

## A CASE STUDY ON HEALTH PROBLEMS OF FISHER FOLK IN ADIMALATHURA FISHING VILLAGE IN KOTTUKAL GRAMA PANCHAYATH

By

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### Abstract

*Despite having the highest quality of life in the nation, according to metrics of human development, Kerala's fishing community has been mostly excluded from the overall development process. For instance, compared to the overall population, fisher persons have substantially lower educational attainment. Other development-related indicators, such as a lack of employment opportunities, poverty and hardship, crowded living conditions for both men and women, higher infant mortality rates, a lower sex ratio, and restricted access to health care facilities, also point to the state's neglect and marginalisation of the fishing community. The purpose of the present paper is to study the health problems of fisherfolk in Adimalathura fishing village in Kottukal Grama Panchayat, Thiruvananthapuram.*

**Keywords:** *health, fisherfolk, diseases, correlation, community, etc.*

### Introduction

Even though the fisher folk are contributing a considerable share to state Gross Domestic Product and create employment opportunities, they are suffering from certain health problems which affect the living standard of the fisherman. Many fishermen are marginalized from the public health care systems. For meeting expenses connected with medical treatment and delivery, they rely on local money lenders with usurious interest rate. The health status of the respondent household was studied based on the parameters like administration of vaccines, incidence of discontinuation, birth weight of infants, incidence of maternal and child mortality at the time of birth, incidence of common diseases and special ailments among adults and children. Disease

management aspects like access to health care, problems in health management and suggestions to improve the health care facilities are also dealt in this session.

Despite having the highest quality of life in the nation according to metrics of human development, Kerala's fishing community has been mostly excluded from the overall development process. For instance, compared to the overall population, fisher persons have substantially lower educational attainment. Other development-related indicators, such as a lack of employment opportunities, poverty and hardship, crowded living conditions for both men and women, higher infant mortality rates, a lower sex ratio, and restricted access to health care facilities, also point to the

state's neglect and marginalisation of the fishing community.

Due to marginalization, the fisher folk are suffering from poor housing conditions, non-availability of safe drinking water, lack of total sanitation coverage, improper waste disposal, unscientific drainage systems etc. which adversely affect their health.

In comparison to the general population, the incidence of water-borne infections, skin conditions, cancer, tuberculosis, strokes, paralysis, and other conditions is noticeably higher in coastal areas. The frequent prevalence of water-borne illnesses including cholera, typhoid, cholera, and diarrhoea are blatant signs of the unsanitary and poor health conditions present in the area. Studying the health issues faced by fishermen is crucial in this situation.

Ngaruiya et. al. (2019) find that there are many occupational health concerns and dangers for fishermen. The risks associated with the job include ergonomics, chemicals, and physical risks. Risks to their occupational health cause them to miss work, which lowers their productivity. The fishermen in Kampi Samaki depend on fishing despite the dangers of their line of work, which could result in fatalities, significant injuries, and chronic health problems. The study's findings also demonstrate that fishermen suffer from tiny wounds that, if untreated, could pose substantial long-term health hazards.

Bhavani (1986) notes that there is a dearth of data on the nutritional state and health of small-scale fishermen on India's east coast in a desk perspective and resource

investigation study. A general idea is provided by a few micro level studies and baseline surveys conducted in Tamil Nadu, Andhra Pradesh, and West Bengal. For instance, it is claimed that the eating habits of fisherman's families in Andhra Pradesh appear to be far from adequate. According to a survey conducted for BOBP in coastal communities in the Kanyakumari and Tirunelveli districts, a sizable proportion of women and children are partially blind as a result of vitamin A deficiency.

