

**HEALTH STATUS OF TRIBES: A Comparative Study on the Health Status of Tribes (Irular Community) In Agali and Pudussery Grampanchayath of Palakkad District**

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**ABSTRACT**

*India has the second largest concentration of tribal communities in the world next to Africa according to 2011 census. Health status refers quality of life and health care that indicates health is closely linked to essentials of living of a human individual. The main aim of the present study is to compare the health status among the Irular community living under the Agali and Pudussery Gram Panchayath of Palakkad district. Additionally aims to find out the frequency of knowledge of Concern about Health. The present study was conducted among the Irulars from Agali and Pudussery Gram panchayths of Plakkad district. Using the Multi stage purposive random sampling method 50 Irulars (equally distributed into two Panchayaths) were selected. Use of both primary and secondary data was made to understand the health status of Tribes. From the study it was revealed that Irulars of Agali and Pudussery panchayath showed more percentage of occurrence of communicable diseases than non- communicable diseases.*

**Keywords:**Health status,Irulars,Agali,Pudussery,Health problems.

**Introduction**

Health is an important index of economic growth and development. The World Health Organization has defined health as a state of complete physical, mental and social well-being (World Health Organization 1980). health is seen as a functional rather than a clinical concept (Mahapatra 1994). Several studies conducted in the past among various tribes revealed wide variation in their health and nutritional status which is determined by their individual socio economic, socio biological as well as socio cultural practices. The environmental conditions in which they live, their access to health care facility and their

utilization also significantly determine the overall health status (Vrindha k:2016). There are several communicable and non-communicable/life style diseases prevalent among the tribes. The widespread poverty, illiteracy, malnutrition, absence of safe drinking water and sanitary living conditions, poor maternal and child health services are the possible contributing factors to the poor health conditions among tribes. There are different schemes for the improvement of health among tribes. But their level of awareness, knowledge and perception towards welfare programmes are very poor. This study has an attempt to understand the health problems of these groups and it will pose newer thrust area of thinking to the tribal development programmes as well as to the society, to bring out necessary changes in accordance with their needs and make them better.

### **Statement of the problem**

Kerala has achieved a good health status compared to other States in India. Kerala has made significant gains in health indices such as high life expectancy, low infant mortality rate, birth rate, and death rate. The State must ensure that these gains are sustained. Besides, the State also needs to address problems of life style diseases (Non Communicable Diseases) like diabetes, hypertension, coronary heart disease, cancer and geriatric problems. Increasing incidences of communicable diseases like chikungunya, dengue, leptospirosis, swine flu are also a major cause of concern. Besides, there are new threats to the health scenario substance abuse and alcoholism, adolescent health issues and rising number of road traffic accidents. The health status of the marginalized communities like adivasis is also poor compared to that of the general population. To tackle these, concerted and committed efforts with compared to that of the general population. (Economic review 2018).

### **Importance of the study**

Health is a prerequisite for human development and is an essential component for the wellbeing of the mankind. There are several communicable and non-communicable/life style diseases prevalent among the tribes. The widespread poverty, illiteracy, malnutrition, absence of safe drinking water and sanitary living conditions, poor maternal and child health services are the possible contributing factors to the poor health conditions among tribes. There are different schemes for the improvement of health among tribes. But their level of awareness, knowledge and perception towards welfare programmes are very poor. This study has an attempt to understand the health problems of these groups and it will

pose newer thrust area of thinking to the tribal development programmes as well as to the society, to bring out necessary changes in accordance with their needs and make them better.

### **Objectives of the study**

1. To study the socio-economic characteristics of the tribes (Irular community).
2. To make a comparative study on health care services and identify the factors towards health problem, if any among tribes.
3. To compare attitudes towards health status and awareness of health hygiene among tribes in Agali and Pudussery panchayath.
4. To bring out solutions and strategies for improving the health of tribes.

### **Research method**

A well-structured interview schedule was prepared for data collection. The interview schedule includes specific questions related to objectives of study such as respondent's socio-economic profile.

### **Sources of data**

#### **(A) Primary Sources**

The main source of data for this study is primary source. The primary source of data was the sample unit (Irular community) from both Agali and pudussery panchayath of Palakkad district. The primary data were collected through face to face interview with the respondents and also by observation.

#### **(B) Secondary Sources**

Secondary data needed for the study has been collected from the following sources.

