the demand constraints emanating from low socio-economic and physical environment aspects contribute to this predicament.

Therefore a health care strategy that aims at the fisherfolk who are relatively at the lower rungs in the socio-economic and environmental conditions would demand a holistic approach. Thus an alternative health care system that embraces such an approach is necessarily to be evolved. There are a few empirical studies which

substantiate the need of such an alternative health care model for a marginalised community like fisherfolk.

The World Health Organisation's (WHO 1991) evaluation of the realization of its goal suggests that in order to bring success in the health care, the people who do not currently have access to appropriate health care - those still missing from the "all" in "health for all" - must be developed to meet their - needs the socio-economic and physical environmental needs.

Pokarna (1994) and Mathur (1995) argue that the health of an individual and community is largely influenced by social and cultural factors which are deeply interwoven with the social fabric of life. There are variations from one community to another and therefore it is necessary to understand the unique features of the community in its socio-cultural context before any health programme is implemented.

Now, the case of fisherfolk provides for such a specific group. We have already seen that the features like fostering of their homogeneity, ancestral and traditional beliefs, geographical immobility, psychological attachment to sea occupational limitations, key role of women in the family management, educational deprivation etc. are some of their specific characteristics. Therefore, health care being developed for such a community should involve certain specificities.

The basic philosophy that emerges at present in the health sector is the emphasis on the importance of educational approach in the

prevention and control of diseases promotion of health care. Such an approach attempts to influence the very health behavior of the people and to obtain the participation of in bringing about enduring changes in personal and community health behavior. The aim of this educational approach is to help people to achieve health by their own actions and efforts. That is to say, with the interest of the people in improving their conditions of living and developing a sense of responsibility for their own health betterment as individuals and as members of family and community.

The basic strategy of educational approach is to awaken people to make them identify their own health problems and to devise their own solutions and plan actions which leads health as peoples' movement.

From the case study and especially of the group discussion with the fisherfolk about their perception on health problems and health care requirements, we could understand their major needs and suggestions to improve the health status. In the light of this, the proposed following agenda as the essential components to be included in the alternative health care model for the fisherfolk.

Components of the Alternative Health Care Model

1. Ensuring the quality of PHC's service and providing adequate number of PHCs

We have already seen, though the PHC plays the pivotal part in the health care of the rural population, their performance is abysmally poor. WHO has given a new meaning to the PHC. The

expression 'PHC' has traditionally been used to mean the first level contact between patients or communities and organised health care. It means the service provided by peripheral health workers. The international Conference on PHC, held at Alma-Ata in 1978, used the expression to convey two other meanings.