Verdujin (2000) on behalf of the BOBP had conducted a survey in Kanyakumari district to find the basic needs of 39 coastal fishing communities, which inhabit the 68 km stretch of the coast over the years, the intensity of fishing has increased partly on account of the increase in the active fishing population, parting due to the lack of alternative income generating opportunities and partly due to motorization and mechanization of fishing crafts. The resource has not kept up with the increase of effort, which results in a sharp reduction in catch per unit effort. Since the usage of mechanization in 1958, artisanal fishers have with dismay compared the landings of the mechanized crafts with their own meager catches. Besides, the artisanal fishers have often seen their nets destroy by mechanized boats with this background, the survey points out that the major problem as given by respondents is the non-availability of safe drinking water followed by sanitation and health care.

O.C. Jensen (1996) made a significant contribution to the advancement of our understanding of the non-total injury issue in the fishing business. Non-total injuries are

a severe issue in the fishing industry, particularly given the relatively high number of injuries and the strikingly high number of days off from work as a result of such injuries. Although there was a large increase in capacity with age, there was no discernible variation in injury rates according to the age of the fisherman. On trawlers with over 100 URT, injuries were much more common. The reporting mechanism needs to be improved because there weren't too many injuries reported to the maritime authorities. The conclusion shows that preventative efforts should be implemented throughout all age groups, not just among the youngest fisherman. All age groups should be covered by preventive interventions. Preventive measures ought to apply to all sizes of fishing boats, with trawlers exceeding 100 GRT receiving special consideration.

The authors Pena and Gomez (2014) analyse the working circumstances and health dangers that subsistence fishers face while outlining the difficulties in putting occupational health surveillance measures into practise. Fishermen live in risky situations because they lack access to occupational health care. They are not protected from diagnosis, treatment, or social security benefits for thirty work-related illnesses. The conclusion obtained is that inter-sartorial VISAT action is required to minimise excessive working hours, organise the united health system to recognise occupational disease, and ensure social security rights through initiatives centred on health education.

According to Lawrie et. al. (2004), health promotion and education campaigns should be carried out to increase fishermen's awareness of the risks of passive smoking and to inform them of the resources that are already available to assist smokers in quitting. Consider legislation that would prohibit smoking below deck or, at the very least, create a code of best practises that would lower the amount of passive smoking. It should be unlawful to board a boat while intoxicated, and fishermen should be made aware of state drinking levels and the risks of binge drinking.

### **Objectives**

To study the health problems of fisherfolk in Adimalathura fishing village in Kottukal Grama Panchayat, Thiruvananthapuram.

### **Methodology**

Both primary and secondary data are used for analyzing the "case study on the health problems of fisher folk in Adimalathura fishing village in Kottukal Grama Panchayath". Primary data were collected through structured questionnaire. Adimalathura region consisting of approximately 500 fishermen families, of which 50 families were selected as sample. Appropriate statistical tools were used for analysing the data and correlation coefficient to express the income and expenditure on health of the fishermen families. In addition to that, secondary sources such as Annual Report of Fisheries Department, Economic Review, State Planning Board etc. were also used.

## Data Analysis

### 1. Age

**Table 1 - Age**

Age	Gender		Total	Percentage
	Male	Female		
0-20	1	0	1	2
21-40	11	3	14	28
41-60	21	7	28	56
61-80	4	3	7	14

Source: Primary Data

Age wise classification reveals that, 56 percentage of the respondents are in the age group of 40-60, only 2 percentage of the households are in the age group of 0-20.

### 2. Educational Qualification

**Table 2 – Educational Qualification**

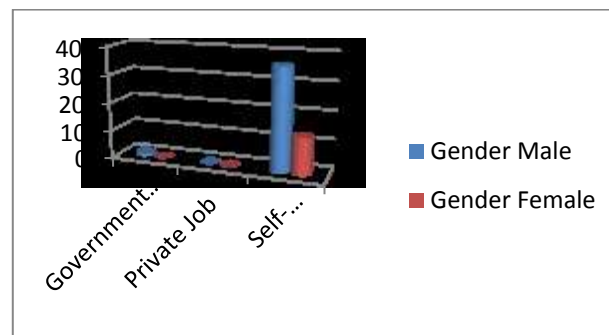
Educational Qualification	No. of Households		Total	Percentage
	Male	Female		
Through Upper Primary	27	11	38	76
SSLC	9	2	11	22
Pre-degree/+2	0	0	0	0
Graduate	1	0	1	2
<b>Total</b>	37	13	50	100

Source: Primary Data

Educational wise classification shows that 76 percentage of the fishermen have only the education of below upper primary. 22 percent has the qualification SSLC. Only 2 percentage of the fishermen are studied at the graduation level.