- 1) Journals
- 2) Newspapers
- 3) Internet
- 4) Studies undertaken by various research institutions
- 5) Magazines

### **Area of study**

The area of study constitutes in Agali and Pudussery panchayath of Palakkad district. The study mainly focused only the tribes in both panchayath.

### **Sampling design**

Study is based on primary data through multi stage purposive random sampling method. The nature of the study is a comparative one. The choice of the sampling is mainly based on the number of the Irulars (Tribal community) in Palakkad district.

In the present study, the sample selection is done in three stages. Sample selection has been made by applying multistage purposive random sampling method. At the first stage, the researcher has selected two Taluks in Palakkad district such as Mannarkkad and Palakkad. In the second stage, the researcher has selected two panchayaths each from two taluks. In the third stage, a sample of 25 Irular community have been selected on random basis from the respective panchayaths viz Agali and pudussery.

### Statistical and Econometric tools used

The study used statistical tools such as frequency distribution, Percentage method, Mean, Standard Deviation, Minimum, Maximum, Cross tabs, etc. The study also used chi-square test to find out the relation between health and socio-economic variables. In addition to this the study used Mann-Whitney U test to find out the difference in attitudes towards the health status between two Panchayath.

Health problems = f (Sanitation facility, Access to health institution, Availability of free medical services, Treatment, Medical insurance, Malnutrition)

To find out the determinants of health problems among tribes the study used binary logistic regression model by taking health of tribes as dependent variable and Sanitation, Access to health institution, Availability of free medical services, Treatment, Medical insurance, Malnutrition as explanatory or independent. The functional form of the model is summarized given equation

$$H = \beta_1 + \beta_2 S + \beta_3 A + \beta_4 F + \beta_5 T + \beta_6 I + \beta_7 M + \dots + U \quad 1$$

H= Health problems= Yes/No

Health problems of tribes, it is a dummy variable assigned value 1= Feel good health and 0= Not feel good health

S= Sanitary facility, It is a dummy variable assigned value 1=Yes and 0=No

A= Access to health institution, It is a dummy variable assigned value 1=Yes and 0=No

F= Availability of free medical services, It is a dummy variable assigned value 1=Yes and 0=No

T= Treatment, It is a dummy variable assigned value 1= Government hospital and 0= Private hospital

I= Medical insurance, It is a dummy variable assigned value 1=Yes and 0=No

M= Malnutrition, It is also a dummy variable assigned value 1=Yes and 0=No

U term is error term which indicates all excluded variables and errors in measurement.

The equation 1 is estimated by using maximum likelihood method.

### **Limitations of the study**

Every research has some limitations. This research is not an exception of this rule. Firstly, for this study we have collected data from the Irular community only. There are many tribal people of different community are scattered in many places of Palakkad district. The data are only for Irular community of Palakkad district that does not represent the whole tribal people of this country and the results cannot be generalized. Secondly, the tribes are not ready to respond properly to the questions. Another important problem was the difficulty to understand the language spoken by tribes. Finally, this was a self-financed study, which limited the various scopes along with the scope of extending the study area and increasing the sample size.

### **Results and Analysis**

#### **Age Composition of the Respondents**

Clarke (1972) rightly points out that these three determinants of age structure are interdependent and any change in one of these may influence the other two and it is through these variables that the socio-economic conditions influence the age structure.

Out of this total number, 52 percent of them were between the age group of 40-50 years, 32 percent between 30-40 years, eight percent were between the age group of 20-30 years and above 50 years respectively (Table-1)

#### **Household Income**

Income is an important indicator of socio-economic condition of a community. A community with higher income level can meet their basic needs and enjoy their livelihoods.

The details of monthly income of all tribal communities are given in table no. 2. The average monthly income of the family is Rs.4357. The minimum monthly income as per the data collected is Rs.500 and maximum income is Rs.24000.

#### **Expenditure**

Income and expenditure are the most important aspects to evaluate the economic life of the people. Expenditure pattern determines the standard of living. Food, Medical, etc. are the major areas of considered for the study of expenditure pattern.

The average monthly medical expenditure is Rs.791.0000 and standard deviation is 1017.68495. The minimum monthly medical expenditure is Rs.100 and maximum medical expenditure of the respondents is Rs.500 (See table No.3)

## **Sanitation**

The study area has very less in sanitation facility. The lack of awareness and poor economic situation is a major obstacle for better sanitation.

