CHILD HEALTH CARE UTILIZATION AMONG TRIBES AND NON-TRIBES IN WAYANAD, KERALA

Thesis submitted to the Jawaharlal Nehru University for the award of the degree of

DOCTOR OF PHILOSOPHY

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Declaration

I, Jayashree S., hereby declare that the thesis entitled "Child Health Care Utilization among Tribes and Non-tribes in Wayanad, Kerala" submitted by me for the award of the degree of Doctor of Philosophy to Jawaharlal Nehru University is my bonafide work and it has not been submitted for any other degree or diploma of this university or any other university.

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Certificate

It is hereby recommended that the thesis may be placed before the examiners for evaluation.

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Dedicated to

All the Children
out there

&

All those who have dedicated their lives
to the
cause of children and their well-being

“We are guilty of many errors and many faults,
but our worst crime is
abandoning the children, neglecting the fountain of life.
Many of the things we need can wait.The child cannot.
Right now is the time his bones are being formed,
his blood is being made
And his senses are being developed.
To him, we cannot answer “Tomorrow”, his name is “Today”.”

- *Gabriela Mistral*

Rats and roaches live by competition under the law of supply
and demand; it is the privilege of human beings to live under
the laws of justice and mercy.

- *Wendell Berry*

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Definitions

Child Mortality rate: The probability of dying between the first and fifth birthdays (calculated per 1000 live births).

Under-five mortality rate: The probability of dying before the fifth birthday (given in per 1000 live births).

BMI/ Body Mass Index: It is defined as weight in kilograms divided by height in metres squared. It excludes pregnant women and those who gave birth during 2 months preceding survey. A cut-off point of 18.5 is used to define thinness or acute under-nutrition and a BMI of above 25 indicates overweight or obesity.

Height: It is an outcome of several factors, most important being nutrition during childhood and adolescence. For women, it is used to identify those at risk of having difficult deliveries, since small statures are related with small pelvic size, also increases the risk of having a low birth weight baby. The cut-off point for height is 145 cms.

Height-for-age among children (Stunting): It is an indicator of linear growth retardation and cumulative growth deficits. Children whose height-for-age z-score is below minus two standard deviations (-2 SD) from the median of the reference population[1] are considered short for their age and are chronically malnourished, and those below -3 SD are considered severely stunted. Stunting reflects failure ot receive adequate nutrition over a long period of time and is also affected by recurrent and chronic illness. It, therefore, represents the long-term effects of malnutrition in a population and does not vary according to recent dietary intake.

[1] *The use of a reference population is based on the empirical finding that well-nourished children in all population groups, for which data exist, show very similar growth patterns before puberty. Height-for-age, weight-for-height and weight-for-age – are the three standard indices of physical growth that describe the nutritional status of children. (NFHS-3, Vol.I, India, 2005-06)*

Weight-for-height among children (Wasting): It measures body mass in relation to body length and describes current nutritional status. Children whose z-score is below minus two standard deviations from the median of the reference population are considered thin (wasted) for their height and are acutely malnourished, and those below -3 SD are severely wasted. It represents the failure to receive adequate nutrition in the period immediately preceding the survey and may be the result of inadequate food intake or a recent episode of illness causing loss of weight and the onset of malnutrition.

Weight-for-age among children (Underweight): It is a composite index of height-for-age and weight-for-height, taking into account both acute and chronic malnutrition. Children whose weight-for-age is below -2 SD are classified as underweight and those below -3 SD are severely underweight.

Abbreviations

ST- Scheduled Tribes

SC- Scheduled Castes

OBC- Other Backward Classes

Other- The general population, not belonging to SC/ST/OBC

Non-ST/ NT- The population not belonging to ST

HH- Household

BMI- Body Mass Index

UW- Underweight

ST- Stunted

WST- Wasted

SLI- Standard of Living Index

L- Low

M- Medium

H- High

Y- Yes

N- No

Chapter – 1
INTRODUCTION

1.1 Statement of the Problem

The health and health care received by children, especially those under the age of five years, belonging to a particular community – is a universally relevant issue not only from the point of view of its effect on the future attainments and use of the potential capabilities by a population, but also because it is completely dependent on the presence, functioning and immediate accessibility and services of the health care institutions in that particular place. Child health and health care utilization, then, is a product of the location of the population, which then determines its access to socio-economic amenities and future attainments. The focus of the present thesis is to understand whether there are disparities in health status and health care utilization of the under-five age children among the scheduled and non-tribes of Kerala, as is well known has done better than other states of India and is seen as a model for its positive achievements on various aspects of social development. Given the achievements and inclusive policies it is expected that Kerala will have, if not similar but lower levels of disparities between and among the social groups. In this study, tribal communities have been studied as internally differentiated by ethnicity and therefore intra-tribal disparities have also been attempted within the context oftheir pre-existing socio-political and geographical/locational (caste society, historical, economic, cultural) situations.

India is home to almost half the tribal population of the world. The tribal populations, being concentrated in the forest and remote areas of the country tend to suffer from varying degrees of inaccessibility, which adversely affect their access and utilization of basic public services, which in turn affect their livelihoods and other opportunities for social and economic mobility."Though during the last fifty years India's economic growth has brought development to some of these communities, they continue to lag behind other communities with respect to the attainment of income, education, health and other requisites of a dignified life".[1]

1. Mishra, Rudra Narayan (2006), "Dynamics of Caste-Based Deprivation in Child Under-nutrition in India", *CDS Working Paper*

The total population of STs, according to the 2011 Census, is 104.2 million (forming 8.6 percent of the total Indian Population, 11.3 percent in the rural areas and only 2.8 percent in the urban areas); it has increased from 84.3 million in 2001, showing a decadal growth rate of 23.7%. The rate of growth has shown a declining trend (from 24.3% in 1991-2001) similar to that observed for the general population. The sex ratio of tribes is more favourable to females than of the general population (990/1000 males vs. 943/1000 males). However, there is a wide variation among the different ethnic groups among the scheduled tribes and also across the states of India. As regards to housing conditions, it has been reported that only 22.6 of the ST households had access to latrine facility and 37 percent did not have any durable assets like – TV, computer/landline/mobile phone and scooter/car; only about 20 percent households have drinking water facility within their premises. According to the Statistics of School Education (2010-11), the dropout rates for ST boys and girls (Classes I – X) is more than 70 percent as compared to about 50 percent among others. According to NFHS-3 (2005-06), under-five mortality was highest (95.7) among the STs. Planning Commission estimates (2010-11) report that the percentage of tribes living below poverty line was 47.3% in rural and 33.3% in urban areas, which is higher than the corresponding national figures of 28.3% and 25.7% respectively. More than 80% of the total ST workers, both rural and urban, are engaged in the primary sector, essentially agriculture[2] and allied activities.

Although the STs have been accorded special status under the fifth and sixth schedules of the Indian Constitution, their living conditions on the whole, especially their health status still remains unsatisfactory[3]. Compared to national averages, Scheduled Tribes have higher mortality rates, the prevalence of communicable and infectious diseases such as- tuberculosis and malaria; anaemia and malnutrition is high among them, which are related to their higher exposure to risk factors like- inadequate food intake, poor sanitation and hygiene, tobacco and alcohol consumption – in combination with *lower access to health care*.

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2. Tribal Profile at a Glance (2013), www.tribal.nic.in, accessed on 6th July'2016

3. Bala Soundarassanane M. and Thiruselvakumar D. (2009), "Overcoming Problems in the Practice of Public Health among the Tribals of India", *Indian Journal of Community Medicine*, 34 (4): 283- 287.

There are vast differences in the health status of mothers and children between tribal and non-tribal populations. The indicators comparing the maternal and child health, highlighting the under-achievements among the tribes are summarized in *Table 1*. According to the NFHS-3 survey, 81 % of tribal women delivered at home compared to 59 percent among non-tribes. Similarly, 47% of tribal women were having Chronic Energy Deficiency (CED) compared to 35% among the non-tribal population. As regards to child health, the under-five and child mortality rates as well as the proportion of stunted, wasted and underweight children is also highest among the scheduled tribes. Equally important is the fact that a very high percentage of ST women reported the distance of a health facility to be a big problem while accessing health care, as compared to other groups.

Table 1.1 Health Indicators by Social Groups, India, 2005-06

Indicators	ST	SC	OBC	Other
Child Mortality rate	**35.8**	23.2	17.3	10.8
Under-five Mortality rate	**95.7**	88.1	72.8	59.2
Percent Stunted Children	**53.9**	53.9	48.8	40.7
Percent Wasted Children	**27.6**	21.0	20.0	16.3
Percent Underweight Children	**54.5**	47.9	43.2	33.7
Percent Live births delivered in a health facility	**17.7**	32.9	37.7	51.0
Percent women (15-49 years) with low BMI (<18.5)	**46.6**	41.1	35.7	29.4
Percent women who reported 'distance to health facility' as an issue in health care utilization	**44.2**	27.3	26.0	18.5

(Source: NFHS-3, 2005-06, India, Vol. I)

Child health and health care utilization is part of a larger picture. The nutritional status of girls and women, even long before pregnancy, affects foetal development and child health[4]. Among the tribes, maternal morbidity and mortality is very high because of a combinations of factors like – early marriage, successive pregnancies, accompanied with low calorie of food intake and inaccessibility and under-utilization of medical

4. Shah B.D and L.K. Dwivedi (2011), "Causes of neonatal deaths among tribal women in Gujarat, India", *Population Research and Policy Review*, 30 (4), 517-36.

facilities[5]. The inadequate diet and uninterrupted physical work load lead to cumulative disorders, such as – anaemia, general malnutrition, premature ageing and early death. More than two-third of the ST women in India are anaemic, which increases their fatigue and thus, affects working capacity and decreases resistance to other diseases. Maternal ill-health affects an infant's chances of survival and its subsequent growth and development. The probability that a child will be healthy and will be having favourable access to health care services increases when the mother is healthy and seeks proper and timely health care.[6]

Nutritional deprivation among Indian children is one of the parameters of under development mentioned in development discourse in recent times. Malnutrition is the most common health problem among tribes.[7] Generally, tribal diets are seen to be deficient in protein, iron, iodine, and vitamins. Infant death or illnesses among children during postnatal period might be due to various problems, such as – inaccessible medical care, inadequate quantity/quality of food, contact with sick, or unhygienic living and environmental conditions (especially drinking water) or more commonly, a combination of these factors. The most common diseases seen among tribes are respiratory tract infections, diarrheal disorders, parasitic infections, and nutritional disorders[8]. Quality health care is still a dream to many of the tribes, especially in areas with meager population because of factors like – lack of accessibility to health facilities due to constraints of time, distance coupled with lack of transport facilities in difficult terrains; non-availability of health staff/ infrastructure/ drugs and equipments or inadequate quality of services in the health centres."[9] Child health and health care utilization are, then, a matter of public health and the health care institutional systems.

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5. Reddy Sunita (2008), "Health of tribal women and children: an interdisciplinary approach", *Indian Anthropologist*, 38 (2), 61-74.

6. Halim Nafisa, Alok K Bohara, Xiaomin Ruan (2010), "Healthy mothers, healthy children: Does maternal demand for antenatal care matter for child health in Nepal?", *Health Policy and Planning*, 26 (3), 242- 256.

7. Mishra, Rudra Narayan (2006), "Dynamics of Caste-Based Deprivation in Child Under-nutrition in India", *CDS Working Paper*

8. Pandey B.N. (2005) "Foetal wastage and infant mortality in two tribal populaions of Jharkhand", *Man in India*, 85 (3-4). 255-63.

9. Mishra *op.cit*. p.4

SCHEDULED TRIBES IN KERALA

The eastern hilly areas of the erstwhile Malabar region of Kerala, currently comprising the districts of - Palakkad, Malappuram, Kozhikode, Wayanad, Kannur and Kasargode – is the home for more than 65 percent of the STs in the state[10]. According to the Census 2011, concentrated in the eastern hilly regions of the state, the total number of Scheduled Tribe population is 4.84 lakhs which forms only 1.5 percent of the total population, which is very low as compared to the national level average of 8.6 percent. In the state as a whole there are 40 groups of the Scheduled Tribes.[11] This small share of the tribal population in the state is one of the main reasons why they have failed to get adequate attention by the policy makers; also lack of political mobilization both within the state as well as in the broader federations of tribal bodies at the national stage render them relatively inarticulate in their demands for justice and equality of treatment.

Wayanad is one of the important tribal belts of Kerala. Wayanad has the highest proportion of the most deprived social group – the scheduled tribes – in the state (31 percent of total STs in Kerala) as well as the highest share of STs in total population of the district (18.5 percent). It is also the most neglected and most backward districts of Kerala. Despite some advances in social indicators during the last two decades, poverty remains a major problem in Wayanad. It is one of the two districts in the state without a railway station and presents a very poor picture in terms of overall infrastructural facilities. In 2006, along with Palakkad district from the state, it was one of the districts out of a total of 250 districts in the country categorized by the Ministry of Panchayat Raj as the “most backward districts” and is covered under the Backward Regions Grant Fund programme[12]. The Ministry of Minority Affairs has identified 90 minority concentrated backward districts using eight indicators of socio-economic development and amenities based on the 2001 census data. Wayanad was included in that list. According to the survey, “primary infrastructure appears to be satisfactory in terms of availability of schools and hospitals. But, the mean distance of middle and secondary

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10. Nelson, Nisha Jolly (2011), “Dynamics of health seeking discourses among indigenous population”, *Eastern Anthropologist*, 64 (2-3), 153-67.

11. Aiyappan, A. (1994), “Tribes in south India” in *Tribal Life in India; Customs, laws, administration, education and development towards 2000 AD, Part 1; Tribal life and forests*, Deep and Deep publication, New Delhi, pp.89-97

12. "A Note on the Backward Regions Grant Fund Programme" (2009), National Institute of Rural Development, Ministry of Panchayati Raj, www.nird.org.in/brgf/doc, accessed on May 27th 2013

schools and tertiary health facilities is relatively high. Heavy rainfall during monsoon results in frequent disruption of road transport. The coverage of sanitation is low and 50 percent villages are still without all-weather road connectivity. All the villages are not electrified and there is no universal coverage of safe drinking water. Similarly, there are differences in availability of toilets and drainage facilities"[13].

The data from Census 2011 reveals striking gaps between the Scheduled tribe and non-scheduled tribal households and population conditions. *Table 2* makes it clear that a lower percentage of ST households are in good condition, have electricity and other amenities and assets as compared to non-ST households in Kerala as well as in Wayanad. High gaps exist between tribal and non-tribal population in terms of literacy; only 76 percent of STs in Kerala are literate compared to 94 percent among non-tribal population. Higher gaps are seen in female literacy, where the ST women lag behind by more than 20 percent as compared to non-tribal women, the differences being higher in Wayanad. Another important differentiating factor in the majorly tertiary sector-dominated state is that the share of agricultural workers among total workers is only 11 percent among the non-tribal population, whereas it is as high as 42 percent among the STs (see *Table 2*). This shows that the STs have not been a part in the Kerala's so-called social development, which becomes clearer when the same indices are analyzed for Wayanad, where one-third of the STs in the state reside.