### 3. Occupation

**Figure 1 - Occupation**



Source: Primary Data

The data shows that the majority of the persons are self-employed. That is, 98 percent persons are self-employed or depending on fishing while there is only 2 percentage of person who have government job. It should also be noted here is that the participation of women is very much lesser as compared to men.

### 4. Housing

**Table 3 – Housing**

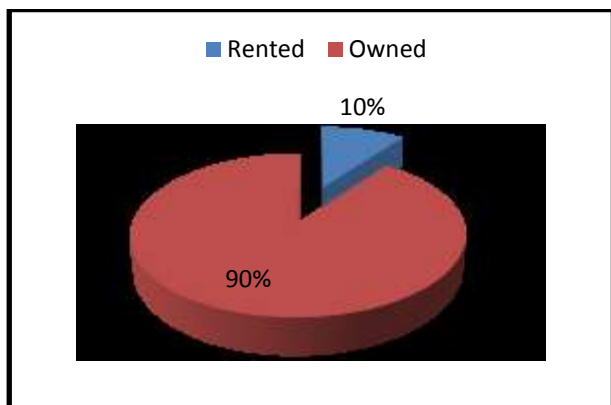
Nature of Housing	No. of Households	Percentage
Pucca	12	24%
Semi-Pucca	21	42%
Kutchha	17	34%
<b>Total</b>	50	100%

Source: Primary Data

The figure 2 shows that only 24 percent of the fishermen live in a pucca house. Remaining 76 percent of the fishermen are distributed to Semi-pucca and Kutchha houses as 42 percent and 34 percent respectively.

## 5. Ownership of House

**Figure 2 – Housing Ownership**

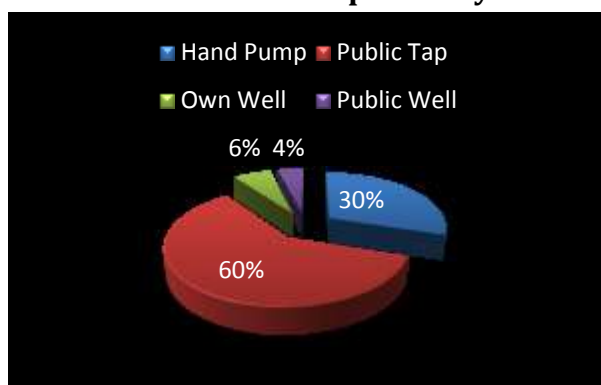


Source: Primary Data

From the Figure 2 we can see that 90 percentage of the fisher folk live in their own houses and only 10 percent of the people live in rented houses. That is majority of the fisher folk have their own houses. But still there are some households who haven't any own houses.

## 6. Source of Drinking Water

**Figure 3 – Source of Water and Households' Dependency**



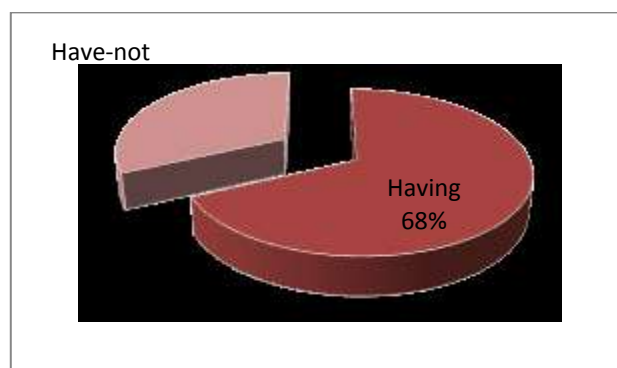
Source: Primary Data

As per the data 60 percentage of the fisher folk are depending on the public taps for drinking water, 30 percentage depending on hand pump, 6 percentage depending on own well and 4 percentage on public well. It is clear that most of the fisher folk are

depending the public tap for their drinking water. Only a few households have well and hand pumps as their own and some others depend the public well for drinking water.