A little less than half of the respondents (48 percent) percent among Irulars in Agali lack proper sanitation in and around their houses. Majority of the respondents (76 percent) from Pudussery have reported that there is no sanitary facility in their house. That means, 76 percent families are opting for open defecation. Details of sanitation facility in tribal households are given in table no. 4

## **Access to health institution**

Accessibility of health institution among tribes are given in table no. 5. About 76 percent of respondents avail the services of health institution by more than 1 km. away from their home in Agali and 80 percent of respondents avail the services of hospitals or clinics by more than 1 km. far away from their residents in and 0 percent in Agali and 4 percent in Pudussery have no access to health institution. A good percentage (24% in Agali and 16% in Pudussery) have access to health institution within 1 km. This data clearly highlights the poor accessibility of health institution among tribes.

## **Awareness**

Government provides various services or schemes to the tribes in country. Especially the central and state Government provides various services and funds for their betterment. But the awareness of tribes about tribal development programmes are the most important factor in their socio-economic conditions. In Agali most of the respondents (72%) are aware about the health programmes provided by the govt. It is identified that none of tribes in Pudussery are aware of government health care programmes. This is a poor condition of Pudussery tribes' people to the main stream society (See table no. 6)

Table No. 7 gives information about the availability of free medical services. The highest proportion was among tribes in pudussery with regard to benefit received (76 percent), followed by tribes in Agali (68 percent).

Table No. 8 gives data about the availability of emergency facilities in the hospitals. More than half of the respondents (52% in Agali and 52% in Pudussery) have reported that there is no emergency facilities in the hospital, where they get treatment. The data collected from the field reveals that tribal communities are still suffering from the problem of lack of emergency facilities.

### **Health problems**

The different diseases were categorized in two three groups for the convenience of study as communicable, non-communicable and the last category included any others. Information on the health problems are shown in Table No.9

Of the three categories of diseases, tribes in Agali showed highest percentage of occurrence of communicable diseases (40 percent), followed by non-communicable diseases (36 percent) such as BP, sugar, etc. Among all the tribals in the study area, only 20 percent opine that they are free from diseases. In contrast to tribes in Agali, tribes in pudussery showed highest occurrence of communicable diseases than non-communicable diseases. Of the three groups of diseases, 36 percent of population had non communicable diseases.

### **Malnutrition**

Malnutrition is a condition that results from eating a diet in which one or more nutrients are either not enough or are too much such that the diet causes health problems. Malnutrition occurs when the body doesn't get enough nutrients. Malnutrition is a major health problem, especially among tribes.

Majority respondents (80 percent) recognize that they suffering from malnutrition. Remaining 20 percent are not having Malnutrition. In Agali 76% are suffered from the problem of malnutrition. In Pudussery the situation is not different 84% are suffering from the problem of malnutrition. The percentage of tribes, who suffered from the problem of malnutrition (Irular community) is higher among tribes in Pudussery than Agali. From the above table, we can understand malnutrition is a major problem among tribes in both panchayath (See table no. 10)

Table No.11 clearly indicates that the people living in joint family system are generally healthier than those living in nuclear families. The main reason for this is, in a joint family, there are lot of people to take care and give attention to other family members.

Table No.12 is used to test association between the dependent variable health problems and independent variables sanitation, access to health institution, availability of free medical services, Treatment, Medical insurance and Malnutrition. Of all the six variables, Malnutrition have significant impact on health problems and other variable like sanitation, Access to health institution, Availability of free medical services, Treatment

have no significant impact on health problems. There is a significant positive association between health problems and medical insurance, but the significance level is low.

**Attitudes towards health status**

As part of comparing the attitudes towards health status among the tribes Mann-Whitney U test is used. The relevant portion of the result of the Mann-Whitney U test is given in table 13 and 14