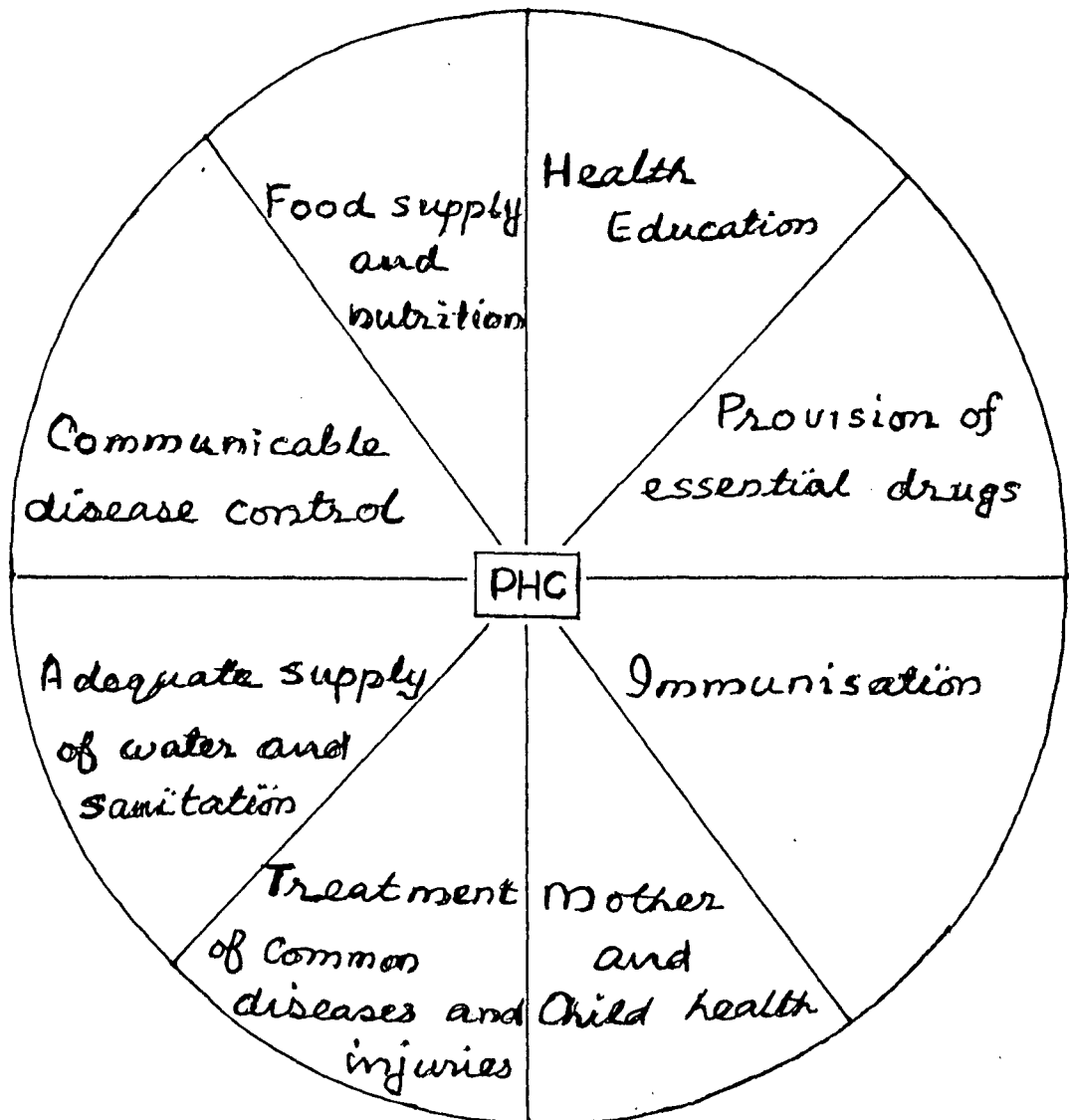
: Essential health care consisting of at least eight elements (given in Figure 6.1.)

: An approach to the provision of health care that is characterised by equity intersectoral action and community participation (WHO 1991)

The role of PHC is of co-ordinating the supply side of health care unit which is a comprehensive one to meet the demands of the concerned village. This has to be ensured in order to bring a good health status of the people. Once we ensure the qualitative service of PHC, it is its responsibility not only for the sick but also for maintaining health in a given geographical area. It would mean that through the outreach programmes like health promotion earlier detection of diseases, arresting of communicable diseases and epidemics, health education and field visit by health workers and providing basic amenities to the people etc. help to maintain optimal health in the catchment area of the health facilities concerned.

In order to render the qualitative service through PHC, it is essential to provide adequate number of primary health centres as per the size of the population and the special complexities of the region. However, relative to the high density of population and the complexity of coastal villages, there are no adequate member

Figure 6.1 Eight Elements of
Primary Health Centre



of PHCs. As it is envisaged in the Panchayati Raj, a village level Committee has to be constituted for the better functioning of PHC and to make sure the community's participation. This will reduce the misunderstanding and non-corporation of the public in the performance of PHC in the village.