## 7. Toilet Facility

**Figure 4 – Toilet Facility**

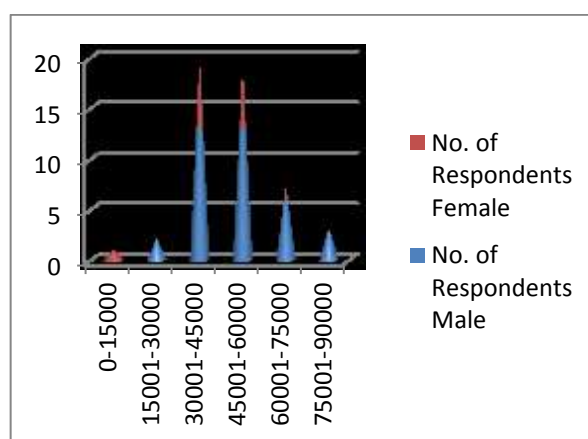


Source: Primary Data

It is clear from the figure – 4 that 68 percent of the fisher folk have latrine facility and 32 percent of the fisher folk lacks it. That is, most of the households have latrine facility. But a considerable percent of the fisher folk does not have any latrine facility.

## 8. Income Groups (Annual)

**Figure 5 - Income Groups (Annual)**



Source: Primary Data

The above data shows that the annual income of the most of the households is between 30001 and 45000. That is 38

percent of the fisher folk belong to the income category of 30001-45000. There are some other persons who belong to the income group of 0-15000, which shows that the poverty is following them as an eagle which undoubtedly increasing over the years.

## 9. Expenditure

**Table 4 – Expenditure**

Expenditure Category	No. of Households	Percentage
0-15000	0	0%
15001-30000	3	6%
3001-45000	13	26%
45001-60000	21	42%
60001-75000	7	14%
750001-90000	6	12%
<b>Total</b>	<b>50</b>	<b>100%</b>

Source: Primary Data

The data shows that most of the household (42%) belong to the expenditure category of 45001-60000. It is clear that there only few persons who spent more than 60001 for their consumption.

## 10. Respondents Affected with Various Diseases

**Table 5 – Respondents Affected with Diseases**

Diseases	No. Of Respondents		Total
	Male	Female	
Dengue Fever	2	1	3(6%)
Back pain and Shoulder pain	11	3	14(28%)
Breathing Problem	17	5	22(44%)
Diarrhea	15	3	18(36%)
Typhoid	1	1	2(4%)

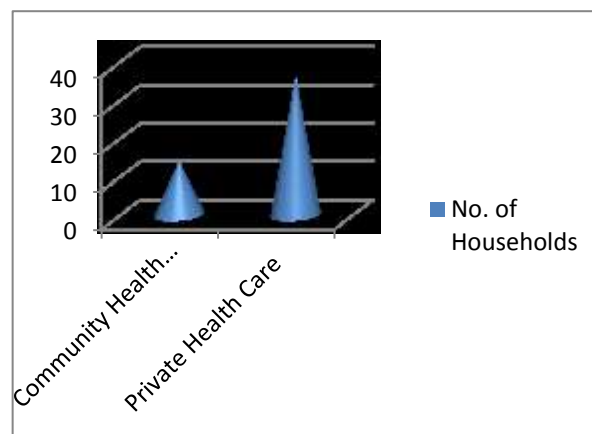
Thyroid	0	5	5(10%)
Skin Disease	8	5	13(26%)
Cancer	6	1	7(14%)
Cholera	6	2	8(16%)
Urinary infection	2	1	3(6%)
Anemia	0	3	3(6%)
Grips	3	1	4(8%)