**Table No.13**

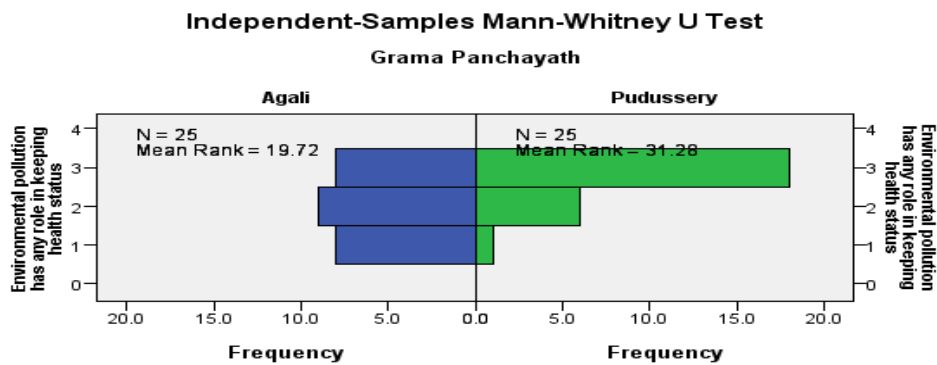
Hypothesis Test Summary				
	Null Hypothesis	Test	Sig.	Decision
1	The distribution of Environmental pollution has any role in keeping health status is the same across categories of Grama Panchayath.	Independent-Samples Mann-Whitney U Test	.002	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

**Source:** Computed from the Primary data

From the independent samples Mann-Whitney U test, it is observed that P value is 0.002 which is less than 5 percent level of significant and hence  $H_0$  is rejected. So the extent to which Environmental pollution influences health status is obtained from the following table.

**Figure No. 1**



<b>Total N</b>	50
<b>Mann-Whitney U</b>	457.000
<b>Wilcoxon W</b>	782.000
<b>Test Statistic</b>	457.000
<b>Standard Error</b>	46.866
<b>Standardized Test Statistic</b>	3.083
<b>Asymptotic Sig. (2-sided test)</b>	.002



It is evident that the mean rank of the tribal respondents of Pudussery Gram Panchayath is 31.28 which is greater than that of the mean rank 19.72 of Agali Gram Panchayath. That is on an average tribal respondents of pudussery panchayath have greater opinion on impact of Environmental pollution on health status.

**Table No. 14**

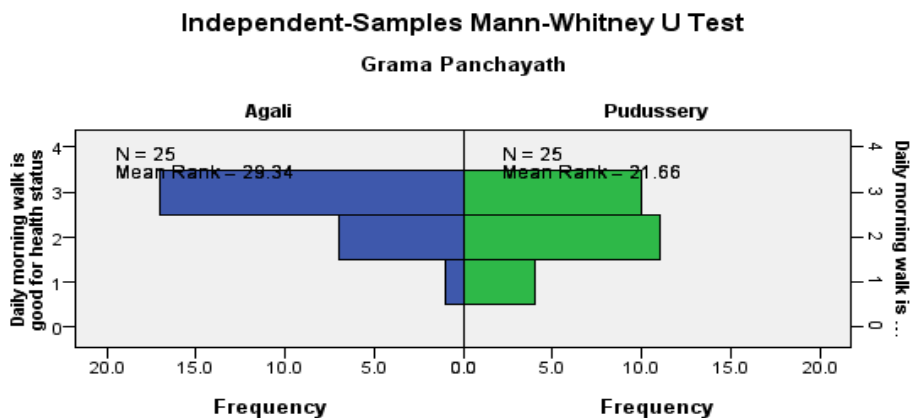
Hypothesis Test Summary				
	Null Hypothesis	Test	Sig.	Decision
2	The distribution of Daily morning walk is good for health status is the same across categories of Grama Panchayath.	Independent-Samples Mann-Whitney U Test	.037	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

**Source:** Computed from the Primary data

From the independent samples Mann-Whitney U test, it is observed that P value is 0.037 which is less than 5 percent level of significant and hence  $H_0$  is rejected. So the extent to which Daily morning walk is good for health status is obtained from the following table.

**Figure No. 2**



<b>Total N</b>	50
<b>Mann-Whitney U</b>	216.500
<b>Wilcoxon W</b>	541.500
<b>Test Statistic</b>	216.500
<b>Standard Error</b>	45.959
<b>Standardized Test Statistic</b>	-2.089
<b>Asymptotic Sig. (2-sided test)</b>	.037

It is evident that the mean rank of the tribal respondents of Agali Gram Panchayath is 29.34 which is greater than that of the mean rank 21.66 of Pudussery Gram Panchayath. That is on an average tribal respondents of Agali panchayath have greater opinion on impact of Daily morning walk is good for health.

### **Awareness of health hygiene among tribes**

To compare awareness of health hygiene among tribes, the study used six statements in order to know their awareness level regarding health hygiene and also used cross tabs for drawing inference from the collected data.