2. *Health Education through Health Clubs*

We may launch massive health clubs consisting of ten to twenty women as the basic unit of health education process. The women are intended due to the following reasons:

: women play a key role in the home management

: a maxim says, 'if you teach a man, you teach an individual and if you teach a woman, you teach a generation'

: The study of Jeffry (1987) reveals, one percent increase in the schooling of women will result in nine percent of reduction in mortality rate

: women are found to be interested and available in such programme

Each village may form and foster such health clubs according to its size and a female health worker may be appointed to facilitate and animate the health clubs. Each health worker may be given charge of maximum five health clubs and shall be given an incentive either in kind or cash. Each health club may have a leader and all the mother leaders may be given health awareness classes, which they will disseminate in their respective clubs and the health worker will facilitate such programmes. The health awareness programme includes classes on various health related topics, audio and video programmes, non-formal techniques, street plays, exposure programmes, collective joint actions, analysing and critically

responding to social and health issues, field visits, medical check up etc. The PHC may initiate this strategy and coordinate the activities of health clubs by providing the resources both human and material. This component will be the base for rest of the components that we discuss in the model of alternative health care.

3. Diffusion of People's toilet

It is mentioned that the biggest problem the womenfolk face in the coastal area is of the lack of sanitary facilities. Since due to want to space, individual latrine facility is not feasible in all the house, therefore we propose the diffusion of 'People's toilet' - community latrines managed and maintained by people themselves. There are a few community latrines owned and managed by voluntary agencies. But they are not sufficient enough to meet the needs of the village. More peoples' toilets are to be constructed by the government agencies with the cooperation of the health club leaders and the health workers of the locality.

4. Introducing Community housing flats

It is learned from the analysis that there are of cluster of thatched huts, scarcity of land and high density of population in the fisherfolk villages. This generates a myriad of issues like congestion, the unhygiene surroundings, air pollution, problem of constructing drainage and the related diseases. It is neither easy to purchase land nor to shift the fishermen to interior places. Therefore it is highly appropriate to construct community housing flats in the fishermen villages. Such a system would provide more free space which could be utilised for various environment cleaning and enriching ends.

5. *Provision of safe drinking water*

To have access to safe drinking water is one's basic right and its denial is a humiliation. This is all the more essential in the fishermen villages since the water there remains salty and contaminated.

6. *Promotion of herbal medicine and home remedies*

Even though the herbal medicines and home remedies are low cost treatment for many illness, such methods are seldom practised in the fishermen households. The chief cause for this is sheer ignorance coupled with laziness of growing medicinal plants. Therefore promotion of these treatment methods and proper concientisation would be very beneficial for the fisherfolk to employ a method of treatment befitting their economic conditions. The health club leaders can be taught the preparation of herbal medicines and application of home remedies . The medicinal plants are widely found in the coastal villages and neighboring interior places. The health clubs in turn can teach the people and also prepare herbal medicines. This will help to reduce their treatment cost and also to help to keep the premises clean and hygienic.

7. *Propagating kitchen garden*

It is very unique to find that the majority of the fishermen households do not have the habit of cultivating kitchen garden. Their staple food is rice, fish and tapioca. The majority do not eat vegetables at all. Deficiencies of vitamins and iron are found in many. The propagation of kitchen garden, therefore within the limited places can take care of this problem. It also would help to

keep the premises clean and the waste water and solid waste can be converted as manure for these plants.

8. *Job diversification*

Number of school drop outs among the fishermen community is rather high (Thomas, 1989) and this obstructs the higher education as well as job diversification. Therefore motivation is to be given to the parents to provide higher education to their children in order to enter into different jobs other than fishing. This will help them to mingle with other people and culture and may earn steady income which will contribute for a better standard of living. Creating small scale industries associated with fish processing, outboard engine repairs etc. can provide maximum employment opportunities to the young generation. This will ultimately reflect in the better health status. Therefore career guidance programmes and proper identification of each one's talent and skills may be conducted in the alternative health care model.

9. *Health insurance scheme*

The justification for health insurance protection for the poor rests on the premise that an episode of illness impose under economic burden on the income of the poor. The case for health insurance rests on three grounds:

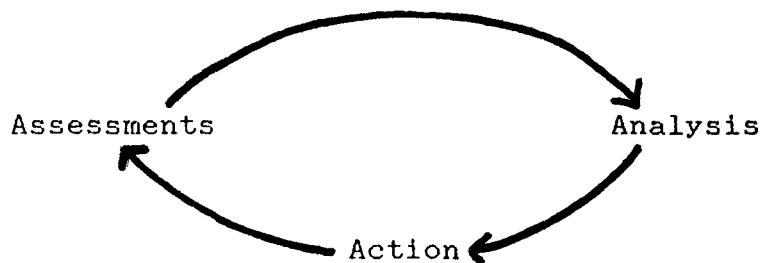
- a. Illness can not be predicted
- b. Hospitalization costs are lumpy and cannot be planned
- c. The proportions falling ill requiring hospitalization in any large population is small and therefore permits of risk pooling.