Source: Primary Data

The data clearly says that the fisher folk in Adimalathura fishing village faces serious health problems. The crucial diseases are Dengue Fever, Back Pain and Shoulder Pain, Breathing Problem, Diarrhea, Typhoid, Thyroid, Skin Diseases, Cancer, Urinary Infection, Anemia and Gripse. The major disease faced by the fisher folk is Breathing Problem, affected by 44% of the fisher folk, followed by diarrhea, 36%.

## 11. Institutions Provide Medical Facilities

**Figure 6 – Institutions Provides Medical Facilities**



Source: Primary Data

Among the 50 sample households, 14 (28%) households depend on Community Health Center and 36 (72%) households depend on Private Health Care. As the data shows most of the people depends on the private health care, because the village lacks a government medical institution. If they want to go to any

government hospital, they have to go to CHC Pulluvila, which is far away from Adimalathura.

## 12. Expenditure On Medical Treatment

**Table 5 – Expenditure Spent on Health**

Expenditure	No. of Households	Total
0-20000	23	46%
20001-40000	18	36%
40001-60000	7	14%
60001-80000	1	2%
80001-100000	1	2%
<b>Total</b>	<b>50</b>	<b>100%</b>

Source: Primary Data

Among the total of 50 sample households, most of the households 23 (46%) have medical expenditure in between 0 and 20000, 18 (36%), households have medical expenditure in between 20001 and 40000, 7 (14%) households have medical expenditure in between 40001 and 60000, 1 (2%) have expenditure in between 60001 and 80000 and 1 (2%) has expenditure of above 80001. This shows that sometimes their health expenditure may exceed their income.

## 13. Correlation Between Income and Expenditure on Health

No	X	Y	X*Y	X*X	Y*Y
1	52.8	72.00	3801.6	2787.84	5184
2	45	84.00	3780	2025	7056
3	60	51.00	3060	3600	2601
4	43.2	54.00	2332.8	1866.24	2916
5	72	54.00	3888	5184	2916
6	43.2	24.00	1036.8	1866.24	576
7	43.2	9.60	414.72	1866.24	92.16
8	55.2	28.80	1589.76	3047.04	829.44
9	45	12.00	540	2025	144

10	60	24.00	1440	3600	576
11	60	36.00	2160	3600	1296
12	14.4	30.00	432	207.36	900
13	38.4	24.00	921.6	1474.56	576
14	48	60.00	2880	2304	3600
15	60	48.00	2880	3600	2304
16	10	24.00	240	100	576
17	45	6.00	270	2025	36
18	64.8	7.20	466.56	4199.04	51.84
19	55.2	6.00	331.2	3047.04	36
20	43.2	7.20	311.04	1866.24	51.84
21	43.2	6.00	259.2	1866.24	36
22	46.2	6.00	277.2	2134.44	36
23	45	30.00	1350	2025	900
24	43.2	9.60	414.72	1866.24	92.16
25	36	6.00	216	1296	36
26	36	6.00	216	1296	36
27	36	3.00	108	1296	9
28	90	12.00	1080	8100	144
29	43.2	36.00	1555.2	1866.24	1296
30	90	48.00	4320	8100	2304
31	36	48.00	1728	1296	2304
32	45	24.00	1080	2025	576
33	30	30.00	900	900	900
34	72	36.00	2592	5184	1296
35	60	36.00	2160	3600	1296
36	78	24.00	1872	6084	576
37	90	12.00	1080	8100	144
38	72	12.00	864	5184	144
39	45	12.00	540	2025	144
40	45	12.00	540	2025	144
41	54	18.00	972	2916	324
42	36	24.00	864	1296	576
43	72	24.00	1728	5184	576
44	36	18.00	648	1296	324
45	24	20.00	480	576	400
46	43.2	18.00	777.6	1866.24	324
47	43.2	30.00	1296	1866.24	900
48	52.8	24.00	1267.2	2787.84	576
49	48	36.00	1728	2304	1296
50	43.2	6.00	259.2	1866.24	36
$\Sigma X =$		$\Sigma Y =$		$\Sigma X^2 =$	$\Sigma Y^2 =$
2492.		1,288.4		138518.	50063.4
8		0	65948.4	6	4