Majority of the respondent from Agali and Pudussery have favorable opinion on the statement that clean and hygienic drinking water is the pre-requisites of maintaining good health status. It implies that the more awareness of respondents regarding the above mentioned statement (See table No. 15)

Majority of the respondents from Pudussery and Agali opine that the regular taking bath is necessary for good health status. That means the awareness of tribes in Pudussery is higher (100 percent) followed by Agali panchayath (92 percent) (Table No. 16)

The proportion of respondents is much higher (84 percent) in Agali, compared to 54 percent in Pudussery giving opinion that Physical exercise can improve the health status of an individual (See table no. 17)

### **Findings**

The major findings of the present study are as follows.

- Age wise classification of the respondents reveals that majority of the respondents almost 52 %) belonged to the age group, between 40-50 years.
- Income of the households of the study population shows that the average monthly income per household is Rs.4357.
- The average monthly medical expenditure is Rs.791.
- As expected, Sanitation facilities vary widely between the households in Agali and Pudussery. Moreover, 76 percent of households in Pudussery have no sanitary facility at all, compared with 48 percent of households in Agali.
- Access to health institutions is a major factor for the health backwardness of the tribal communities despite a number of policy and programme interventions. Inaccessibility is highly visible among Irulars in Pudussery as the majority of all tribes do not have access to health institution. It is also noticed that the distance to health institution is a major problem among the tribes in the study area.

- It is identified that none of the tribes in Pudussery panchayath are aware of government programmes and the awareness is higher among tribes in Agali gram panchayath. They have benefited from Krishi millet scheme and community kitchen scheme. In Pudussery, all most all respondent (100 percent of respondents) are not aware about any kind of Government programmes for the improvement of their health. This is a poor condition of Pudussery tribes' people to the main stream society.
- The percentage of tribes who received the benefits of free medical services was 72 percent. The highest proportion was among tribes in pudussery with regard to benefit received (76 percent), followed by 68 percent in Agali.
- The data collected from the field reveals that tribal communities are still suffering from problem of lack of emergency facilities.
- Among all the independent variables such as sanitation, access to health, etc. Malnutrition have significant impact on health problems.
- From the study it was revealed that the occurrence of communicable diseases is higher among Irular community in Pudussery panchayaths (48 percent) than Agali (40 percent), owing to their poor hygienic aspects. The percentage of occurrence of Non communicable diseases is almost same in both panchayaths (36 percent respectively), which is a clear reflection of their changing life style.
- It has been found that the people living in joint family are generally healthier than those living in nuclear families. The main reason for this is, in a joint family, there are lot of people to take care and give attention to other family members.
- Poor education plays a vital role in the lack of awareness on good health. As per this study, it is observed that families with poor educational attainment are more prone to diseases. There is a positive relation between education and health.
- Regarding the attitudes towards health status, on an average tribal respondents of Agali panchayath have greater opinion on the statements like, Daily morning walk is good for health. In the case of tribes in Pudussery panchayath, they have greater opinion on impact of environmental pollution on health status of an individual.
- Regarding the awareness of health hygiene among Irulars in both panchayaths, awareness of tribes about health hygiene is higher among Tribes in Agali than Pudussery panchayath. The awareness of tribes in Pudussery panchayath is comparatively less, but it is much better. Majority of the respondents in both panchayaths (90 percent and 96 percent respectively) opine that the clean and hygienic drinking water and regular taking bath is necessary for good health status.

### Important suggestions

- Provide better sanitation and drinking water facilities for improving the social conditions of tribes.
- Provide adequate awareness about the health services supplied through various govt. and non govt. institutions.
- Ensure proper availability of services from Govt. hospital, Pvt. Hospital and from various health agents like Anganvadi workers, Tribal promoters. etc.
- Health centre should be established near to their village
- Provide adequate transport facilities in order to access the health care facilities.
- Panchayath should take care the local environment to avoid the spread of mosquitoes.

### Conclusion

In brief, the present study revealed that the Irular community in both the Panchayath belongs to the poor health conditions according to their self-rating of health and the study also concluded that tribes of Pudussery Panchayath are less concerned about health related knowledge than tribes of Agali Panchayath, so from the study it can demonstrate that Irulars in Agali are healthier than Pudussery. The socio-economic aspects were also more or less similar. Both panchayaths did not have proper sanitary facility and reliable water source. From the study it was revealed that Irulars of Agali and Pudussery panchayath showed more percentage of occurrence of communicable diseases than non-communicable diseases.