The benefits of Kerala's progressive development have not been equally shared across the population. This calls for a more critically balanced and in-depth research on human development issues in the state, which was projected as a role model for other states, especially those with poor economic base. "Often we forget the fact that these parameters of human development were mere averages and often tend to forget the outlier communities which were left out from the mainstream public action"[14].

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13. "A Baseline Survey of Minority Concentration Districts of India: Executive Summary of Wayanad District (Kerala)", Government of India and ICSSR, www.icssr.org
14. CDS. (1975), "Poverty, unemployment and development policy", UN, New York

Table 1. 2 Tribal - Non-tribal Comparison, 2011, Kerala, Wayanad

Indicators	Kerala		Wayanad	
HOUSEHOLDS (%)	ST	Non-ST	ST	Non-ST
Share of Households	1.8	98.2	17.8	82.2
Houses in Good Condition	**38.4**	67.0	**33.1**	60.0
Dilapidated Houses	16.3	5.0	**19.6**	**7.0**
Houses with Electricity	62.8	95.0	**50.0**	88.0
Houses with Latrine facility	71.4	96.0	72.3	96.0
Houses with Bathing facility	41.5	82.0	**34.0**	83.0
Houses availing Banking facility	54.7	75.0	**46.4**	82.0
Houses with no assets*	23.5	4.0	**34.9**	5.0
POPULATION				
Share in total population of the area,%	1.4	98.6	18.5	81.5
Share within the group's State pop.%	100	100	**31.2**	**2.02**
Sex Ratio	1035	1085	1033	1035
Child Sex Ratio	949	964	962	965
Literacy Rate, %	75.8	94.2	**70.5**	93.1
Male Literacy Rate, %	80.8	96.3	77	96
Female Literacy Rate, %	71.1	92.3	**64.3**	90.4
Total Agricultural Labourers, %	41.7	10.7	**61.4**	20.8
Male Agricultural Labourers, %	39	9.7	59.7	18.6
Female Agricultural Labourers, %	45.8	13.7	63.7	25.8

Source: calculated from Census of India - Household Tables, PCA, PCA- ST, Kerala, 2011

*assets include- radio, television set, any vehicle (bicycle/scooter/car),phone/mobile,computer

Even though the Indian state is constitutionally secular and egalitarian, caste and socioeconomic inequalities persist and influence every aspect of a person's life, and health is no exception to this. The inclusive development policies undertaken by the governments of Kerala in the post-independence period enabled the people to make gains in education, health care, employment and social security. This has prevented a

deeper probing of issues, including the investigation of potential inequalities (as that between tribes and non-tribes) among the population groups. Although there have been numerous studies on the health and social sector development of the general population in Kerala, the situation of scheduled tribes has not received much attention. Or it can be said that because the general social development was so high and received so much praise and support, it diverted attention from and sidelined the needs and underdevelopment of the scheduled tribes in the state, who form a marginalized proportion of the total population. Even after several decades of the famous "Kerala model of development', the scheduled tribes do not have much to boast about, either in terms of socio-economic or political attainments, they have not been able to improve their asset base in material terms or to catch up on human development indices as compared to the rest of the population in the state.

On the one hand, during the 1990s there were attempts to bring the participation of the people in the development and political processes with the implementation of decentralized planning in 1996. On the other hand, at the same time, the state itself attempted to increasingly withdraw itself from the social and economic sectors due to the implementation of the neoliberal policies of globalization, liberalization and privatization. The adivasis, who were already posed very low in the socio-economic ladder of the society, did not have the means to face the impact of these new policies. The negative effects of liberalization, particularly in the agricultural sector, have diminished the employment opportunities for the adivasis, since their participation is more as landless labourers (more than 40 percent of the tribes in Kerala are agricultural labourers according to census 2011); and has contributed to further marginalization of these communities.

With the government's policy on decentralized planning since 2001, the *adivasis* have increasingly lost control over the limited development resources they had at the local level. This has increased the vulnerability of these communities, which is particularly disadvantageous to the younger generation, owing to the lack of opportunities for quality education and health care. The long-term human development of the younger generation is getting seriously affected, leading to the intergenerational transfer and repetition of poverty and deprivation, and increasing the magnitude of socio-economic disparities. The expenditure cuts in the health and educational sector are more harmful as they are almost completely dependent on public services. Decreased government spending in this sector and development of private profit-

oriented health sector (which is a barrier to access) is resulting in - an increasingly inadequate public health delivery system with declining quality of services, government hospitals not having the necessary equipment and medicines, and substantial increases in the prices of medicines, including the most essential ones.

Table 1.3 Tribal- Non-tribal Comparison, Wayanad, 2007-08 (%)

Indicators	ST	Non-ST
Pucca houses	39.9	77.2
Houses in Richest Quintile	**0.6**	29.7
HHs with >1acre agricultural Land	**3.4**	37.5
Children attending school (11-17 years)	**71.9**	94.7
Boys attending school (11-17 years)	81.8	93.9
Girls attending school (11-17 years)	**60.5**	95.5
Mothers with 10+ years of schooling	**16.3**	47.3
Mothers working as wage labourers	**32.6**	2.5
Mothers who received full ANC (last birth)	58.7	70.7
Mothers who delivered at home (last birth)	**20.4**	1.3
Mothers who delivered in public hospitals (last birth)	71.4	**48.1**
Children whose first checkup after birth was in public health institution	74.4	46.6
Children who are fully immunized, 12-23 months	77.7	82.7

(Source: calculated from DLHS-3, Kerala, 2007- 08)

However, not all tribal communities are equally affected in all spheres. The inter-tribal variations are also need close examination. The need for understanding the variations in socio-economic development of different tribal communities was insisted by Kurup as early as 1971, even though, for administrative purposes, all 'scheduled tribes' were considered as 'an entity'.[15] He prepared separate ranking and composite index of levels of development of ten purposively selected tribal communities (representing various regions, language groups, religions, levels of economy, cultural contact etc) according to their qualitative (based on ethnographic information) and quantitative data (1961

15. Kurup, A.M. (1971), "Status of Kerala Scheduled Tribes: A Study Based on Ethno-Demographic Data", *Economic and Political Weekly,* 6(34), p. 1815-20.

census). Both sets of analysis showed similar results with slight differences, placing communities like – Kurumans, Malyarayan, Kurichian, Hill Pulayan at a much higher level of development than – Kattunayackan, Paniyan, and Malapandaram. The differences between these communities can be seen even today. Socio-Culturally, techno-economically, educationally, geographically – these communities vary from one another and are lying at various stages of socio-economic development.

Table 1.3 shows the tribal-non tribal comparison in Wayanad with regards to a different set of indicators. It shows that the percentage of ST households belonging to richest quintile and those owning more than an acre of agricultural land is negligible. Another most disturbing fact is the lower school attendance of 11-17 year-old ST girls and boys as compared to non-tribes. Even the proportion of ST mothers (15-49 years) who had more than 10 years of schooling is very low, with one-third among them working as wage labourers. As regards to health care utilization, one fifth of the ST mothers had their last birth at home. Their dependence on public institutions with regards to deliveries and child checkups seems to be very high vis-à-vis non-tribes. From these tables it is clear that the tribes have a very low asset base, are engaged in low paying/seasonal occupations and combined with low levels of education – they have less resources to spend in private education/health care.

Significant health inequalities exist not only between tribes and non-tribes but also between the different tribal groups, with one tribe having very distinct needs compared to others as not all indigenous groups are equally disadvantaged. The largest tribal group, the Paniya, have higher unmet health needs compared to other Scheduled Tribes in this area, specifically with respect to underweight, anaemia and goiter[16]. The concentration of poverty and lack of education among the Scheduled Tribes contributes significantly to the excess morbidity observed in this group compared to the general population. Haddad et. al also observed that the health gradient between social groups was still evident among those of similar economic status, indicating that health inequalities are rooted in social structures much deeper than material deprivation. As the poor and landless Scheduled tribes in Wayanad are mostly agricultural labourers, the seasonality, low wage rate and larger dependence on it for livelihood fluctuate the

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16. Haddad Slim, Katia Sarla Mohindra, Kendra Siekmans, Geneviève Màk and Delampady Narayana (2012), "“Health divide” between indigenous and non-indigenous populations in Kerala, India: Population based study", *BMC Public Health*, 12 (390),

availability of food in the household, which in turn reduce the children's nutritional intake.

The key health issues faced by the adivasi communities in Wayanad include: high morbidity, high infant mortality rate, low life expectancy, genetic disorder like sickle cell anemia, low nutritional intake, poor hygienic condition, no adequate preventive measures, inadequate public health delivery system, large share of young unwed mothers, high consumption of tobacco/alcohol, insufficient income to approach private doctors, and high spendings on health compared to the earnings. Among men, more deaths are taking place during the ages 40-50, and the proportion of unnatural deaths (suicides, murder, accident) is high[17,18,19].

The district has witnessed high number of incidents of maternal deaths and poor health of children among its tribal population. A report of the Comptroller and Auditor General has pointed out that the infant mortality rate in Kerala fell from 12 per 1000 live births in 2008 to 7 in 2013, while in Wayanad it increased from 8 to 10. The IMR for tribes stood at 29 in 2008, and in some villages, it was more than 40. A UNICEF survey noted that about 34 percent tribal children in the age group of 1-2 years did not receive all the primary doses of immunization[20]. Such reports keep cropping up frequently, throwing light on the pathetic state of tribes. In 2010, of the 86 infant deaths in Wayanad, 46 were from tribal communities[21]. Similarly, of the 8 maternal deaths reported, 6 belonged to adivasi mothers. Kerala may record the highest life expectancy for both men and women in India, but the average life expectancy of tribes in Wayanad is merely 45 years.

Accessibility to proper health facilities is very rare. Though there are PHCs, the services are very limited and not easily reachable. Advanced checkups and treatments

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17. IIM Kozhikode, (2006) "Wayanad Initiative: A Situational Study and Feasibility Report for the Comprehensive Development of Adivasi Communities of Wayanad".

18. Kunhaman, K. (1985), "The tribal economy of Kerala: An inter regional analysis", *Economic and Political Weekly*, 20 (11), 466-474.

19. Bijoy, C. R. (1999), "Adivasis betrayed: Adivasi land rights in Kerala", *Economic and Political Weekly*, 34(22), 1329-1335.

20."Public Health Services Elude Wayanad Tribal Communities", June 13, 2014, www.mattersindia.com.

21. KK Shahina, (2011), "Wayanad Tribals are soft targets for Sterilisation", Tehelka, 8(5), archive.tehelka.com

are unavailable and unaffordable to the majority of tribes. Health education and proper sanitary amenities are far from them.[22] The health system seems to be inflexibile and unable to accommodate social realities of the tribal populations, especially the Paniyas and Adiyas; this in combination with the physical difficulties in access, strange attitudes of the health staff and the existing complex of vulnerabilities of the marginalized tribes – is resulting in a vicious interplay of social realities and health outcomes.[23]

From the above discussion and statistics it is evident that against the general perception, Kerala is one of the states with very high divide in the level of socio-economic development between tribal and non-tribal population[24]. Also, there is a wide variation in the level of development among the different tribal groups within the state. This makes their situation very vulnerable in the context of dwindling public spending on health and education sectors, which will only fasten the processes of their sinking into vicious traps of poverty (debts) and ill-health in future, not to mention a multitude of other psycho-social externalities at the level of individual as well as community. As Varghese states - “there are two types of citizens in Wayanad: tribes and non-tribes. The Tribes are an oppressed community, exploited by others and thrown out from their own land and are forced to settle in colonies. The non-tribes are organized and the laws are in favour of them. They are considered as elites. Tribes lack unity and ability to organize themselves. In this context, there is a constant struggle for survival.”[25] Thus, “*being a tribe in Wayanad does not have much to do with traditional customs and practices, but has much to do with the extent of their marginalization in social, economic and political domain. They can more or less be identified as a political entity or a socio-economic formation than a cultural entity”*[26]

The present study, therefore, is an attempt to understand the differences in child health and health care utilization in Wayanad district of Kerala, since it has the

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22. www.focusonpeople.org/problems_faced_the_tribes_in_Kerala.htm , accessed on 25th June, 2013

23. Maya C. (2012), “System failure in Wayanad”, *The Hindu*, www.thehindu.com, august 2012

24. Sujatha, K., (1998), “Education among scheduled tribes”, *India Educational Report*, Government of India, 88-92

25.Varghese Thressiamma, “Tribes in Kerala: A Case Study in Sultan Bathery Taluk of Wayanad District”, www.shodhganga.inflibnet.ac.in/bitstream/10603/222/13/13_Chapter4.pdf ,accessed on 5th June, 2013.

26. IIMK, *op.cit.*p.11

maximum concentration of tribal population in the state across selected scheduled tribes (Paniyans, Kurichians, Kattunayackans, Kurumans and Adiyans) and the non-scheduled population. It is also an exploration of the extent to which the modern system of health care has penetrated among the tribal communities, especially in the area of child health care. The study is a comparative one between tribes and non-tribes, focusing on the inter-tribal differences as well. It might be read as an earnest contribution of a 'morally obligated geographer'[27], who would be happy to make even a minutest dent to the ever-increasing "dualisms between fact and value, subject and object, man and nature, science and human natures", created and sustained by the "corporate state" in the name of "national interest", simultaneously unashamedly pushing the non-conforming groups to non-existence or ill-existence.

The provisions and utilization of health care services might not be very relevant for the well-to-do sections, whose health needs, compositions (risks and vulnerabilities are less) are different from the poor or the not-so-well-to-do sections. It is precisely for this reason that it is very important to study and understand the nature of health care utilization, among under-five children, who are the most vulnerable age groups in any population, as their health and growth are completely dependent on their families, communities and surroundings -that too in a socio-economically and culturally excluded "population" of scheduled tribes. And the study attains full clarity only when we study the children in the context of their mothers and the socio-economic conditions of their households. The assumption here is that, at present, in India, the chances of attainments (in terms of health/education/employment) of non-tribes is relatively more dependent on their compositional factors like – age, sex, socio-economic position as compared to scheduled tribes, whose chances of attainments (even their compositional factors) are more dependent on the contextual factors like – provision and access to social amenities, physical location, social systems and state support etc. This study is more interesting because Kerala is already known for controlling some of the major contextual factors that result in inequalities among populations, through effective implementation of land reform policies, social reforms, efficient public distribution systems, along with provisioning of social amenities throughout the state. Since it is known that the contextual factors are not equal in all places (among districts within

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27. Harvey, David (1974), "What kind of Geography for What Kind of Public Policy?", *Transactions of the Institute of British Geographer,* 63(Nov. 1974),18-24.

Kerala, Wayanad has a relatively poorer social environment); within this context we are trying to explore the possible explanations for this, because health is not exclusive of space or society.

'Health inequalities or the differences in the levels of health attainments between different social groups or regions occur when (or where) the chances of good or bad health are not evenly distributed between groups of people'.[28] This is just an attempt to understand these health inequalities in their context. Because, as Paul Farmer puts it aptly – "for surely we have learned that the right to vote, for example, has not protected the poor from dying premature deaths, caused as often as not by readily treatable pathogens (including pathogenic situations), or from decreased access to services – or, as is most often the case, from both of these *'risk factors'* working together"[29], whose central idea was "that human rights abuses are best understood from the point of view of the poor. In no arena is it more needed than in that of health and human rights."