These three factors enable a person to cover the risk of illness at a very small cost, provided an appropriate insurance scheme is in position (Krishnan, 1996).

All the other organized labourers do have insurance schemes like Employees State Insurance (E S I) scheme and also the plantation labourers have insurance schemes. But the marginalised and unorganized donot have this and they are doomed to darkness and utter poverty once someone is sick in the family. For the effective implementation of this insurance among the fisherfolk, as Krishnan (1996) suggests some new institutional arrangements has to be made like that the panchayat's responsibility to identity the poor and take out insurance; minimising the complexity and formalities which sometimes becomes a means of exploitation; the provisions of health insurance for poor should be considered a first step towards a universal health financing scheme (Krishnan 1996). The insurance scheme shall be monitored and promoted through the health clubs in the fisherman villages .

The Mechanism of Implementing the Model

To activate the model we have discussed, we would require a feasible mechanism. For this identification of the processes and the key actors involved is needed. The processes involved in the implementation can be characterised as 'triple A cycle'.



Thus the people become the key actor in the implementation process. The other actor like mother leaders of health clubs, village level health animators, Panchayat committee, PHC personnel, Health department, Voluntary agencies and the government do have a role to empower and facilitate the people in the planning, implementation and monitoring of the programmes.

There are empirical evidences which reveal that interventions of some external voluntary agency could become a good facilitator . For instance, Trivandrum Social Service Society (TSSS) sponsored by the catholic diocese of Trivandrum, a voluntary organization registered under the Charitable Society Act in 1960 had launched 'Rural Health Education Programme ' in the beginning of 1990 's in certain coastal villages of Trivandrum district. Though TSSS had health programmes even before 1980 's later the vision and approach has shifted to mobilize and participate the community in its health programmes. It was an alternative model which is aimed to reach the lower unit to identify its priorities and health needs. TSSS had succeeded in the formation of health clubs and imparting health awareness and related skills to the households through the health workers. In addition to this the low cost treatment and propagation of herbal medicines and home remedies were carried out successfully. The self help groups were formed in order to bring self reliance in the communities. But there were a few limitations that affected this programmes are the lack of proper follow up and the paucity of fund.

Another empirical evidence of implementing a holistic health care model where health has become peoples' movement is that by a

voluntary agency called AWARE in Andhra Pradesh in 1975 (Madhavan, 1992). AWARE is an acronym for Action for Welfare and Awakening in Rural Environment is a national organisation, dedicated exclusively for the uplift of Tribals and Dalits. Major objectives of AWARE are:

- : Awareness building and community organization programmes
- : Income and employment schemes
- : Basic needs programmes including health whenever the need was identified by the people.

To conclude, it is highly important that any health development policy that does not aim to transform the role of the people from merely being passive beneficiaries into active participants of the decision making and development process, and does not embrace a holistic approach is bound to fail in producing any visible and lasting positive impact on their lives (Rohde, et.al 1993).

Chapter VII
SUMMARY AND CONCLUSIONS

Our study is an attempt to understand the health status and the health care system among the fisherfolk of Kerala through a micro level analysis. The methodology we employed, namely the survey and the group discussions, were very beneficial in analysing the research problem. We have seen that fishermen community in Kerala remains as a marginalised group with respect to socio-economic and human development.