The accessibility of facilities to tribal community is a major issue as majority of the tribal settlements is located in geographically challenged areas (hilly areas or rural areas where the roads are not 'Pucca'). An adequate supply of healthcare services through various health institutions, proper awareness about the health care services, provision of better transport facilities should be required to improve health condition of tribes in Kerala.

**Table 1. Distribution of Respondents by Age Group**

		Frequency	Percent	Valid Percent	Cumulative Percent
<b>Valid</b>	<b>20-30yrs</b>	4	8.0	8.0	8.0
	<b>30-40</b>	16	32.0	32.0	40.0
	<b>40-50</b>	26	52.0	52.0	92.0
	<b>Above 50yrs</b>	4	8.0	8.0	100.0
	<b>Total</b>	50	100.0	100.0	

**Source:** Computed from the Primary data

**Table 2. Monthly income of the family**

<b>N</b>	<b>Valid</b>	50
	<b>Missing</b>	0
<b>Mean</b>		4357.0000
<b>Std. Deviation</b>		5300.28888
<b>Minimum</b>		500.00
<b>Maximum</b>		24000.00

Source: Computed from the Primary data

**Table 3. Monthly medical expenditure**

<b>N</b>	<b>Valid</b>	50
	<b>Missing</b>	0
<b>Mean</b>		791.0000
<b>Std. Deviation</b>		1017.68495
<b>Minimum</b>		100.00
<b>Maximum</b>		5000.00

Source: Computed from the Primary data

**Table 4. Availability of Sanitation facility**

			<b>Gram Panchayath</b>		<b>Total</b>
			<b>Agali</b>	<b>Pudussery</b>	
<b>Sanitary facility</b>	<b>Yes</b>	Count	13	6	19
		% within Gram Panchayath	52.0%	24.0%	38.0%
	<b>No</b>	Count	12	19	31
		% within Gram Panchayath	48.0%	76.0%	62.0%
<b>Total</b>		Count	25	25	50
		% within Gram Panchayath	100.0%	100.0%	100.0%

Source: Computed from the Primary data

**Table 5. Access to health institution**

			<b>Gram Panchayath</b>		<b>Total</b>
			<b>Agali</b>	<b>Pudusse ry</b>	
<b>Access to health institution</b>	<b>Nil</b>	Count	0	1	1
		% within Gram Panchayath	0.0%	4.0%	2.0%
	<b>Within 1 km.</b>	Count	6	4	10
		% within Gram Panchayath	24.0%	16.0%	20.0%
	<b>More than 1 km.</b>	Count	19	20	39
		% within Gram Panchayath	76.0%	80.0%	78.0%
<b>Total</b>		Count	25	25	50
		% within Gram Panchayath	100.0%	100.0%	100.0%

Source: Computed from the Primary data

**Table 6. Distribution of respondents according to their awareness on Government programmes.**

			Gram Panchayath		Total
			Agali	Pudussery	
<b>Awareness about Government Programmes</b>	<b>Yes</b>	Count	18	0	18
		% within Gram Panchayath	72.0%	0.0%	36.0%
	<b>No</b>	Count	7	25	32
		% within Gram Panchayath	28.0%	100.0%	64.0%
<b>Total</b>		Count	25	25	50
		% within Gram Panchayath	100.0%	100.0%	100.0%

Source: Computed from the Primary data

**Table 7. Availability of free medical services**

			Gram Panchayath		Total
			Agali	Pudussery	
<b>Availability of free medical services</b>	<b>Yes</b>	Count	17	19	36
		% within Gram Panchayath	68.0%	76.0%	72.0%
	<b>No</b>	Count	8	6	14
		% within Gram Panchayath	32.0%	24.0%	28.0%
<b>Total</b>		Count	25	25	50
		% within Gram Panchayath	100.0%	100.0%	100.0%

Source: Computed from the Primary data

**Table 8. Emergency facilities in the hospital**

			Gram Panchayath		Total
			Agali	Pudussery	
<b>Emergency facilities in the hospital</b>	<b>Yes</b>	Count	12	12	24
		% within Gram Panchayath	48.0%	48.0%	48.0%
	<b>No</b>	Count	13	13	26
		% within Gram Panchayath	52.0%	52.0%	52.0%
<b>Total</b>		Count	25	25	50
		% within Gram Panchayath	100.0%	100.0%	100.0%