1.2 Study Area

Wayanad is located roughly 76 km away from the Arabian coast and lies at a height of 700-2100 meters from the sea level. Its name evolved from the combination of two words*;* *vayal* meaning paddy fields and *nadu* meaning land, i.e. 'the land of the paddy fields'. It is bounded on the north by the Kannur district of Kerala and the Mysore and Kodagu districts of Karnataka, on the east by the Nilgiris district in Tamil Nadu; on the South and west by Malappuram, Kannur and Kozhikode.

Fig.1 Political map of Wayanad District

Fig.2 Location of Wayanad in Kerala

28. Shaw, M., Dorling D. and Mitchell, R. (2002) *"Health, Place and Society"*, Pearson: London.

29. Farmer, Paul (2003), "Pathologies of Power: Health, Human Rights and The New War on The Poor", University of California Press, California, p.9 and 140.

The district is divided into two physio-geographic regions: the Wayanad plateau and the Wayanad Forested Hills. Of these, the Wayanad plateau (a continuation of the Karnataka plateau) lies on the eastern portion of Mananthavady, entire Sulthan Bathery and eastern tract of Vythiri taluks. The forested hills form an unbroken strip to the Western and Southern side of the Wayanad plateau. It is generally rugged and broken and has some of the largest mountain peaks in the district. The central portion consists of ranges of low hills of easy slopes, covered with grass and low bamboo jungle, while the eastern parts are fairly open and flat and merge into the table land of Mysore[30]. Covering an area of 2131sq km the district accounts for 5.48% of the total area of the state and more than one third of it covered under forests. It is drained by the east flowing river - Kabini and its three tributaries. The location of the district in the high altitudes and the resultant cool climate and dense forest cover have given the district an important place in the tourist map of the state as well as at the national level. It is the least dense in terms of population and the smallest district in the state, consisting of three taluks – Sultan Bathery, Vythiri and Mananthavady. The main road connecting Karnataka, Kerala and Tamil Nadu passes through Wayanad[31]. The economy of the district is mainly dependent on the cash crops like coffee, pepper, vanilla, tea etc., besides which rice is also important.

The district has numerous tribal groups, but the major ones are Paniyans (44.7 percent of ST population in Wayanad), Mullu Kuruman (17.5 percent), Kurichian (17.3 percent), Kattunaickan (9.9 percent), Adiyan (9.1 percent) and Urali Kuruman (2.29 percent)[32]. Among them, those who were traditionally bonded labourers such as Adiyan and Paniyan, along with forest dependant community like Kattunayackan and artisan community like Urali Kuruman are the most vulnerable sections of tribal communities in Wayanad (forming the lowest indicators in terms of health, education, income etc.). Traditionally cultivating communities like Mullu Kuruman and Kurichians are relatively better off than the rest of the tribal population of the district owing to the resource base – agricultural land – they had. Other tribal communities include – Tachanad Mooppan, Wayanad Kadar and Karimpalan, all three recently included in the Scheduled Tribes list of Kerala. Majority of them are marginal peasants or agricultural

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30. Rashmi Sandhya, (2008) “Paniyas of Wayanad”, Modern Books, Sulthan Bathery

31. Varghese *op.cit.* p.13

32. As calculated from population data provided by tribal development offices in Wayanad.

labourers. Some of the tribes in Wayanad, viz.- Cholanaickan, Koraga, Kattunayakan, Kadar and Kurumbas – fall in the Primitive Tribal Group Category (PTG), based on the criteria of pre-agricultural level of technology, low literacy rates and stagnant/ diminishing population size[33].

1.3 Research Questions

- Is there any difference between the child health status and health care utilization of the selected population groups in Wayanad?
- What is the health status of the mothers and their health care in the area? How is the reach of the health care systems in the area?
- What factors can be marked out as the most important ones affecting child health care issues in the study area? Do they vary across communities?
- What are the relative positions of these selected communities with regards to their living conditions?
- To what extent can these attainments be explained by their historical, social, economic and political context? Why do some of the tribal communities find themselves extremely marginalized in Kerala?

1.4 Objectives

Following are the objectives of the study:

1. To study the child health status and health care utilization (birth weight, morbidity, nutritional status, immunization, anganwadi attendance) of five tribes (Paniyans, Kattunayakans, Kurumans, Kurichians and Adiyans) in Wayanad vis-à-vis non-tribes.
2. To analyze the degree of variation in the socio-economic status and health care utilization of mothers belonging to the various population groups.
3. To understand and study the history and context behind the establishment and working of the health care system in the state of Kerala and issues in the working of present health care set up in the region and the communities.
4. To explore the differences in the level of socio-economic assets and attainments of the various social groups.

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33. Kakkoth Seetha (2005), "Issues of Development in a changing primitive tribe: Koraga of Kasargode, Kerala", *Man in India*, 85 (3-4), 273-81.

F? To study the historical, socio-economic and political nature of the exclusion of Wayanad and the tribes residing there in order to understand the differential situation of the various communities.

1.5 Data Sources

Primary Source:

Primary data was collected, from households with children under 5 years of age, on socio-economic variables, mother and child health utilization among the various tribal and non-tribal households in Wayanad using questionnaires. Moreover, interviews and discussions were carried out with the tribal healers, doctors, anganwadi workers, key informants - recording their attitudes, responses towards patients, awareness and problems of health care (if any) in order to understand how the social support systems work.

Secondary Sources:

- o Census of India 2011, District Census Handbook – Wayanad, Primary Census Abstracts, PCA- Scheduled Tribes, Household Tables.
- o Panchayat Level Statistics – 2006 Wayanad District, Department of Economics and Statistics,
- o Data from Tribal Development Offices of various blocks of Wayanad – 2007-08,
- o Data on various amenities in tribal areas from Kerala Institute of Local Administration (KILA) – 2010
- o District Level Household Survey – 3, 2007-08
- o Kerala Institute for Research, Training and Development Studies of Scheduled Castes and Scheduled Tribes (KIRTADS)-2006, Govt. of Kerala.

1.6 Sample Design

The following five tribal communities were selected for the study since they constitute more than 95 percent of the total tribal population in Wayanad, according to data collected from tribal development offices in Wayanad:

1. Paniyans

The Paniyans probably represent the earliest settlers of Wayanad. The name of this community seems to be derived from the Malayalam word '*pani*' which means work,

and also from the fact that majority of them used to work as agricultural labourers[34]. So, traditionally, they used to work as bonded labourers, as proved by their folklores that tell how their labour was brought and sold by the owners during the *annual temple festival of Valliyoorkavu Amman.*[35] They are the largest tribal group in Kerala, but fare low in terms of their socio-economic attainments.

2. Kurichians

Kurichians form the next major community in Wayanad after Paniyans. As Mathur[36] noted, they consider themselves superior to other tribal communities, (even practiced a system of untouchability with other groups), practice matrilineal family system[37], they were mainly warriors, land owners and cultivators where owning and cultivation was a *joint responsibility* of the family and nobody could claim a separate share, had great skills in archery and were close allies of the *Pazhassi Raja (a non-tribe),* who fought against the armies of British and Tipu. Many of the Kurichia settlements were completely wiped out by the British. Today, they are one of the better placed communities in the socio-economic and political front, with even having a minister of state from their group.

3. Kurumans

Kurumans, socio-economically a dominant group, are believed to be the descendants of the *Vedars*, the ancient rulers of Wayanad.[38] "Their name is said to stand for "*existing or remaining (i.e. Ulla) Kuruman*", which in course of time became Mullu Kurumans. According to a legend, when they lived in the jungles as hunters under their own chief Veda Raja, the local king, for certain personal reasons attacked and killed

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34. Mathur, P.R.G. (1977), "Tribal Situation in Kerala", Historical Society, Trivandrum.

35. Thurston, E. (1909), "Castes and Tribes of South India", Cosmo Publications, New Delhi.

36. Mathur, *op.cit.*

37. Ayyappan, A. and Mahadevan, G. (1990), "Ecology, Economy, Matriliny and Fertility of Kurichians", B.R. Publishing Corporation, New Delhi.

38. The International School of Dravidian Linguistics (1996), "Encyclopedia of Dravidian Tribes", International School of Dravidian Linguistics.

many of their people."[39] Later, they shifted to becoming farmers and settled agriculturists, growing pepper, coffee, ginger, paddy, tapioca and plaintain. Their socio-economic attainments are almost similar to that of non-tribes in their region and a high degree of participation in civic and public life, all local levels of offices have their representation.[40]

4. Kattunayackans

Kattunayackans fall in the category of "*primitive tribal groups",* as their level of socio-economic attainments is relatively very low. Traditionally, they were a *hunting gathering* community[41] (very isolated), completely dependent on the forests, even now they live within or near the forest boundaries and are dependent more on the forest products as compared to other groups, even though many of them are now wage/ forest labourers. So, this community remained in isolation for a comparatively longer time period[42] as compared to other communities, they still do, even their dialect is more close to Kannada than Malayalam.[43]

5. Adiyans

Adiyans (meaning *slave labourers*, even though they call themselves *Ravuleru,* which means *human beings)*, are believed, originally, to be the inhabitants of the hilly regions of Mysore, who were supposed to have been brought, as slaves to landlords, here to work in the paddy fields of non-tribes.[44] Infact, the bonded labour system continued till very recently among them.

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39. Sathyanarayanan, C.R. and Nirmal Chandra (2012-13), "Traditional Life, Livelihood and Plantations: A Study among the Mullu Kurumba", *Journal of Anthropological Survey of India,* 61(2) & 62(1), p. 595-615.

40. George, K.K. (2011), "Higher Education In Kerala: How Inclusive is it to the Scheduled Castes and Scheduled Tribes?", *CSSEIP Working Papers,* 1(4), Cochin University of Science and Technology, Kerala, India.

41. Luiz, A.A.D. (1962), "Tribes of Kerala", Bharatheeya Adimjati Sevak Sangh, New Delhi.

42. Mathur, *op.cit.*p.19

43. George, *op.cit.*

44. Iyer, L.A.K. (1937), "The Travancore Tribes and Castes", Government Press, Trivandrum.

The Non-Tribes in Wayanad

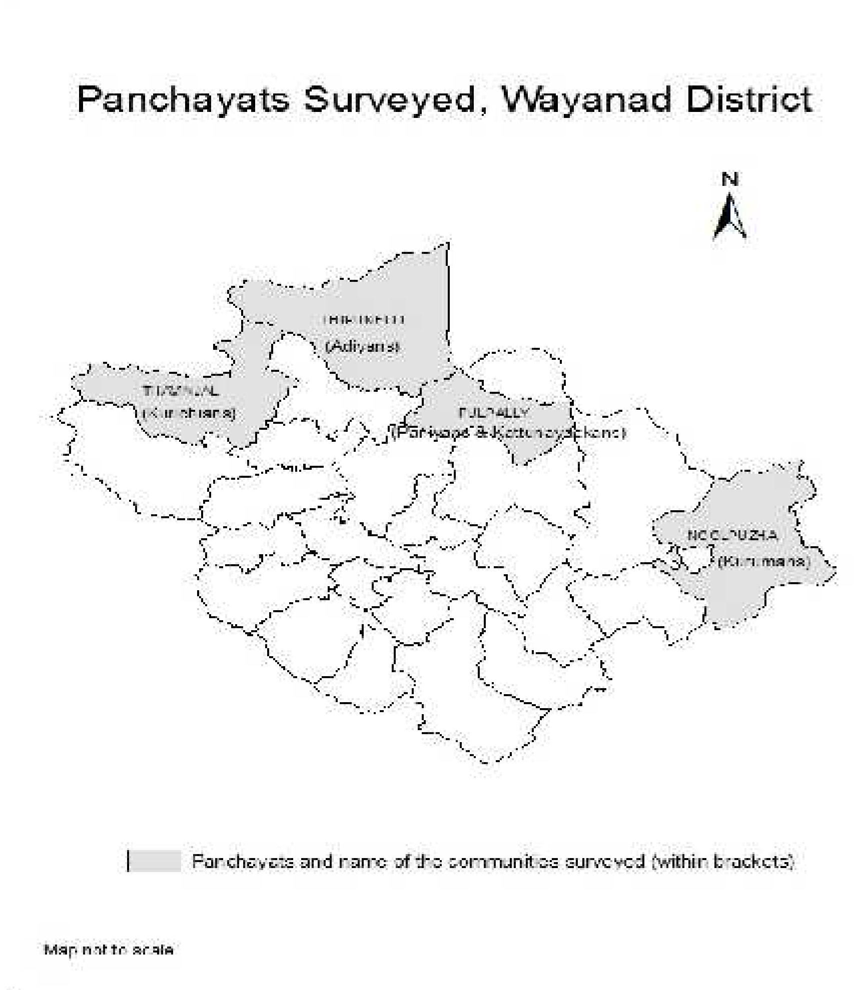
Studies show that the area was under the control of a powerful tribal group named Vedar from whom it was captured by the neighboring princely powers of Kottayam-Malabar and Kurumbanaadu. The major non-tribe groups include – the *Wayanadan Chettis* who are thought to be one of the oldest immigrant groups of this area. Later, came the *Gounders* from the nearby areas of Mysore-Karnataka. Both these groups gradually became landlords, under whom the tribes worked. The influence of the Kottayam-Kurumbranadu dynasties resulted in the fast rise of non-tribal settlements and establishment of feudal system (under the *Nairs)* in the area in course of time. The Muslims from the southern parts began to come and settle in the area by 1930s and 40s, while the Christian population started settling during 1940s and 50s. The waves of migration of non-tribes continued till 1980s. The tribal people had a majority in Wayanad till about 1941; they constituted over 60% in 1931. But, by 1971, they were a minority in the district population (18%). Thus, land alienation of the tribals and their fight to restore the land owning rights is a several decade old issue in the district.[45]

Since our study is based on 6 population groups – Adiyans, Paniyans, Kattunayakans, Kurumans, Kurichians and Non-tribes; Panchayats having the *maximum population* of selected tribes were chosen, from the colony/settlement-wise data of population and number of households provided by the taluk offices of Mananthavady, Sulthan Bathery and Vythiri. So, *four panchayats* were finally selected for studying the five tribes: *Pulpally* Panchayat (for *Paniyans and Kattunayakans*),

45. Sathyanarayanan

Noolpuzha Panchayat (for *Kurumans*),*Thirunelly* Panchayat (for *Adiyans*) and *Thavinzhal* Panchayat (for *Kurichians*). Within these Panchayats, the colonies having the largest number of households of these particular tribes were selected for collecting the samples. As some large colonies did not necessarily have large number of *households with children below 5 years of age* (as they were the target households of our study), the discretion of ASHA workers was also used in colony selection, since they knew the area better. The

Figure 3. Map of Panchayats Surveyed for the Study



sample of *non-tribal households was taken from all these areas*.