The poor health status of the fisherfolk was evident from the high morbidity rates prevailing in the common and chronic diseases. Highest morbidity rate was found to be in chest diseases like asthma and its incidence is more among women. It was revealing that apart from the humidity factor there were other causes such as occupational (fish vending) health hazards, cooking device (wood burning) and torture from the drunkard husbands for the prevalence of this disease. Socio-economic and physical environmental status have an influence on the health status. We have observed an inverse relationship between the morbidity rate and the status groups. This is all the more emphasised when we compare the percentage of income spent for treatment with respect to SES groups. When the highest SES group spent 9 percent of their income for treatment, the lowest SES group of fisherfolk spent as much as 20 percent which is much larger than that of rural Kerala.

The group discussions provided us with perceptions of the fisherfolk on their problems and prospects related to health status and health care. Though a few perceive health as absence of diseases, most of them conceive health as something intimately related to food, environment, fresh air, drinking water and sanitation. This reveals that they have a notion, though vague, of an alternative approach to health. The increasing rate of morbidity is viewed by them as a sign of declining trend in their health status. The fisherfolk is also becoming more and more aware of the negative externalities of over crowding. The gradual acceptance and adoption of family planning methods can be seen as an expression of this awareness.

The fact that the fisherfolk do not perceive housing as a priority can be seen only as a consequence of their existential struggle to get both ends meet and not that they do not want it. It was found that the fisherfolk is doomed to be in a morbidity ridden environment because of the poor sanitary and drainage facilities. Moreover, geographical, physiographic and financial constraints make them very helpless in improving this situation. Among the health care institutions primary health centres are found to be the sole institutions in many marine villages. However, the poor performance of the most of the PHCs aggravate the health problems among the fisherfolk. This is time for the government to have a fresh look at the functioning of the PHCs in the rural areas.

It is in this context of poor health status coupled with socio-economic and environmental backwardness of fisherfolk, we have proposed an alternative health care model which embraces a new

approach to health and highlights the role of people's participation in its implementation. It would help to bring about a better health amidst a marginalised community like the fisherfolk. However, we have seen that though the fisherfolk have high aspirations of health, they are conditioned to a great extent to live with the improper housing and unhygienic living conditions. They are also much helpless to change these situation. Therefore, some external agents who can break their inertia and empower them for improving the conditions are in need. The governmental interventions, with its standardised schemes without attending to the local specificities, could not succeed. In this situation, if the local bodies with the collaboration of religious institutions like church and other voluntary organisations can evolve a coordinated strategy, it may be more effective in ensuring community participation and infostering the health status.

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APPENDIX

HOUSEHOLD SURVEY QUESTIONNAIRE

1. House Number -----
- 1.1 Name of the head of the family -----
- 1.2 Name of the respondent -----
- 1.3 Relation between respondent and head of the family -----
- 1.4 Address Panchayat -----
 Ward No. -----

2. Details of the family

sl. No.	Name	Relations hip	Age	Sex	Education standard			Occup ation	Monthly income
					R&W	E. School	Grade		

Code: 2.3

- 01. Head
- 02. Husband or Wife
- 03. Son/Daughter
- 04. Son/Daughter in law
- 05. Grand child
- 06. Parent
- 08. Brother/Sister
- 09. Brother/Sister in law
- 10. Other relative

Code: 2.5

- 01. Male
- 02. Female

Code: 2.6

- 1. Yes
- 2. No

Code: 2.7

- 01. Yes
- 02. No

Code: 2.9 01. Fishing- Coolie 02. Fishing- Owner 03. Fishing- Employer
 04. Fishvending 05. House Wife 06. Govt. Sector 07. Non-Govt. Sector
 08. Business 09. Foreign Countries 10. Others (specify)

Code : 2.8 00. > 1

3. Details of assests

3.1 Do you passes land 1. Yes 2. No

3.2 Whether the ownership of land is:

1. Own 2. Parish 3. Govt. 4. Rented 5. Puramboke

3.3 Total landed property of the family [Area (Cents)]

Land	Field

3.4 Income from the land -----
 (Rs. per month)

3.5 Income from other investments (Rs. per month)

Cattle	Fishing equipments	Deposit	Others

3.6 Income from members those who do not live in the house (Rs. per month)

--

4. Equipments

4.1 Do you posses Fishing equipments 1. Yes 2. No

4.2 If yes, nature of ownership 1. owned 2. leased

4.3 Type and number of assets

Kattamaram	Out board Engine	Country boat	Mechanized boat

Quantity

- 4.4 Total income (per month) -----
- 4.5 Total Maintenance cost (per month) -----
- 4.6 Income/Expenditure -----
- 4.7 Total income (per month) of family -----