Source: Primary Data

Karl Pearson's Correlation Coefficient =

$$\begin{aligned}
 & \frac{n \sum XY - \sum X * \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2} * \sqrt{n \sum Y^2 - (\sum Y)^2}} \\
 & = \\
 & \frac{50 * 65948.4 - 2492.8 * 1288.40}{\sqrt{50 * 138518.6 - (2492.8)^2} * \sqrt{50 * 50063.44 - (1288.40)^2}} \\
 & = \\
 & \frac{3297420 - 3211723.52}{\sqrt{6925930 - 6214051.84} * \sqrt{2503172 - 1659974.56}} \\
 & = \\
 & \frac{85696.48}{\sqrt{711878.16} * \sqrt{843197.44}} \\
 & = \\
 & \frac{85696.48}{843.73 * 918.26} \\
 & = \\
 & \frac{85696.48}{774763.51} \\
 & = 0.11
 \end{aligned}$$

The correlation coefficient is 0.11. This shows that the correlation between income and expenditure on health is positive.

### Major Findings

The survey conducted among fishermen community in Adimalathura village at Thiruvananthapuram District found the following:

- Majority of the fishermen have only primary and upper primary education.
- Most of the fishermen are self-employed.
- Most of the fishermen lived in katcha and semi pucca house.
- Majority of the fishermen lived in their own houses, but the problem is the joint family in a small house.
- Majority of fishermen were dependent on public tap for drinking water, but required quantity of water has not been given regularly.
- Lack of toilet is a major problem in Adimalathura fishing village.
- Majority of the fishermen belonged to APL category.
- Waste management is a serious problem in that area. It will generate pollution and health problem.
- Diarrhea, Cancer, Skin diseases, Back Pain and Shoulder Pain, Breathing Problem etc. were the major problem that affected the people in Adimalathura fishing village.
- Majority of the fishermen depends on Private Health Center.
- Majority of the fishermen do not have any Health Card.
- The income and medical expenditure on fishermen have shown a positive correlation. As they were spending more on health, the remaining income is not sufficient to meet other expenses most often.

To conclude, Adimalathura fishermen community has been affected by many health problems like Breathing problem, Cancer, Diarrhea. Back pain and shoulder pain Sunburn, Stress etc. The reason for health problem is mainly from poor quality of living standard and large use of alcohol.

### Suggestions

- ❖ Provide drinking water facility.
- ❖ Provide toilet facility.
- ❖ Conduct awareness programs about good living standard.
- ❖ Provide solution for waste management.
- ❖ Provide Government hospital including all facilities to that particular coastal area.
- ❖ Provide an awareness about the micro credit activities.

- ❖ Conduct awareness programs about alcohol.
- ❖ Provide medical services

### Limitations

- ❖ The study has taken 50 random samples of fishermen families. This will not reflect the entire coastal area.
- ❖ Time constraint was a major limitation.
- ❖ There are many practical problems for obtaining accurate information.

### Conclusion

Even though the village has been developing there exists so many drawbacks, especially in case of medical treatment in the village. Medical camp has been conducting for every Wednesday for providing treatment to them, but it is not sufficient. The village lacks a government medical institution. Most often they are dependent on a Community Health Centre in Pulluvila, which is far away from Adimalathura fishing village. So, an immediate action from the part of the government is needed.

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