Table 1.4 Profile of Sample Households and Population, 2015

Number	Paniya	Kurichia	Kattunayacka	Kuruma	Adiya	ST	Non-ST	Total
HHs	66	64	64	64	64	322	64	**386**
Persons	397	374	374	335	384	1864	370	**2234**
Mothers	69	69	66	65	67	336	65	**401**
Children	88	83	91	77	89	428	77	**505**

A total of 387 households from 65 colonies/settlements were surveyed for the study (60-65 HHs from each group), which included about 401 mothers and about 505 children below the age of 5 years/ less than 60 months (*Table 4)*.The survey covered details of 2234 persons. The sex ratio is seen to be highest among the Paniyas and non-tribes and lowest among the Kurichias (see *Appendix-1*). The average age of the population is lowest for Kattunayackas and highest for non-scheduled tribes. The respondents, in the case of tribes, were mostly mothers or elderly women, only in some cases, the respondents were men. In the case of non-tribal households, the men were the main respondents for the questions related to household details, the women gave reproductive details and child health details.

The survey also covered 2 Community Health Centres, 3 Primary Health Centres, and 3 Sub-Centres. The respondents in the CHCs were the chief medical officers, whereas in the PHCs it was the Junior Public Health Nurses or the Health Inspectors. Anganwadis were also included in the health institutional system, seven of them were covered by the survey, where the respondents were mostly the anganwadi teachers or the helper. Informal discussions were held with a few of the local healers as well.

1.7 Methodology

The analysis of primary data and secondary data was done using *quantitative statistical* techniques of percentage and cross-tabulation. The socio-economic conditions of households, the health and health care utilization of mothers and their socio-economic status, child health and health care utilization have all been analyzed across the different social groups; and some of those indicators have been cross-tabulated with the background characteristics of the respective populations and households.

The *Standard of Living Index* has been calculated as a measure to determine the overall socio-economic status of households, by adding scores set for each amenity/asset a particular household possessed (see *Appendix 2).* The *Body Mass Index* of mothers has been calculated by dividing their weight in kilograms by height in squared metres in order to calculated chronic energy deficiency. A BMI below 18.5 is considered low, between 18.5 and 25 is considered normal, and above 25 is overweight. The proportion of *underweight, stunted and wasted* children has been calculated with the help of the standardized field tables given by the World Health Organization for children below 5 years of age in their website.[46] Alongwith this, primary field *interviews* and *responses* of tribal and non-tribal households, mothers, ASHA workers, Anganwadi workers, doctors, and Panchayat office staff have been added alongwith *photographs* to increase the understanding about the problems and workings of the system. Further comprehension and analyses of structures and working of the state system in Kerala has been attempted at *theoretically* by reading contributions of scholars who have particularly worked in this area in order to understand the processes that are at work in impeding the path to equity.

1.8 Limitations of the Study

This work definitely could have been better if qualitative and ethnographic information of specific cases of child deaths and maternal deaths were recorded in detail, in order to understand the pathways adopted by people during times of emergency. Similarly, the tribal women were found to be very silent and shy, so their life experiences and real/ perceived state of health and access to amenities could not be brought out in accurate detail. So, it has a slight bias in this matter, as during the household surveys, it was mainly the ASHA workers who were responding for the tribal mothers, so some of the opinions could be more of the ASHA workers themselves than those of the mothers. Moreover, it would have been better to measure the distances (temporal and spatial) of the colonies/settlements from the health centers in order to explore the difficulties in accessing health care.

46. Simplified Field Tables, www.who.int/childgrowth/standards, accessed on 13th June'2016.

1.9 Organization of the Study

The thesis consists of seven chapters.

The first chapter is Introduction, which provides an overview about the context and the state of things in the region from a macro perspective, that direct us towards the research questions, objectives, sample design and the way the thesis is structured further.

The second chapter provides a review of literature on various aspects of – child health and health care and the factors related to health care utilization. This chapter provides the theoretical framework for the study.

The third chapter explores the differences in the child health status and health care of under-five age children among the different communities selected for the study, where health status and care have been analyzed in relation to other characteristics of the children. This, therefore, serves as one of the core chapters of the thesis.

The fourth chapter is on the mothers' health status, health care utilization and their socio-economic attainments. Here, some of the child health and health care indicators have been seen in relation with the mothers' health and socio-economic status.

The fifth chapter begins with a background of the health care system in Kerala, the presence of traditional healing systems in the study area and gradually moves towards showcasing the day-to-day workings of the health care system which captures the experiences, attitudes and responses of the various levels of workers in the health system.

The sixth chapter presents a comparative analysis of the socio-economic conditions of the surveyed *households*, with regards to housing conditions, amenities and assets; and *people*, with regards to their education and work status, belonging to different communities. The second section of this chapter attempts to evaluate the state-political systems, earlier in the Wayanad region and later in Kerala, that seem to have resulted in the different population groups attaining different positions in current 'development' scenario with the help of secondary theoretical sources.

The seventh chapter is a concluding one, which summarizes the findings of all the previous chapters and attempts to give some policy recommendations.

Chapter – 2

CHILD HEALTH CARE: AN OVERVIEW OF LITERATURE

The present chapter reviews current and past literature that have remained relevant for understanding the concepts of child health and well-being, and the factors that affect the child health status and health care utilization. The literature review begins with the concept of child health as a part of a broader concept of child well-being, and in the next section, it goes on to list out the factors that influence child health status and health care utilization. The factors have been divided into two parts- compositional factors (i.e. individual/ household-level factors – the socio-economic conditions of the parents/the household) and contextual factors (i.e. the physical, socio-economic and environmental context in which the child is born into/ grows up in). Both these sets of factors are, in the succeeding section, explained as a culmination of longer-running historical, socio-economic and political processes that affect a community/ individual at the local, regional, national and more recently, global levels. The literature, till this section, mentions all the factors that result in differences in the health attainments of a population and health care services available to them. The last section highlights the arguments that have been made in favour of making health and health care as a basic human right because it has been, it is and it will be increasingly very difficult for a majority section of the world's population (or children) to overcome all the factors that affect health and health care and achieve adequate health care and maintain their well-being. This chapter, thus, presents the theoretical framework used in the present study.

2.1 Child Health and Well-Being

The concept of child health and well-being is vital not only because they are the future generations on this planet, but also because their health status and well-being is completely *dependent on others*, more so in the case of infants and young ones. The *others* here include – their families (parents and guardians and their socio-economic status), their nutrition, clothing and health care, especially during sickness, cultural values attached to children, social responsibilities and support systems, philosophies of

life, recreation and knowledge systems, political institutions and state systems of health care and protective measures and their implementation[1].

Explaining why the right to health of children is important, Doebbler (2001) writes – "*first,* child health indicators of infant and child mortality/nutrition are the best evidences of the health of a nation; *second,* there is a widely shared understanding of the moral importance of child health, quoting James Grant of UNICEF, '*the care of children is a practice and an ethic rooted deep in the wisdom and culture of all societies'; and third,* children's health has been normatively recognized as a priority by governments in several international legal instruments, primary among them being the UN Convention on the Rights of the Child (CRC)".[2] As per CRC, 'child' is someone below the age of 18 years, who has the *Rights to: survival, protection, participation and development.*[3]

Whilst talking about the feasibility of forming a universal concept of child well-being, Seaberg states – "child well-being is a subjective, value-based concept, so the feasibility of creating a definition and conceptual model on it that would have a wide acceptance is extremely limited, especially when it will come to assessing the performance of families or institutions regarding the physical and emotional care of children. Food is the most basic need for physical well-being, then should children/families be assessed based on calorie intake, or the different forms of diet, or would it considered adequate to feed children just so that they don't die? And when it comes to emotional nurturance: where some wouldn't even consider it as part of child well-being and others might argue for nothing less than *smother love* for each child, the levels and scales of measurement become extremely difficult, varying in different cultures with different values." Even then, there is some agreement on some of the themes related to child well-being that include: -"providing food, clothing and shelter; providing medical care; providing a non-abusive (physical, sexual and emotional) family environment; providing for emotional nurturance and affection; providing for socialization to normative behavior and the complementary supervision needed to

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1. Seaberg, James R. (1990), "Child Well-being: A Feasible Concept?", *Social Work,* 35(3), 267-272.

2. Doebbler, Curtis Francis (2001), "The Right to Health of Children and the World Bank", 5 (2), 120-146.

3. Nair, M.K.C. and Vishwas Mehta (2009), "Life Cycle Approach to Child Development", *Indian Pediatrics,* 46, Supplement, S7-S11.

accomplish this; and facilitating acquisition of formal education toward later self-sufficiency."[4]

So, the moral philosophies of well-being are equally important here, as Griffin wrote about three perspectives to study well-being: one, where well-being is based on *need*; second, where well-being is based on *desire/aspirations*; and third, where well-being is based on *perfection*.[5] His argument was more in favour of *social obligation* that is limited to well-being based on need (basic survival matters) rather than a more expansive quality-of-life perspective on well-being, even though he also realized the importance of considering the complexities of the conceptual pluralities that result from different value systems.

Pollard and Lee (2003), while writing on the need for a "consistent unified definition of well-being", identified *five* distinct domains of child well-being: *physical, psychological, cognitive, social, and economic.* They found that positive indicators are used more often in all domains except that of psychological. Physical domain pertains to physical health and eating practices, or self-inflicted injuries; psychological domain includes indicators that are related to emotions, mental illness, depression, self-esteem; cognitive domain usually includes academic assessments, teacher's perception, memory, classroom behavior; social domain assesses family and peer relationships, emotional and practical support, resources, social behavior, interpersonal skills; and economic domain related to family resources, parental income, government support. They prepared a list of more than 200 indicators, positive and negative, objective and subjective, under these domains that they reviewed from other literature, for children from 0 upto the age of 19 years. So, child well-being for them is a multifaceted theme, focusing on just one or two domains doesn't make up 'child well-being', which is dependent on a host of other factors related to parents and their environments. [6]

Similar considerations, as Nair and Mehta observe, led us to develop the '*life cycle approach to child development'*[7] through the development of the 'Integrated Child Development Services (ICDS) project, which is perhaps the largest child development

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4. Seaberg *op.cit.*

5. Griffin, J. (1986), "Well-being, Its Meaning, Measurement, and Moral Importance", Oxford University Press, Oxford, England.

6. Pollard, Elizabeth L. and Patrice D. Lee (2003), "Child Well-Being: A Systematic Review of the Literature", *Social Indicators Research,* 61(1), 59-78.

7. Nair and Mehta, *op.cit.*

project in the world, trying to meet the basic development needs of pregnant women, children and adolescent girls. This in essence is a life cycle approach to child and adolescent development, caring for the most critical nine months of intrauterine growth, the vulnerable first six years of life and the most neglected adolescent period.' Since, poverty, illiteracy and poor environmental hygiene are factors detrimental to optimal child development, "National Children's Policy resolution states that priority shall be given to programs in: preventive and promotive aspects of child health; nutrition for infants and children in the preschool age along with nutrition for nursing and expectant mothers; maintenance, education and training of orphan and destitute children; crèches and other facilities for the care of children of working or ailing mothers; and care, education, training and rehabilitation of handicapped children." Thus, Nair and Mehta, then re-emphasize that acceptance and successful implementations of such 'broader visions of child welfare, which include not just physical/ material well-being but also psychological and social wellness', automatically necessitate the making of a more responsive and responsible health care system and management, which stresses not only on the medical model but also on the preventive and promotive aspects of health, working in coordination with the departments of women and child development and the local bodies, all of which should work together to provide multiple 'secure spaces' for the children and their families and their communities that would enable them to benefit fully from the program.

2.2 Factors Affecting Health Status and Health Care Utilization

Shaw et.al (2002) very comprehensively, in their book, have tried to understand the concept of health inequalities from the two approaches of – *composition* and *context*. Composition, here, refers to an individual's – age, sex, diet, habits, socio-economic position etc.; whereas, context refers to – health care services/ other amenities, physical environment, socio-economic environment, rural/ urban, community sense, crime rate etc. According to them, these two approaches can never be mutually exclusive, but work simultaneously, even though the degree of impact of these two types of factors may be different for different groups and places at different times. So, in such studies of health inequalities and utilization of health facilities, it is more important to find out which of these groups of factors is having a higher role – composition or context – because complete explanation (of individual/group knowledge, thinking, attitudes, behavior and practices) is not possible in the absence of

either[8], as Hummer remarks – ‘while it is important to focus on individual behaviour, it is also equally important to place the cultural and behavioural variables in their appropriate socio-economic and historical contexts because the root causes of differentials lie here’[9].

2.2.1 Compositional Factors

1) Poverty

Health, in today’s world, definitely depends on wealth/ income as adequate availability of food, medicines, health care within a household is increasingly dependent on the material well-being and flow of income in that household. It is a misnomer[10] that “mortality due to ‘diseases of affluence’ like – heart disease and cancer (in Western industrialized nations that have passed through the epidemiological transition) affect the rich more; in fact, it is not the affluent but the relatively poor in these countries who are more likely to be afflicted with these diseases. The class inequalities in health of the 19th century that were apparent when looking at infectious diseases are thus still clear today”. As Stockwell pointed out, in the case of Sudden Infant Death Syndrome having strong inverse relation with income patterns in Ohio, USA – “the first to benefit from advances in medical technology and other health care improvements are those in the highest income classes…and the progress made in the prevention and treatment of these diseases has not benefitted all groups equally”.[11] Poverty is fearsome from the simple understanding that it increases one’s chances of getting all kinds of illnesses, but at the same time severely decreases his/her chances of getting cured or even getting access to treatment, and appropriate nutrition, shelter and other amenities that are very important for the success of any treatment. As Premi observed: – ‘as of 1999-2000, 27 percent of India’s population lives below poverty line, majority of whom do not earn even the minimum subsistence wage for their work; thereby, highly reducing their access to food and medical services, hence resulting in

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8. Shaw, *op.cit.* p.128

9. Hummer, Robert A. (1996), “Black-White Differences in Health and Mortality: A Review and Conceptual Model”, *The Sociological Quarterly,* 37(1), 105- 125.