5. Household assets	Yes	No
Sewing machine	1	2
Clock/ watch	1	2
Furniture	1	2
Fan	1	2
Radio/Tape recorder	1	2
Refrigerator	1	2
Television	1	2
VCR/VCP	1	2
Bicycle	1	2
Motorcycles/scooter	1	2
Car	1	2
Water pump	1	2
Iron	1	2
Mixi	1	2
Grinder	1	2

5.0 Housing

- 5.1 Do you own a house 1. Yes 2. No

7.3 Domestic waste (write code no.) -----

Code: 1. Simply thrown out 2. Burns 3. Deposit in pit 4. Convert to manure

7.4 Does water get accumulated in the compound 1. Yes 2. No

7.5 Does the immediate surrounding get water logged 1. Yes 2. No

7.6 Mosquito menace at home 1. Yes 2. No

8.1 Is the house electrified 1. Yes 2. No

9.1 No. of daily newspapers bought -----

9.2 No. of daily newspapers read -----

9.3 No. of Magazines bought -----

9.4 No. of Magazines read -----

9.5 Have you read any book or article on health in last one month

1. Yes 2. No

10.0 Details of food taken

10.1 Do you cook your food

Breakfast 1. Yes 2. No

Lunch 1. Yes 2. No

Tiffin 1. Yes 2. No

Dinner 1. Yes 2. No

10.2 If not, from where do you purchase your food (write code no.) -----

1. Hotel 2. Petty shop 3. Relatives house

10.3 How much food consumed (per day) during the last one month

1. Rice Qty. Per household

2. Wheat

3. Tapioca

4. Vegetables

5. Pulses

6. Fish

7. Meat

8. Egg

9. Milk

10. Other items (specify)

- Male
- a. How many times does he take food
 - 1. At home -----
 - 2. Working place -----
 - b. Food composition -----
 - c. Sunday special -----
 - d. Intoxicants -----

- Female
- a. How many times you take food -----
 - b. Food composition -----
 - c. Sunday special -----
 - d. Intoxicants -----

- Children
- a. How many times you take food -----
 - b. Food composition -----
 - c. Sunday special -----
 - d. Fancy food/ sweets -----

11. Status of women and health

11.1 Age of marriage for female in the family

Sl. No.	Name	Age of marriage	Present age
1.			
2.			
3.			
4.			
5.			
6.			

11.2 Child birth during the last 15 years -----

11.2.1 Total child birth in the family -----

11.2 Total births took place in your household from 1.1.95 to 31.12.96

1	2	3	4	5	6	7	8	9	10	11

Codes: Column

1. Sl. No.

2. Age at the time of delivery

1. Below 20 years 2. 20 < age < 25 3. 25 < age < 30 4. 30 < age < 40

5. Above 40 years

3. No. of previous delivery (write code no.) -----

4. No. of living children (write code no.) -----

5. Place of delivery (write code no.) -----

1. Home 2. Private hospital 3. Govt. hospital 4. Others (specify)

6. Type of delivery -----

1. Normal 2. Caesarian 3. Others(specify)

7. Still born baby. Living baby -----

1. Still born Living baby

8. Whether mentally/ physically handicapped -----

1. Mental 2. Physical 3. Normal

9. If delivery at home who attended the delivery -----

1. Midwife 2. Doctor 3. Family member 4. Others (specify)

10. Expenses of delivery -----

1. below 100 2. 100 < exp < 500 3. 500 < exp < 1000 4. 1000 < exp < 2500
5. above 2500

11. Have you ever had an abortion 1. Yes 2. No

11.1 If yes, spontaneous 1 2 3 4 5

Induced 1 2 3 4 5

12. Is there any family planning methods adopted by:

1. The female of the family 1. Yes 2. No

2. The male of the family

1. Yes

2. No

If yes for (a) source of 1. Advice 2. Information

for (b) source of 1. Advice 2. Information

If no, the reason for (a) 1 2 3 4 5 6

(b) 1 2 3 4 5 6

Codes: 1. Lack of necessity 2. Lack of information 3. Lack of availability

4. Objection of the partner 5. Personal objection 6. Others

12.1 Child care, immunization and diseases for the last 2 years

Sl. No.	Main food for 1 to 3 months	Main food for 4 to 12 months	Triple	Polio	BCG	Meals

Affected by the following diseases?