Source: Computed from the Primary data

**Table 9. Health problems**

			Gram Panchayath		Total
			Agali	Pudussery	
<b>General sickness reported in the family</b>	<b>Nil</b>	Count	6	4	10
		% within Gram Panchayath	24.0%	16.0%	20.0%
	<b>Communicable diseases</b>	Count	10	12	22
		% within Gram Panchayath	40.0%	48.0%	44.0%
	<b>Non Communicable diseases</b>	Count	9	9	18
		% within Gram Panchayath	36.0%	36.0%	36.0%
<b>Total</b>		Count	25	25	50
		% within Gram Panchayath	100.0%	100.0%	100.0%

Source: Computed from the Primary data

**Table 10. Malnutrition among respondents**

			Gram Panchayath		Total
			Agali	Pudussery	
<b>Malnutrition</b>	<b>Yes</b>	Count	19	21	40
		% within Gram Panchayath	76.0%	84.0%	80.0%
	<b>No</b>	Count	6	4	10
		% within Gram Panchayath	24.0%	16.0%	20.0%
<b>Total</b>		Count	25	25	50
		% within Gram Panchayath	100.0%	100.0%	100.0%

Source: Computed from the Primary data

**Table 11. Family type and health Crosstabulation**

			Health		Total
			Healthy	Unhealthy	
<b>Family type</b>	<b>Single</b>	Count	7	32	39
		% within healthy	70.0%	80.0%	78.0%
	<b>Joint</b>	Count	3	8	11
		% within healthy	30.0%	20.0%	22.0%
<b>Total</b>		Count	10	40	50
		% within healthy	100.0%	100.0%	100.0%

Source: Computed from the Primary data

**Table 12 Logistic regression for determinants of health problem among tribes.**

Variables in the Equation									
		B Coefficient	S.E.	Wald	Df	Sig.	Exp(B) (Odd ratio)	90% C.I. for EXP(B)	
								Lower	Upper
Step 1 <sup>a</sup>	Sanitation	.040	1.167	.001	1	.973	1.040	.153	7.096
	Access to health institution	-16.251	40192.947	.000	1	1.000	.000	.000	.
	Availability of free medical services	-.210	1.402	.022	1	.881	.811	.081	8.134
	Treatment	1.260	1.113	1.281	1	.258	3.524	.565	21.979
	Medical Insurance	2.157	1.523	2.007	1	.157*	8.646	.706	105.816
	Malnutrition	-4.113	1.391	8.740	1	.003**	.016	.002	.161
	Constant	17.747	40192.947	.000	1	1.000***	50958634.244		

**Source:** Computed from the Primary data

- a. Variable(s) entered on step 1: sanitation, accesstohealth, availability, where, insu, mall.

\*Indicates 10 percent level of significance.

\*\*Indicates 5 percent level of significance.

\*\*\*Indicates 1 percent level of significance.

**Table 15 Clean and hygienic drinking water is the pre-requisites of maintaining good health status**

			Gram Panchayath		Total
			Agali	Pudussery	
Clean and hygienic drinking water is the pre-requisites of maintaining good health status	Yes	Count	23	22	45
		% within Gram Panchayath	92.0%	88.0%	90.0%
	No	Count	2	3	5
		% within Gram Panchayath	8.0%	12.0%	10.0%
Total		Count	25	25	50
		% within Gram Panchayath	100.0%	100.0%	100.0%

**Source:** Computed from the Primary data



**Table 16. Regular taking bath is necessary for good health status**

			Grama Panchayath		Total
			Agali	Pudussery	
Regular taking bath is necessary for good health status	Yes	Count	23	25	48
		% within Grama Panchayath	92.0%	100.0%	96.0%
	No	Count	2	0	2
		% within Grama Panchayath	8.0%	0.0%	4.0%
Total		Count	25	25	50
		% within Grama Panchayath	100.0%	100.0%	100.0%

Source: Computed from the Primary data

**Table 17. Physical exercise can improve the health status of an individual**

			Grama Panchayath		Total
			Agali	Pudussery	
Physical exercise can improve the health status of an individual	Yes	Count	21	13	34
		% within Grama Panchayath	84.0%	52.0%	68.0%
	No	Count	4	12	16
		% within Grama Panchayath	16.0%	48.0%	32.0%
Total		Count	25	25	50
		% within Grama Panchayath	100.0%	100.0%	100.0%

Source: Computed from the Primary data

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