10. Shaw *op.cit.* p. 117

11. Stockwell, Edward G. (1988), “Economic Status Differential in Infant Mortality by Cause of Death”, *Public Health Reports,* 103(2), 135- 142.

malnourishment, morbidity and mortality, which continue to be passed on to their infants and children. This poverty, which is a result of improper distribution of incomes and resources across space and society, needs to be tackled urgently'.[12] While pointing towards the need to changing the development approaches as early as 1971, Mahbub-ul Haq aptly remarked: "the problem of development must be defined as a selective attack on the worst forms of poverty. Development goals must be defined in terms of progressive reduction and eventual elimination of malnutrition, disease, illiteracy, squalor, unemployment and inequities. We were taught to take care of GNP because it would take care of poverty. Let us reverse this and take care of poverty because it will take care of the GNP. In other words, let us worry about the content of GNP even more than its rate of increase."[13] The same tone is maintained by Bill Gates, as late as 2015, world's richest entrepreneur-turned-philanthroper, when he said - "some countries will soon be too rich to qualify for the most favourable forms of aid, but they will still be home to many people in extreme poverty and may not have enough money to cover the gap on their own. For e.g. India, Pakistan, Nigeria and Vietnam could all face this problem. So we will need to focus less on aid to poor countries and more on aid to poor people, no matter where they live."[14]

2) Education and Awareness

The level of awareness and knowledge about the importance of accessing and availing quality health care at the right time is a good predictor of whether a child's parents will provide him/her the proper medical care. This is, in turn, dependent on the educational levels of the parents, as Caldwell pointed out, which has an effect on: "*the power balance* between the spouses and between the generations in the sense that an educated mother has a say in devoting better resources to children and distributing those resources equally among them; *reducing the degree of fatalism* with respect to children's ill health, and *a confidence in the human capacity* to manipulate the world through *knowledge about the location* of facilities as well as gaining access and utilizing

12. Premi, Mahendra K. (2003), "Social Demography: A Systematic Exposition", Jawahar Publishers, New Delhi.

13. Haq, Mahbub-Ul (1971/95), "Reflections on Human Development", New York, Oxford University Press.

14. Gates, Bill (2015), "Setting Targets to Save Lives", www.gatesnotes.com,, accessed on 8th July, 2015.

those facilities."[15] This is especially important in a country like- India where, as Sinha says – "People have a fatalistic view towards life and death, resigning to fate even before they think of getting their infants treated, despite the medical advances".[16]

Thus, just like poverty, education has a *multiplier* effect, but more in a *positive* direction, on the behavior of the individuals and the society, by enabling individuals and groups to cut across institutional barriers like – race, caste, class, socio-political attitudes, gender; it aids in autonomy of the weaker groups and women, increases political consciousness (makes people determined to fight for their rights), influences and expands their choices and skills, results in changing the occupational structure and thus access to resources (nutrition, housing, health services, self-care, sanitation etc.) through income and assets (Kravdal, 2004[17]; Mosley and Chen, 1984[18]).

3) Caste/ Social Position

The hierarchical arrangement of people into different social-occupational categories, for e.g. the caste system in India, or the relatively recent economic classification of workers into – white-collar and blue-collar jobs – tend to assign specific positions to people/ groups, which in turn result in differential recognition, respect and rewards for different levels; and movement between these groups (or from one level to another) is either severely restricted (in the case of caste) or slightly restricted (in blue/ white collar jobs, where moving up (even though very difficult) was still possible through hard work/ qualifications/ networking). The position of an individual or a group within these hierarchies (which lasts almost throughout a person's life, with few exceptions) definitely has an impact on their access to health and health-seeking behavior, and finally on their health status (both physical and mental). Hummer (1996) presented a conceptual model for explaining the mortality differences between *Blacks* and *Whites* in USA, in which experienced "*racism* and its *social manifestations*

15. Caldwell, J.C. (1979), "Education as a Factor in Mortality Decline: An Examination of Nigerian Data", *Population Studies,* 39(3), 395- 413.

16. Sinha, Shantha (2006), "Infant Survival: A Political Challenge", *Economic and Political Weekly,* 41(34), 2657-60.

17. Kravdal, Oystein (2004), "Child Mortality in India: The Community Level Effect of Education", *Population Studies,* 58(2), 179.

18. Mosley, W. Henry and Lincoln C. Chen (1984), "An Analytical Framework for the Study of Child Survival in Developing Countries", *Population and Development Review,* 10 Supplement: Child Survival: Strategies for Research: 25- 45.

came out to be the major determinants of health, as, both at the individual and institutional levels, racism influences the differences in health care, physical environment, health and coping behavior, stress, social roles and support systems."[19]

"In India, racism is replaced by casteism, which has all the attributes of racism plus some additional rigid and discriminating restrictions that do not allow equal rights of living to everyone. This is because of the fact that caste is highly correlated with other factors like – wealth, social respect, access to education, health services, awareness and distribution of amenities and resources." [20]*While caste may have a say in an individual's economic or political situation, but economic or political situation can have no say in an individual's caste in the society.*

Caste groups are not only hereditary, endogamous, and localised but they also have fixed positions in the hierarchy of castes, at the bottom of which come the SCs and STs. So, it not only has a physical affect on the living conditions of the people and communities but also a psychological facet that shapes their behavior, practices, beliefs and social norms that, in turn, dictate the extent of socio-economic and political mobility attainable by them. Thus, access to power or resources is a product of the caste of the individual. Such distinctions result in deep and unequal division of community participation and resources and frustrate the processes of *equity in social development.*

In the Indian context, as Mukherjee et al. aptly state, "a household's caste characteristics are most relevant for identifying its poverty and vulnerability status. Inadequate provision of public health care, the near-absence of health insurance and increasing dependence on the private health sector have impoverished the poor and the marginalised, especially the scheduled tribe population"[21]. In their study, they found that the per capita health expenditures reported by four caste groups, viz. Paniya, SC/ST, OBC and Forward Castes accord with their status in the caste hierarchy, with FC spending the most and Paniya, spending the least, clearly reflecting their unequal access to quality health care. This calls for a fresh look into the widespread belief that Kerala manifests less social inequality in access to health care.

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19. Hummer *op.cit.* p.31

20. Jayashree S. (2011), *Unpublished M.Phil. Dissertation,* "A Study on Trends, Patterns and Socio-Economic Correlates of Infant Mortality in India: 1970- 2008", Jawaharlal Nehru University, New Delhi.

21. Mukherjee Subrata, Slim Haddad, and Delampady Narayana (2011), "Social class related inequalities in household health expenditure and economic burden: evidence from Kerala, south India*", International Journal for Equity in Health,*, 10:1

Mohindra et al. report a higher prevalence of poor health outcomes among lower caste women. Despite Kerala's superior performance in reducing caste discrimination, "inter-caste disparity continues to underlie overall disparity". Poor health is associated with lower socioeconomic position regardless of the indicator. The inequalities in household landholdings are also linked to poor health. The burden of low socioeconomic position combined with lowness of caste can lead to "double deficits" in health. Their study revealed that caste interacts with socioeconomic variables on health by magnifying or buffering the effect. Caste and socioeconomic position are two inter-related sources of inequality that tend to reinforce each other; being from an upper caste can buffer women from the poor health effects related to low socioeconomic status, whereas being from a lower caste can magnify these effects. They state that both being from a lower caste and of low socioeconomic status can trap people into poor health more than either inequality on its own [22].

Social stratification remains a strong determinant of health in the progressive social policy environment of Kerala. A significant part of this gap is driven by discriminatory practices and differential rates of returns on endowments for tribal and non-tribal populations, especially since differences in endowments between indigenous and non-indigenous groups (poverty status, occupation, education, housing conditions, etc.) are themselves largely attributable to past exclusion and discrimination practices. This becomes more relevant in a context where the whole society is brought up and develops the collective thinking that particular positions in a social hierarchy deserve differential levels of social respect, reverence and value, which in turn results in that particular individual or group experiencing different levels of self-respect or pride in themselves; such a collective thought and social structure definitely influences their levels of success (opportunities) and sense of well-being, and the health benefits (or disadvantages, more commonly for those placed low in the hierarchy) that might accrue from them. And within this picture, the processes which produce upward or downward mobility (of a group/ a household/ an individual) become important to understand because of their degrees of beneficial or adverse impacts on health.

A study by Dommaraju et al. (2008), examining the effect of caste on child mortality and maternal health care utilization in rural India using data from the NFHS-

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22. Mohindra K.S., Slim Haddad and D Narayana (2006), "Evidence based Public Health Policy and Practice: Women's health in a rural community in Kerala, India: Do caste and socioeconomic position matter?", *Journal of Epidemiology and Community Health* (1979-), 60 (12), 1020-1026.

2, show that children belonging to low castes have higher risks of death and women belonging to low castes have lower rates of antenatal and delivery care utilization than children and women belonging to upper castes. Further analysis shows that the mortality disadvantage of low castes is more pronounced in poorer districts. They stress on the fact that caste differentials in health outcomes such as child mortality cannot be reduced only to socioeconomic differences among castes, "children belonging to low castes have higher risks of death and women belonging to low castes (30 percent lower for SCs/STs and 24 percent lower for OBCs compared to FCs) have *lower rates of antenatal and delivery care utilization* than those belonging to upper castes"; which, according to their speculation, could be "because of segregation of residences, less accessibility of health care services, and even due to *discrimination by health care providers,* where health worker visits remain confined to forward caste houses", and this disadvantage, of the low castes, they found to be *more pronounced in poorer districts.*[23] To better understand the inequities in health it is necessary to conceive of caste and class as both independent and related. They suggest that successful child mortality reduction policies in India should pay special attention to lower castes, striving specifically to increase their access to and utilization of antenatal and child delivery care.

4) Mother's Autonomy and Employment

Gender becomes an important social factor in health, not only because of the culturally established norms that control the actions, roles and behavior of males and females in domestic and public spheres, and the role of such constructions in influencing the opportunities that these two 'sexes' are extended, but also may be because only 'women' are expected to take care of children and they are the ones who experience maternal mortality (should we say *poor* women?). Such attitudes automatically force us to observe and understand the degree of autonomy that the mothers actually possess in *making decisions regarding health care* and other services for themselves and their children. Women's autonomy (participation in household decision-making process regarding own health care, freedom of movement and access

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23. Dommaraju, Premchand, Victor Agadjanian, and Scott Yabiku (2008), "The Pervasive and Persistent Influence of Caste on Child Mortality in India", *Population Resource and Policy Review,* 27(4), 477-495.

to money) does play an important role in demographic and health-seeking behaviour of people. As Karve (1968) pointed out – "the position of women in the house and in society depends on the kind of kinship and lineage systems that a particular region follows. Women's *autonomy* is higher in matrilineal/matrilocal-endogamous societies (like-Kerala) as compared to patrilineal/patrilocal-exogamous societies (like-North India). The main problem in traditional societies lies in the *power* distribution *within the households*, where the power is wielded by the elders (mainly the mother-in-law or the husbands) who control the allocation of resources ((food) to the daughter-in-law or the wife, and the infant)"[24], and also decide the type of care and treatment during sickness. Low status of women (because of the differences in the "perceived *socio-economic and spiritual* values of *boys and girls"*[25]) in society results in their education, health, decision-making abilities getting neglected and vice versa; and this directly affects children.

On talking about the multiple factors affecting maternal mortality, Shaw (2002) state that "maternal deaths are a persistent feature of poor countries, and within those countries it is the poorest, most disadvantaged and least powerful who are most at risk" [26]. They continue to say that these deaths are related to women's status in society, mainly cultural practices – which in turn put constraints or encourage them to access and decide on their own nature of work, nutrition and health which in turn influences their access to health care at the right time, which is also affected by their location. "One of the fundamental determinants of maternal mortality is the low social status of women, limiting their access to economic resources and basic education, which in turn affects their ability to make decisions about their health and nutrition. Cultural practices in some societies mean that women are secluded and denied access to care. Excessive

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24. Karve, Irawati (1968), "Kinship Organization in India", Asia Publications, Bombay.

25. At least, in Indian Society, there is universal consensus and strict adherence in the roles of parents and the relative positions of their children: *from an* ***socio-economic*** *point of view-* girls are a burden because all their needs *have to be taken care* of by parents till their marriage, which is itself a heavy drain on family's wealth and even after marriage they *have to be taken care of* by their husbands and later by their sons; *whereas boys deserve* to be taken care because they will grow up to take care of their parents later in life and through them the *family name* survives; *from a* ***spiritual*** *(because, no one can question the scriptures – they are the final authority!) point of view- to attain spiritual peace,* one is supposed (forcefully expected) to give ***kanyadan,*** which actually means donating a girl to someone through the ritual of marriage (that's why you need to have a girl too, but you can also do kanyadan for someone else's girl – it doesn't matter how), but, the most important thing is *to give birth to your own boy,* who only can give one's parents lasting spiritual peace through the performance of their last rites.

26. Shaw *op.cit.* p.100

physical work and poor nutrition, before and during pregnancy, are also contributing factors to poor maternal outcomes. Lack of access to essential obstetrical services is also a crucial factor, and is especially a problem for women in remote rural areas, or where there is little transport".[27]

Hobcraft et.al (1984) showed how *mother's employment* may have contradictory influences on child health – 'while on the one hand, women's work may be associated with enhanced individual autonomy and improved family incomes, both of which are thought to be beneficial for child health; on the other hand, women's work in developing nations often involves long hours and poor working condition (accompanied with meager incomes), which lessen the ability of the mothers to care for their children or even avail health care at the right time. So, the *nature of work* of the mother (because the *gendered* role of *caring and rearing* has been assigned to women) is an indicator of the amount and quality of *time* that she can devote towards taking proper care of herself and her child (including prenatal visits, postnatal visits, breastfeeding, food preparation, and *sickness care*)."[28]

Very importantly, Agnihotri argues that it is not just important to increase female autonomy through education and employment but equally important to *change the attitudes* towards the values of children and social ideologies, *otherwise* "an increase in the bargaining power of the mother may increase the healthcare expenditures on sons at the expense of those on daughters, and it can exacerbate female disadvantage."[29]

5) Unemployment

Unemployment is not only a socio-economic factor but also a spatio-temporal factor, because there are regional level variations in unemployment levels, because some kinds of jobs are simply not available in some places. "An individual cannot find work, no matter how qualified and experienced they may be, if there are no jobs available within reasonable distance of where they live"[30]. This may be for a short

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27. *Ibid.*

28. Hobcraft, J.N., J.W. McDonald and S.O. Rutsteon (1984), "Social and Economic Factors in Infant and Child Mortality: A Cross-National Comparison", *Population Studies,* 38(2), 193- 223.

29. Agnihotri, Satish B. (2001), "Declining Infant and Child Mortality in India: How Do Girl Children Fare?", *Economic and Political Weekly, 36(3),* 228- 233.

30. Shaw, *op.cit.* p.114

period of time (when it affects all levels of workers) or a much longer period of time (where it might affect a specific category of workers). So, unemployment affects real incomes and thereby living and material conditions, which in turn affect health; it also directly impacts health, leading to 'depression, anxiety, psychological illnesses, even suicide because of an individual's loss of self-respect, emotional stress and in some cases – social isolation'. The chances of getting access to health care services gets severely reduced when the flow of income stops in households suddenly, as shown by Brennan et.al (1978) who found 'high infant mortality especially in households where the fathers are unemployed (again *gendered roles,* where men are expected to *provide for* their families) and remain so for a long period of time, because of its direct relation with disposable income, food, diet, and other goods and services'.[31]

2.2.2 Contextual Factors

The understanding of context becomes vital when it is found that the contextual conditions (sometimes, over and above material conditions) of an individual, a group or a society influence their health and life possibilities and, differences within them or between them result in producing relative differences in those possibilities. Many studies have explored the role of community support and ties in influencing the health of its people, and have found that "a particularly close-knit community, with strong social cohesion with a clear egalitarian ethos, family and civic ties enjoyed better relative health advantages" as compared to neighbouring towns or locations, where there was more competition than social support, lose community ties, importance to materialistic values.[32] The importance of this social context on health has been very aptly conceptualized and explained by Shaw et.al who stated: "one of the most interesting aspects of studying medical sociology and medical geography is that as living standards in the Western worlds have risen there has not been a commensurate decrease in health inequalities. The gap between the life expectancy of rich and poor has often widened for instance. Thus, it may not be simply the absolute level of people's

31. Brennan, Mary E. and R. Lancashire (1978), "Association of Childhood Mortality with Housing Status and Unemployment", *Journal of Epidemiology and Health,* 32(1), 28- 33.