Whooping Cough	Tetanus	Measles	TB	Polio	Diphtheria	Treatment given

Codes:

Column 2: 1. Breast feeding 2. Bottle milk 3. Baby food 4. Home made food

Column 3-13: 0. No 1. Yes

Column 14: 1. Allopath 2. Ayurvedic 3. Homeopathy 4. Others

13.1 Deaths that occurred between 01-01-95 to 31-12-96

Age		3. Disease
1. Below 1 year	2. Above 1 Year	

Codes: Column 1 & 2 Specify age

3. 1. Heart Attack 2. Abdominal Disease 3. Cancer 4. TB 5. Other
Respiratory diseases 6. Accidents 7. Suicide 8. Cerebral Thrombosis 5. Kidney
Diseases 10. Others (specify)

4.1 Ailments (During last two months)

Sl. No.	Name of the disease	No. of days of disease	Method for Treatment	Agency Treatment	Expenditure		
					Medicine	Fees	Others
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

Codes: Column 2:

1. Diarrhoea 2. Fever 3. Malaria 4. Filaria 5. Chicken pox 6.
Measeles 7. Mums 8. Diphtheria 9. Tetanus 10. Jaundice 11. Typhoid
12. Asthma 13. Pneumonia 14. Heart Attack 15. Paralysis 16. Diabetes
17. Blood Pressure 18. Goiter 19. Allergy 20. Others

Column 4: 1. Allopathy 2. Ayurvedic 3. Homeopathy 4. Home Remedies
5. Others

Column 5: 1. Self treatment 2. Govt. Hospital 3. Pvt. Hospital 4. Others

15.1 Chronicle Diseases

Sl. No.	Disease	Duration	Treatment
1	2	3	4

Codes: Column 2:

1. Leprosy 2. TB 3. Filaria 4. Asthma 5. BP 6. Heart Attack
 7. Cancer 8. Ulcer 9. Uterus dis. 10. Kidney ailment 11. Arthritis
 12. Goiter 13. Others

16.2 Physically Handicapped

Sl. No.	Nature of Handicap
1	2

Codes: Column 2:

1. Affecting movements 2. Deaf/dumb 3. Blindness 4. Mental abnormality
 5. Epilepsy 6. Mental Abnormality 7. Combination of above

17.1 Personal Habits

Sl. No.	Cigarette	Beedi	Snuff	Pan	Liquor
1	2	3	4	5	6

Codes: Column 2 & 3

1. No If yes, 2. Below 10 3. Above 10

Column 4 & 5 1. No 2. Yes

Column 6 1. No 2. Yes

1. < 10 days pm 2. > 10 days pm

18.1 Total Expense for treatment in last year in Rs. -----

19.1 Do you know about the nearest primary health centre -----

1. Yes 2. No

19.2 If yes do you go there? -----

1. Yes 2. No

19.3 If no, reason (write code no.) -----

Codes: 1. No doctor 2. No Medicine 3. No Treatment 4. Too far

5. No Confidence 6. Other reasons

19.4 Distance to the hospital to which usually going (km)

1 2 3 4 5 6 7 8 9 10

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20.1 Reasons for going to Pvt. hospital

1 2 3 4 5 6 7 8 9

--	--	--	--	--	--	--	--	--

Codes:

In Govt. Hospitals 1. No doctor 2. No medicine 3. No treatment

4. Bribery 5. Lack of hygiene 6. Pvt. hospital is near 7. Good behavior

8. Adequate attention 9. Others

Code Number:

Panchayat/Municipal/Corp. Ward/ -----