32. Shaw, *op.cit.* p.121

material circumstances (what they have) which influences health as much as their relative positions".

1) **Location**

An individual's location could be spatial, social and temporal. But here, we refer to mainly physical or geographical location (the nature of which directly influences the weather and climate, the establishment of transport and connectivity networks, the laying and distribution of social infrastructure like – hospitals, health centres, schools and post offices), dealing with social and temporal factors separately. The distribution, density and maintenance of social amenities is different in a plain area as compared to hilly or desert regions, also depending on the degree of wetness or dryness and the seasons. Location in a particular space and place is a big determinant of a person's health status and accessibility to health care services, in terms of the country and region within the country, along with location in society and time.

"Relatively speaking, the historical, social, economic and cultural *experiences* and *linkages* of a region depend on its location in relation to other regions"[33], as Caldwell mentions – "the island location of Sri Lanka, the coastal and strategic location of Kerala, their relatively small population, production of commercial crops and spices, and thus, their high degree of external trade links and role of missionaries – all have resulted in major cultural and demographic changes in these regions as compared to the rest of the subcontinent."[34] For e.g. the life expectancies of children vary from continent to continent, from country to country. Particular spaces tend to accrue particular benefits or disadvantages to health (either because of their physical environment – elevation, weather, pollution, or human environment - settlement types, rural/urban, housing, cleanliness, public policy). At a more local level, locations reveal what 'types of people' live in 'what types of neighborhoods' : "neighborhoods often contain quite specific groups of people at similar stages in their lives, with very similar economic or family circumstances, similar racial identities and similar attitudes to the world" [35]. 'These are a product of the processes of "residential differentiation" (Soja and Harvey);

33. Jayashree, S. *op.cit.* p.34

34. Caldwell, John C. (1986), "Routes to Low Mortality in Poor Countries", *Population and Development Review,* 12(2), 171-220.

35. Shaw *op.cit.* p.119

the driving forces behind which are market economics (housing) and social/ group identities'. Location from a micro scale might refer to the physical and material conditions that a community makes use of daily, like – housing (quality), layout of the settlement, overcrowding, other immediate amenities, cleanliness, shops, the pricing in the locality, avenues for leisure and recreation – parks, safety, crime – all of which not only have a physical but also a psychological impact on the health of the people. Differential locations result in and are produced by extreme variations in the characteristics (especially the socio-economic ones) of population living within even a small area, which in turn cause differences in their health status. As Amartya Sen says in his foreword in Farmer –'indeed, the deprived groups in the "First World" live, in many ways, in the "Third." For example, African Americans in some of the most prosperous U.S. cities (such as New York, Washington, or San Francisco) have a lower life expectancy at birth than do most people in immensely poorer China or even India. Indeed, location alone may not enhance one's overall longevity.'[36]

2) Social Exclusion

As Thorat et.al state while presenting a conceptual framework to study exclusion based on caste (in the case of Scheduled Castes/*Dalits)* and ethnicity (in the case of Scheduled Tribes/*Adivasis)*, "social exclusion implies the denial of equal opportunities imposed by certain groups on others which prevents an individual's participation in basic political, economic and social functioning of a society. Exclusion has two particular features: *first,* it is caused through exclusion (or denial of opportunity and thus deprivation) in multiple spheres which in turn reveal its multidimensionality; *second,* it is embedded in societal relations and societal institutions, that is, the processes through which individuals or groups are wholly or partially excluded from full participation in the society in which they live."[37] Further, quoting Amartya Sen, they draw attention to two ways in which social exclusion could work, "wherein some people are being kept out (or left out), i.e. *unfavourable exclusion* or *active exclusion,* through deliberate policy interventions by government or by other agents; and on the

36. Farmer, Paul (2003), "Pathologies of Power: Health, Human Rights and The New War on The Poor", University of California Press, California, p. xii

37. Thorat, Sukhadeo, Arjan de Haan and Nidhi Sadana Sabharwal (2014), "Exclusion, Deprivation and Human Development: Conceptual Framework to Study Excluded Groups", in Thorat, S. and Sabharwal, (eds.) , "Bridging the Social Gap: Perspectives on Dalit Empowerment", Sage, New Delhi, p. 1-7

other, where some people are being included (even forcibly) in greatly unfavourable terms, i.e. *unfavourable inclusion* or *passive exclusion*, which works through social process in which there are no deliberate attempts to exclude, but nevertheless, may result in exclusion from a set of circumstances."[38]

From the viewpoint of mainstream economics, as Thorat et.al continue to explain – 'in the market discrimination framework, exclusion may operate through restrictions on entry to markets and/or through *selective inclusion,* but with unequal treatment in market and non-market transactions'. Thus, they categorized caste-based exclusion and discrimination into – economic, civil and cultural, political and general spheres. In *economic sphere,* exclusion may be practiced by denial in hiring for particular jobs, denial of access to capital/loans/equal wages for labour/ price for products, denial of sale and purchase of land/house/other goods; in *civil and socio-cultural spheres,* exclusion may be practiced through denial of access to public spaces and goods like – schools, housing, water points, temples, participating in festivals, even roads and health care; *politically,* some groups may not be included in decision-making processes and in availing their political rights; in *general spheres,* discrimination may be practiced by residential segregation, untouchability (since the duty of the society is strict enforcing of *social norms),* even violence.[39]

Talking specifically about *Adivasis,* they state that in their case, the process of exclusion and discrimination are different because here it is based on their *ethnic identity/ culture,* so they are not strictly "*structural or systemic,* even though the outcomes of such processes may be the same as in the case of dalits"[40]. This they attribute to the cultural (language, habits, lifestyle) distinctness of these groups, social organization and economy, their relatively isolated habitats in hills and forests, outcomes of historical processes, and *unintended and intended government policies* which denies them the rights to access to resources that can be accessed in areas around which they live - all of which result in their "*inability to relate to others, their ideas of development, to take part in the life of the community, and thus, directly impoverish the members of these groups.*

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38. Sen, Amartya (2000), "Social Exclusion: Concept, Application and Scrutiny", Social Development paper no.1, *Asian Development Bank.*

39. Thorat et.al *op.cit.*

40. *Ibid.*

Raman (2002) opined 'For the adivasis in the state, history is an unbroken chain of servitude and atrocities with nary a break with the past'.[41] Even as numerous programmers and initiatives were undertaken by the government of India after independence, the brutal legacy of the existing social structure (in which the tribes always stood in the lowest strata of society) continued. Any review on the problems of tribes therefore should begin with this aspect of Indian society, and health status is not an exception to this. The psychosocial strain, that the communities have to bear because of this social exclusion, is in itself a main cause of ill-health.

3) Social Capital

The concept of social capital is related to social interaction, the relationship among members, their norms, mutual trust, resources, networks and consequences of participation in these networks in the day-to-day quality of life of the members, which not only equates to, but in many cases, is more valuable than – financial support. In its relation to health, social capital works through some "pathways" in improving health or prevent illness, including- influencing health-seeking behaviours, providing stress relief, physical and emotional support whenever needed. Yang et.al show how social capital works in influencing maternal behavior and thus infant mortality in three ways: - "through the enhancement of *tangible and invisible assistance,* such as money, food, care, or health information; secondly, through *rapid spread of health information and assistance* in an area where residents are tightly bonded; and finally resulting in *less deviant maternal behavior* (like substance abuse) because of *better psychosocial environment*."[42] "The social capital thesis suggests that work with groups or areas may be more fruitful in enhancing the health of the individuals. This approach stands in contrast to an individualistic one in which population health is improved by changing the behavior and characteristics of individuals"[43].

And this kind of participation, in some contexts, becomes more 'valuable than (or compensates) material wealth and opportunity' in matters related to health. But,

41. Raman Ravi K (2002), "Breaking New Ground"-Adivasi Land Struggles in Kerala, *Economic and Political Weekly*, 37(10).

42. Yang, Tse-Chuan, Huei-Wen Teng, and Murali Haran (2009), "The Impacts of Social Capital on Infant Mortality in the U.S.: A Spatial Investigation", *Applied Spatial Analysis and Policy,* 2(3), 211-227.

43. Shaw, *op.cit.* p.149

then such systems could work in two equally strong ways – one where all people are more equal, thus happy; and on the other, a society based on a hierarchical arrangement of people (inequality) – their places and functions, where again people could be happy with their respective lot (high social capital) leading to low risk of illness.

The review on the compositional and contextual factors reveals that health and health care are a product of a complicated set of interactions that keep taking place – *spatially* as well *socially*. Thus, it becomes important to study those factors that determine the direction and possibilities of *spatial* (movements in space) and *socio-economic mobility* (movements in social status or circumstances) experienced by particular individuals or communities at a particular space and time.

2.3 Factors Affecting Composition and Context

1. History

From the arguments above, studying and understanding the history (the temporal socio-spatial changes that have led to the present conditions) of a place becomes automatically inevitable in order to understand the present conditions, whether in terms of health, or long-term socio-economic or political conditions or even their voluntary/involuntary socio-spatial mobility. This history could vary for the different kinds of people living within a same space or even same time. People can live at the same time but have very different histories. Place and history determine how people view themselves, their positions and passage through time. The understanding of a region's history becomes very important in order to understand the development and establishment of its existing socio-economic and political institutional structures.

2. State Institutions and Public Policy

State Institutions and Public policies matter in a context where socio-economic development is slow and unequal. The role of the state becomes important in reducing the impact that these inequalities have on the well-being of a population; it becomes important in creating ideal conditions for assuring all of equal opportunities and access to services and amenities for increasing their capabilities and situations and in the distribution of resources. The organization and access to state support systems, both social and medical (the spread and distribution of amenities, quality, type, the extent of access) are responsible for "determining the context within which people live their lives"; this, in turn, depends on the nature and type of governments as also on the

community's own material position. For e.g., they say that the performance of the state was more uneven in many parts of the USA (based principally on private medical insurance, and the individual states decide on the extent of welfare services) than in any part of Britain (where the National Health Service is funded and administered by the state, through tax), attributing it to the nature of government and its policies; thereby stressing on the powers of the state, which becomes very important especially in the context of welfare since "the net effect of the welfare state reduces 'real' inequalities in wealth and hence the extent of inequalities in health".

Mosley and Chen attach a high value to factors of *political economcy,* like – organization of production, physical infrastructure, and political institutions; which are responsible for the distribution and stabilization of resource supplies (food), building of transport networks, public health works (drainage and sewage networks), irrigation, and maintenance of political security; simultaneously regulating the quality of products, housing, work places and environment, and working towards increasing the awareness among the people. Farmer, while writing about the institutional structures working in many countries in the world, points towards the social, political and economic forces there that "have structured the risk for most forms of extreme suffering, from everyday violence, hunger to torture and rape", and also for "AIDS, tuberculosis, and indeed, most other infectious and parasitic diseases", where violence is mainly caused by *structural* forces[44]. In the same book, the importance of integrated understanding of how power structures work is given by Amartya Sen, when he says- "but inequalities of power (in different forms), in general prevent the sharing of different opportunities, and if it is central to deprivation and destitution, then there is no sense in distancing inequality from poverty. They can devastate the lives of those who are far removed from the levers of control. Even their own lives are dominated by decisions taken by others."[45]

Public amenities, policies, decisions and their good implementation are the keys for achieving equitable health for all. The role and *will of* political institutions is crucial for the failure/success of any welfare programme. States can achieve considerable

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44. Farmer, *op. cit.*p.42

45. Farmer, *op. cit.* p. xvi

results even by following different political structures and routes.[46] But, then it also important to create resources in regions and for communities who need it the most, and not, as Friedman observed – 'in USA, the projects for maternal and infant care tended to have no relation with prior needs and priorities, rather they were given to areas that already had medical and organizational resources'.[47] Faulty institutional approaches lead to wastage of resources (*already constrained by budget)* and tend to magnify the problems in the already deprived (remote/ rural) regions; whereas *welfare* approaches, as Rao et.al believe – "it is not just enough to make infants survive, but equally important to ensure that they receive and achieve the best of health from the state, their village and households throughout their infancy and childhood without any bias."[48] Where there are major socio-economic and cultural obstacles in attaining individual development, then, it is important not to let public health get effected by inequalities in individual and household-level attainments. It must be made mandatory for the government to look after the health of its people, whether or not they have the means to pay for it. Clearly, Public health should not be guided by private policies.

The impacts of such strong and clear socio-political wills have been documented well by Caldwell through the examples of the *then* poor populations of Kerala, Sri Lanka, Costa Rica and China- who were able to achieve high reductions in mortality, through "a combination of high relative spending on health and social sectors, which was made possible only by unrelenting social and political will (*where parties competed against each other in offering social reforms and continually pushed up social welfare expenditure)"*[49] and in China, it was achieved purely through political will.

The presence and regular working of health services in a locality is a very important determinant of health care utilization. These include – the availability and accessibility of health centres, hospitals, beds, equipment, medicines, doctors, nurses, health workers and other staff, their density (e.g. ratio of nurses to population) which

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46. Conley, Dalton and Kristen W. Springer (2001), "Welfare State and Infant Mortality", *The American Journal of Sociology,* 107(3), 768- 807.

47. Friedman, Judith J. (1973), "Structural Constraints on Community Action: The case of infant mortality rates", *Social problems, 21(2), 230- 245.*

48. Rao, S. Krishnaswany, P.S. Mohapatra and P.S.Bhatia (1972), "Mortality in India in Relation to Prospects of Fertility Decline", in K.E. Vaidyanathan (ed.), "Studies on Mortality in India", Gandhigram Institute of Rural Health and Family Planning, Tamil Nadu.

49. Caldwell, John C. (1986), *op.cit.* p.41

affects their quality of care, the frequency of their visits, their attitudes and nature of services, as Srinivasan reports – "there is a higher density of Auxiliary Nurse Midwives and lady doctors per 100,000 population in Kerala. The number of births and sick infants that a doctor or an ANM has to attend in Kerala is half the number in Rajasthan. Thus, the quality of care by a nurse or a doctor in Kerala can be expected to be much higher than in Rajasthan."[50] Inadequate staffing is a major detriment to meaningful access to health care, as NRHM report (2010) stated - "only 58 percent PHCs conduct deliveries and only 22 percent provided neo-natal care……if the percentage of PHCs having adequate staff is more than 90 percent in Tamil Nadu, Maharashtra and Kerala, it is less than 20 percent in Orissa, West Bengal and Bihar".[51] On top of this the staff, medical as well as the paramedical, increasingly are reluctant to work in rural areas, particularly the remote, inaccessible hilly and forested areas, desert regions and tribal areas. Thus, there is a need to promote and extend basic reproductive and child health care services through mobile clinics and counseling services. In other areas, these should be made available in an integrated manner at one place. Premi had suggested that "a vast increase in the number of trained birth attendants, at least two per village, is necessary to universalize coverage and outreach of antenatal, natal and post-natal health care, with a well-equipped maternity hut having indigenous medicines and supplies for maternal and newborn care"[52]. Health care services, especially from the perspective of child health, attains more relevance when we understand the role it plays at different stages – before the child is born (ante-natal care for the mother), during delivery (institutional/home, skilled/unskilled assistance), and after birth (immunization, treatment of diseases) – and thus, the huge impact that it has on the health of the mother and later, the child. Their importance is clearly seen by Benjamin, when he declares: "in conditions of universal availability of medical services unrestrained by any economic barriers, social and economic differentials in mortality are correspondingly reduced"[53]. Similarly, the provision and regular maintenance of

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50. Srinivasan, K. (1998), "Basic Demographic Techniques and Applications", Sage Publications, New Delhi.

51. NRHM – The Progress So Far, 2010, Ministry of Health and Family Welfare, www. mohfw.nic.in

52. Premi, Mahendra K. (2003), "Social Demography: A Systematic Exposition", Jawahar Publishers, New Delhi.

53. Benjamin, B. (1965), "Social and Economic Factors Affecting Mortality", Mouton and Co, Paris.

good transport network throughout a region is necessary for easy accessibility to social services.

After having said all this, it is equally important to understand that even state and public institutions are a product of and have to operate within a given *'socio-economic and cultural setup',* so replication of successful models may not be the best way to go, without a deeper change in the ideologies and established systems.

3. Global Ideologies of *Neo-liberalism and Globalization*

The public policies and decisions are increasingly dependent on the current raging ideologies that dominate the global scene of economics and politics. As Farmer notes - "*neo liberalism* generally refers to the ideology that advocates the dominance of a competition-driven market model"[54]. According to this stream of thought, individuals are rational beings who act and decide based on material and economic concerns and considerations, without focusing on their social or political conditions and inequalities that actually motivate their way of thinking and behavior. Such market principles, scholars argue, do not work for the majority of the world's poor whose very survival, in this market system of "demand and supply", is at stake. In such a system, they will never get the 'health care, the education, and other social services' that a 'rational human being' requires, and that is why the present focus on human rights. Farmer goes on to say that "the neoliberal era has been a time of looking away, a time of averting our gaze from the causes and effects of structural violence."[55]

While criticizing the World Bank (an international institution that says its mission is to fight poverty and improve standards of living of people in the developing world) for not giving enough attention to human rights, Deobbler states that many countries are increasingly lacking the resources necessary to respect and achieve health and human rights for their populations, and international community recognizes World Bank and other intergovernmental actors as major players that promote and invest in health in many such countries. "But, the Bank remains constrained by its mandate and policies, which are in part a result of its failure to adopt a human rights approach to child health, and in part its increasing emphasis on temporal needs, economic objectives

54. Farmer, *op.cit.* p.42

55. *Ibid.*

and repayment of loans rather than respect of human rights."[56] This is because the World Bank group is made of different intergovernmental organizations, each having its own separate goals that are mainly confined to economic growth. Moreover, it depends on voluntary contributions from the developed countries, so governments that contribute the maximum capital for lending to the bank (like- USA, a country which has failed to ratify the Convention on the Rights of the Child) have the maximum say in its policies. This results in countries, states and international organizations increasingly compromising health outcomes in order to achieve economic outcomes. The bank, thus, gives *loans* to the developing countries, and not *grants.* The *Structural Adjustment Policies,* which intended to improve child health through economic development, have infected adversely affected the living standards of the poor and the vulnerable and *user fee policies,* in which the users of particular services are charged to gain access to those services, have enlarged the inequalities in the health system. *The most important impact* of such policies have been the *failure of the states to invest in or provide health care,* because they started spending more on profit-making activities than on social programs, and *increasing the complacency of the states* who started backing from their responsibilities to provide health care for those who could not pay the user fees.

Globalization is mainly used in the context of expansion of markets in the wake of increasing privatization where local/regional socio-economic-cultural structures get increasingly weakened and the role of the state is transformed mainly into a facilitator in the establishment of free markets everywhere, with revolutions in transport-communication and information technology[57]. Even though the concept speaks of spreading of progress, development and sharing of knowledge and technologies; but its actual workings on the ground reminds one more about colonialism, insecurity of livelihoods and violation of rights everywhere.

It is a phase where the power of the nation-states or power-blocks gets diminished in comparison to the combined power and networking of the wealthiest multi-national corporations and the banking establishments, who hold every power over the lives and livelihoods of billions of people, just like in the days of imperialism and

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56. Doebbler, *op.cit.* p.28

57. Nithya, N.R. (2014), "Globalization and The Plight of Tribals: The Case of Kerala, India", *The Dawn Journal,* 3(1), 727-758.

colonialism, where the attention of the society is diverted more towards the latest achievements and entertainments of the modern man so that serious questions are not raised about the history and causes of sufferings of the deprived and the destitute. The era of globalization has been profoundly successful in globalizing, spreading and universalizing the inequalities (fuelled better by the already existing atrocious socio-political-economic-cultural structures) that were earlier only local experiences, at least from a regional geographical perspective. It has effectively rendered the constitutions, the national states, the countries, their laws and justice systems completely dysfunctional (that were hitherto, at least for namesake, working from a welfare perspective) and apathetic to the rights, freedoms, pleas, appeals and sufferings of their citizens; thereby forcing the poor, to not only fight the inequalities existing within their regions and social structures but also those that are acting from outside, to fight a war that they are undoubtedly losing; because their loss is indispensable for somebody else's gain and to maintain the supremacy of the structures.

Krishna and Ananthpur, while talking about increasing spatial health disparities in India, state that – "more than 50 percentage of the Indian population lives in villages that are located more than 5 kms. from the nearest towns. This half of India is more likely to experience illnesses of different kinds and simultaneously less likely to get qualified medical treatment. The incidence of premature deaths, infant and child mortality and malnutrition are all significantly higher within villages located further from towns. So, such villagers are more susceptible to being overcome by the medical poverty trap. Poverty has increased within villages located more than 5 kms from towns, even as the national economy was surging ahead. Globalization privileges cities, disadvantaging locations at greater distances from towns."[58]

As Farmer remarks about growing inequalities in health care –"it's clear that modern biomedicine, like the global economy, is booming. Never before have the fruits of basic science been so readily translated into life-promoting technologies. Headlines abound with news of sequencing the entire human genome, of effective organ transplants, of new drug development. But inequalities of access and outcome increasingly dominate the health care arena, too: protests of indigenous people against the Human Genome Project; grisly stories of organs stolen or coerced from the poor for

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58. Krishna, Anirudh and Kripa Ananthpur (2013), "Globalization, Distance and Disease: Spatial Health Disparities in Rural India", *Millenial Asia,* 4(1), p. 3-25, Sage Publications, online: http://mla.sagepub.com/content/4/1/3.

transplant to the bodies of those who can pay; great enthusiasm on the part of drug companies, for the development of new drugs to treat baldness or impotence while antituberculous medicines are termed ‘orphan drugs’ and thus deemed not worthy (not profitable) of much attention from the drug companies, even though they are heavily dependent on public finance for making their own private profits.”[59]

2.4 Marginalization and Vulnerability in the Global Socio-Economic Context

1. Tribes and Marginalization

Today, “the word “tribe” generally connotes poverty, malnutrition, disease, low education, neglect and exploitation by the population of 'mainstream society'. Tribal communities all over the world are now facing the problem of displacement in economy because of various reasons. Starting from food gatherers to agriculturists, the tribes are adapted to their ecosystem and traditional subsistence patterns. Changes in the subsistence patterns due to migration, land alienation, deforestation, introduction of development programmes, deforestation etc. have created a shift in economy and resultant shortage of traditional resources. This has badly affected the various strategies of tribal life including health”[60]. Talking about tribes in Wayanad, Ramachandran further states that each one of the tribal communities has their own specific culture and tradition, even though they are live in the same ecological setup.

According to Aerthayil, “most of the tribals in Kerala had land in the beginning, but gradually many of them lost their land due to various factors like – the land policy of the British, immigration, land reforms, developmental projects and lack of legal protection for the tribal land. Most tribes depend on settled agriculture or agriculture labour for their livelihood as most of them are landless. Educationally, the adivasis are the most backward in the state. Functionally, it is very poor, though some groups are well-educated. Socially, they are marginalized like dalits. Politically, they have no influence in state politics as they are not a political or numerical force.” [61]

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59. Farmer, *op.cit.* p.42

60. Ramachandran, Bindu (2005), “Adaptation to resource constraints and displaced economy: tribal situation in Wayanad, Kerala”, Man in India, 85 (3-4), 291-95.

61. Aerthayil, Mathew (2003), “Muthanga police firing in Kerala; a tribal reaction to exploitation and alienation of land”, *Social Action*, 53 (3), 298-306.

The process of exploitation has set in creating ethnic, nutritional, cultural, socio-economic problems as well as health hazards, including reproductive and child health. With the developmental activities and opening up of tribal areas for tourism it is necessary to understand the impact on the lives of the tribes[62]. They are lured for exchange of forest produce by offering alcohol, which has lead to alcoholism among tribes and has become a major social problem in that society. From a broader view, it seems that the tribes have had more losses than gains in the processes of development.

2. Ecology and Health

Pandey et.al write - "nature is wholly and solely responsible for survival of any organism. Recently, the natural ecological balance has been majorly upset due to human action, resulting in reducing the quality of resources and thus, life. Serious health problems have been created because of urbanization, industrialization, mining, deforestation and population growth. The worst sufferers are tribal populations, who have become landless in their own home land."[63]

"Deforestation has badly affected the health status of the tribal communities of Wayanad, especially those who have higher dependence. Meat was an important item in their diet and deforestation has resulted in a loss in hunt. Moreover, the introduction of cash crops and oil grass reduced the cultivation of ragi, which was a main item of their food. They are also deprived of other edible items like- roots, fruits, leaves and tubers from the forest"[64]. All of these have adversely affected the nutritional status and health.

Similarly, the forests were also the sources of rare herbal medicines that the tribes prepared from the medicinal plants. Even today some groups like- Kattunayakans show unsatisfactory attitude towards allopathic medicines. At the same time they are not getting the traditional herbal medicines as in the past. This will lead to unidentification of certain diseases, deterioration of nutritional status and increased deaths.

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62. Reddy Sunita (2008), "Health of tribal women and children: an interdisciplinary approach", *Indian Anthropologist*, 38 (2), 61-74.

63. Pandey, *op.cit.*

64. Ramachandran, *op.cit.* p.52

As Ramachandran correctly notes – "a rapid process of ecological transformation has induced changes in the forest, mountain, and drainage systems – that have been the main sources of food, medicine and housing for the tribes. They have lost their balanced diet, medicinal herbs and shrubs and the medicated air – which was available from the thick forests earlier"[65].

3. ***Vulnerability and Health***

"Vulnerability is seen as a risk that a household will suddenly/ gradually reach a position with which it is unable to cope, leading to catastrophe (hunger, starvation, family breakdown, destitution or death). Poor people are not much concerned that their level of income, consumption or capabilities are low, but that they are likely to experience stressful declines in these levels."[66]

Vulnerability to ill-health is a problem among the poor. A common cause of chronic poverty occurs when a household's main income earner contracts a chronic/ terminal illness, resulting in depletion of assets and income and increasing debts. In order to overcome such shocks, the possession and access to **assets** (jewellery, capital, land, livestock, tools, house etc.) is very important especially in the absence of strong public social protection measures. They determine the future income potential and also possibilities of "bounce back" from crisis. Thus, improved well-being is increasingly dependent on enhanced individual and household assets.

Studies have indicated that "the scheduled tribes are caught in multiple 'vulnerability traps', that is, they view their situation as vicious cycles from which it is difficult to break free. In a study among Paniyas, it was found that the accumulation of health deficits was consistent with the Paniyas' own perceptions as voiced in focus group discussions, in which numerous vulnerability traps related to a range of risk factors were identified, including poor health, landlessness, poverty, exposure to harsh environmental conditions (e.g. floods), alcohol use, colony isolation, and education deficits."[67]

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65. *Ibid.*

66. Hume, David and Andrew Shepherd (2012), "Conceptualizing Chronic Poverty", Critical Quest, New Delhi.

67. Mohindra K.S., D Narayana, CK Harikrishnadas, SS Anushreedha and Slim Haddad (2010), "Paniya Voices: A Participatory Poverty and Health Assessment among a marginalized South Indian tribal population", *BMC Public Health*, 10:149

So, here the role of government becomes important in providing 'security' of livelihoods, devising effective ways to provide quality health-care and reducing vulnerability of these tribes, since in majority cases terminal illnesses and deterioration of health of adults are the major factors in households slipping gradually into poverty. There is a need for implementing interventions that concomitantly deal with tribal discrimination and socio-economic disparities because effective education and nutrition policies and interventions can be considered to be interrupters of chronic poverty in their own right. Thus, a ***Multi-Dimensional Approach*** needs to be developed in order to understand and comprehend the multifarious causes of health deprivations and attainments, because “the more dimensions on which an individual is deprived, the less likely s/he is to escape poverty as the exit routes will be limited.”[68] This is because the deprivations (in terms of – human, psychological, social, natural, physical and financial) experienced by the tribal communities are multiple, long-term and repetitive in nature (in majority cases, getting transferred to succeeding generations).

As Reddy (2008)[69] critically points out “anthropological studies on the health of tribals give rich ethnographic details about their cultural practices, perceptions and behavioural aspects. But, they fail to link the larger issues of socio-economic, political and ecological factors with the accessibility, affordability and availability of health services to understand the health of tribal populations, especially maternal and child health”. So, she continues, in order to address the health of tribal women and children, it is necessary to take into account various aspects – geographical location, their positions in the continuum of development, literacy levels, economic base, political participation, levels of integration and assimilation, and the external agencies and factors influencing them.

2.5 Social Justice and Human Rights

“Everyone has the right to a standard of living *adequate* for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control.” - Article 25, Universal Declaration of Human Rights

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68. Hume and Shepherd, *op.cit.* p.54

69. Reddy *op.cit.* p.53

In the above statement, the word ‘adequate’ sounds the most problematic since it can interpreted by policy makers according to their own convenience, because the standards of *adequate health and well-being* and the chances of *attaining them* are clearly different for the richest and poorest, and those who fall in between. It doesn’t point to the absence of ‘quality’ or ‘equity’ in the definition, which are truly the most important concepts that should drive the human rights campaigns.

Farmer, in his book where he attempts to “reveal the ways in which the most basic right – the right to survive – is trampled in an age of great affluence” [70], says – “Human rights violations are not accidents; they are not random in distribution or effect. Rights violations are, rather, symptoms of deeper pathologies of power and are linked intimately to the social conditions that so often determine who will suffer abuse and who will be shielded from harm.” He further asks – why is no one “judged guilty of human rights violation when children living in poverty die of measles, gastroenteritis and malnutrition?” [71]

Stressing on the need to develop a human rights approach with regards to health, Doebbler quotes Amartya Sen – “*a human rights approach is a strategy requiring that actors view the entitlements of individuals as rights rather than as discretionary concessions’*. States that have ratified certain international agreements should abide by and should be held to those obligations (legally, by making those rights fundamental), recognizing the basic human rights that have been agreed upon in treaties, further quoting Jonathan Mann, a leading public health advocate – ‘*modern human rights provides a better guide for identifying, analyzing and responding directly to the critical societal conditions than any framework inherited from the biomedical or recent public health tradition.”*[72] As Doebbler argues further, here one need not *prove* the benefit of a human rights approach for improving health and human rights; it should seen “as a prescriptive approach whose starting point is the body of human rights that have been unequivocally agreed to by governments. It, thus, hypothesizes nothing, but rather assumes that human rights must be achieved because they are the birth right of every human being.”[73] Such approaches would definitely influence the policy choices of

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70. Farmer, *op.cit.* p.42

71. *Ibid.*

72. Doebbler, *op.cit.*

73. *Ibid.*

states and international organizations, thus 'catapulting the right to health above the fray of compromise and negotiation, excluding the possibility of compromising it for economic reasons, since states would have *explicitly agreed* to this prioritization', and they would first have a "common commitment to human rights" by accepting a 'common standard of human dignity'. In a situation where most of the governments are still dependent on loans from the World Bank, which itself depends on voluntary contributions from others, it should be made mandatory for all governments to provide for human rights.

2.6 Gaps in Research

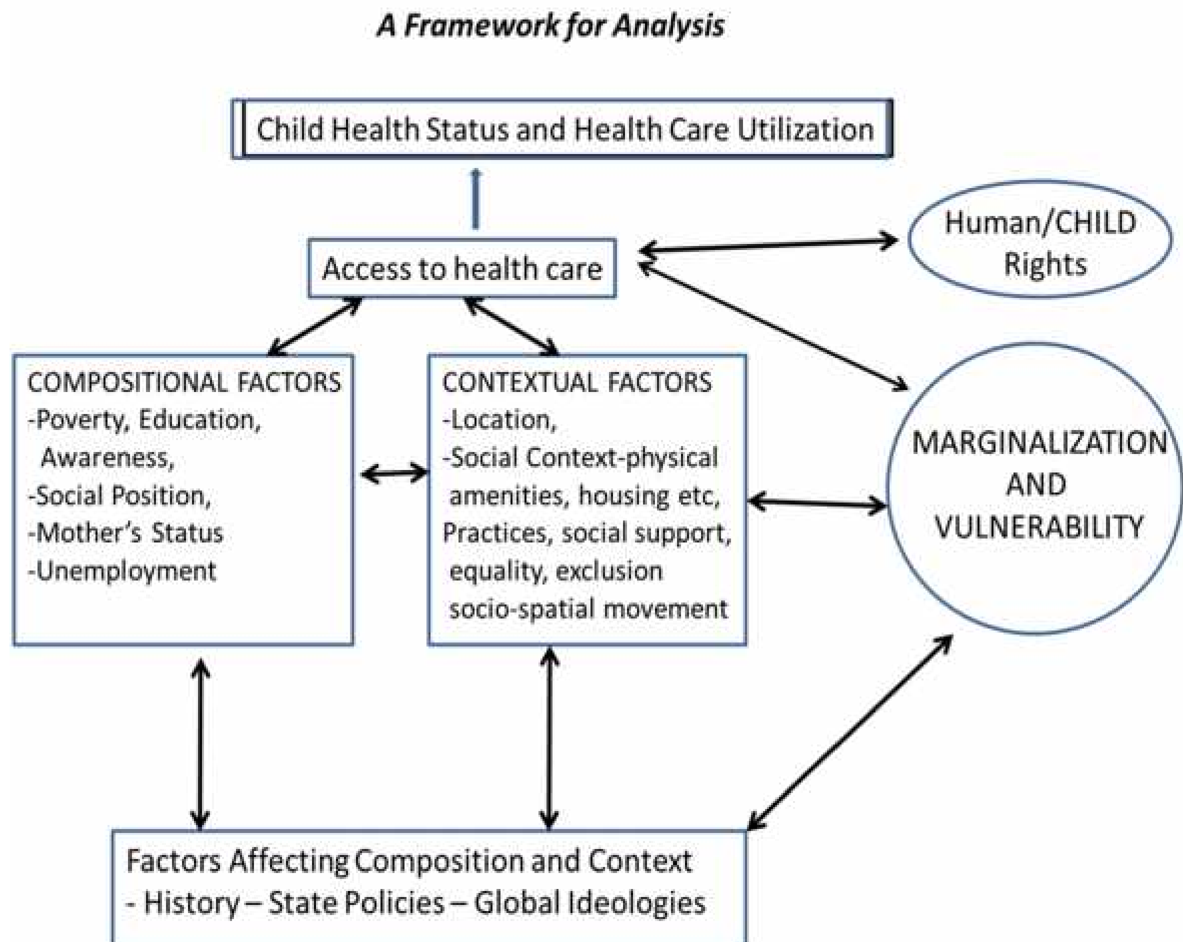
There is an enormous amount of literature related to child well-being, factors affecting health status and health care utilization that have very clearly and systematically conceptualized the frameworks to study health, ranging from globalization to formulating vulnerability frameworks, how inequalities are getting magnified in various setups especially in the current economic systems, leading scholars to suggest actions on the basis of human rights. However, in order to understand *why* some groups are suffering more and falling into *vulnerability traps more* in this age of globalization requires us to delve deeper into the historical and political processes of marginalization of certain spaces and certain communities, then only one would be in a position to arrive at a complete understanding of why *particular spaces, particular groups and particular systems* are functioning the way they are today. So, the present thesis tries to fill in these gaps in the existing literature on health by studying not only the inter-tribal and tribal-non-tribal variations in child health, mother's health, socio-economic status but also tries to explore into the nature of workings of the health care systems in the field, its history, and the historical and political exclusion of some spaces and groups in the socio-politically developed space of Kerala.

2.7 Conceptual Framework

Health condition of any population is the reflection of the socio-economic condition and the environment in which they live and have lived over time. The review of literature affirms the fact that health and health care utilization is a product of a complex interaction of factors, ranging from those at the level of the individual (income, education, employment etc.) to the community (location of settlements, caste positions,

social supports) to state (local institutions, social amenities and infrastructure, distribution of resources, regional/ national development projects) to global level processes (global economy, neo-liberalism and globalization). Finally, ending with the arguments that favour basic amenities and resources to be given on the basis of a human rights approach, so that even those who are not able to overcome their situational factors can have access to opportunities that will take them out of their vulnerability traps. This review has provided us with a conceptual framework for structuring the present thesis on child health care utilization, wherein chapters 3 and 4 explain the compositional factors and chapter 5 and 6 delve into the contextual factors of health care (in particular) and development (in general) in the study area.

Fig. 2.1 Diagramatic Representation of the Conceptual Framework for the Study



Chapter – 3

CHILD HEALTH STATUS AND HEALTH CARE UTILIZATION

This chapter deals with the core theme that is the utilization of children's health care in the study area from the primary survey data like – birth weight, nutritional status, illnesses, place of birth, health care during illnesses, immunization and attendance in anganwadis. The main child health and health care indicators have then been analysed in relation to some characteristics of the children, like- birth order, feeding habits, etc. in order to see the relations between them.[1]

3.1 Child Health Status

Weight at Birth

An analysis of the birth weights (*table 3.1*)[2] throws some interesting facts, more than one-third of the scheduled tribe children have birth weights below 2.5 kg, which is double than that for non-tribes. Also, a high proportion of non-tribal children is born with birth weights above 3 kg. More than 40 percent of Paniya and Adiya children are born with low birth weights, which is quite disturbing. The average birth weights are highest for the non scheduled tribes and Kattunayackas (table 2), and lowest for Paniyas (a difference of some 400 grams, which is quite high).

[1]. In total, the study has covered about 505 children below the age of 5 years (60 months). The sex ratio in 0-5 years shows significantly higher value among non-scheduled tribes as compared to scheduled tribes (see *Appendix-4*). The lowest sex ratio is seen among Kurumas (750), infact, all tribal communities have sex ratios in favor of males, except the Paniyas. The age-wise classification reveals that in all the social groups, the proportion of children aged 36 months and above is higher; the Paniyas have the highest proportion of children below 24 months of age (almost 41%), which is 10 % higher than that of Kurumas. The average age of children is highest among Kurumas (31.5), and lowest for Paniyas (29); whereas the median age is highest for Adiyas (34 months) as compared to 26 months among Paniyas (a difference of 6 months), showing that Paniyas have the highest proportion of young children.

[2]. Birth weight of only 435 children could be analyzed, as many mothers could not recollect or show any record of their child's weight at birth. This especially happened in the case of Paniyas', Kattunayackas' and Adiyas' older kids. Most of the non-tribal, Kuruma and Kurichia mothers could readily recollect the birth details of every child.

Table 3.1 Classified Birth Weight of Children (0-5 years)

Birth Weight	Name of Social Group[3]							Total
	Pani.	Kuri.	Kattu.	Kuru.	Adi.	ST	NonST	
Below 2.5 kg	**43.9%**	29.1%	27.9%	32.9%	**43.2%**	**35.2%**	16.2%	32.0%
2.5 to 3 kg	40.4%	54.4%	39.7%	48.7%	34.6%	43.8%	45.9%	44.1%
Above 3 kg	15.8%	16.5%	32.4%	18.4%	22.2%	21.1%	**37.8%**	23.9%
Total	57	79	68	76	81	361	74	435
Mean,kg.	**2.4**	2.6	2.7	2.6	2.6	2.6	**2.9**	2.6

Anthropometric Measuerments

At all ages, the average weights of children are higher for the non-tribes as compared to the scheduled tribes, except the age group 9 to 11 months (*table 3.2*). It is highest for the Kuruma tribes, followed by the non- tribes; whereas the Paniya children have the lowest average weights. Kattunayacka children have high average weights till about 8 months of age, but after that age their averages are lower than other groups. The difference in weights between the Paniya children on the one hand and Kuruma and non-tribal children on the other is more than 2 kgs, and is maintained at all age groups above 24 months.

Table 3.3 shows the average heights (in cms.) for different age groups among children. It is seen that the average heights of children is higher for the scheduled tribes till the age of 8 months (when the difference is more than 6 cms); whereas, after 9 months and above the averages are higher for the non scheduled children. The differences are highest during the ages of 24 to 35 months (more than 8 cms). The Paniya and Kattunayacka children have the lowest average heights, and non-scheduled tribes and Kuruma children have the highest average heights (the difference between them is more than 5 cms).

[3]. Social Groups: Pani. – Paniyans, Kuri. – Kurichians, Kattu.-Kattunayackans, Kuru.- Kurumans, Adi. – Adiyans, ST- Scheduled Tribes, NonST/NonT- Non Scheduled Tribes.

Table 3.2 Average Weights of Children (kg.)

Age categories	Name of Social Group							Total
	Pani.	Kuri.	Kattu.	Kuru.	Adi.	ST	NonST	
5 months/ below	2.50	5.35	**5.60**	5.00	**4.42**	4.88	4.59	4.83
6 - 8 months	6.29	**6.00**	7.60	6.71	**7.63**	6.86	7.45	6.95
9 - 11 months	**6.67**	8.50	8.00	**8.58**	8.13	7.84	7.50	7.82
12 - 17 months	**8.15**	8.75	**8.15**	9.07	8.66	8.50	**9.48**	8.66
18 - 23 months	**7.81**	**10.48**	9.60	10.43	8.73	9.30	10.18	9.49
24 - 35 months	**9.36**	10.81	10.88	**11.44**	11.12	10.75	**11.33**	10.81
36 - 47 months	**11.90**	12.21	12.35	13.13	11.43	12.27	**13.54**	12.51
48 months/above	**12.07**	13.95	13.74	**14.80**	13.74	13.59	**14.93**	13.77
Total	**9.62**	10.87	10.90	**11.61**	10.57	10.69	**11.59**	10.82

Table 3.3 Average Heights of Children (cms.)

Age categories	Name of Social Group							Total
	Pani.	Kuri.	Kattu.	Kuru.	Adi.	ST	NonST	
5 months/below		37.45	39.20	33.83	32.83	**35.66**	33.22	35.47
6 - 8 months	50.35	61.26	56.08	61.62	61.34	**57.72**	51.74	56.80
9 - 11 months	57.00	62.18	47.55	61.98	61.95	59.09	**62.18**	59.23
12 - 17 months	62.25	59.69	59.64	62.44	62.54	61.23	**63.73**	61.65
18 - 23 months	62.22	62.26	62.36	63.18	62.56	62.54	**64.62**	62.95
24 - 35 months	64.90	65.28	65.85	63.72	65.79	65.14	**73.91**	65.93
36 - 47 months	77.13	85.12	75.13	85.99	73.96	79.65	**86.06**	80.73
48 months/above	81.40	89.38	87.04	92.57	89.41	87.77	**92.52**	88.35
Total	**69.22**	71.76	**69.37**	**74.22**	70.15	70.82	**75.86**	71.50

But it is important to mention, if we go by field observations and if children can be called healthy if they ‘have strong, curious and bright eyes, are physically very active, not dull, even sturdy’, then definitely Kuruma and Kattunayacka infants and young children are ‘healthier’ compared to all others. But, they definitely do not ‘seem healthier’ but comparatively ‘paler, less active, dull, slightly built’, among Paniyans, Adiyans.

Table 3.4 Weight-for-age among Children (3 months and above)

Social Group	Weight-for-age[4]				Total
	Normal	Moderately Underweight	Severely Underweight	Overweight	
Paniyans	36.9%	**34.5%**	**27.4%**	1.2%	100.0%
Kurichians	76.9%	12.8%	10.3%	0.0%	100.0%
Kattunayackans	67.8%	22.2%	8.9%	1.1%	100.0%
Kurumans	**90.3%**	6.9%	1.4%	1.4%	100.0%
Adiyans	61.7%	**34.6%**	3.7%	0.0%	100.0%
ST	65.9%	22.7%	10.6%	0.7%	100.0%
Non-ST	**91.5%**	5.6%	2.8%	0.0%	100.0%
Total	69.7%	20.2%	9.5%	0.6%	100.0%

The analysis for weight-for-age among children reveals that a very high proportion of the Paniya children have extremely low weights for their ages (below – 3 standard deviation); such cases are least among the Kurumans. The proportion of moderately underweight children is highest among Adiyans and Paniyans, followed by Kattunayackans. The Non-tribal and Kuruman children have the maximum proportion of normal weight children among them. The share of overweight children is negligible in the study area.

Table 3.5 Height-for-age among Children (3 months and above)

Social Group	Height-for-age				Total
	Normal	Moderately Stunted	Severely Stunted	Above normal	
Paniyans	42.7%	12.2%	**42.7%**	2.4%	100%
Kurichians	50.0%	32.1%	17.9%	0.0%	100%
Kattunayackans	36.7%	24.4%	**38.9%**	0.0%	100%
Kurumans	76.4%	19.4%	4.2%	0.0%	100%
Adiyans	51.9%	33.3%	14.8%	0.0%	100%
ST	50.6	24.3	24.6	0.5	100%
Non-ST	65.1%	19.0%	14.3%	1.6%	100%
Total	52.6%	23.6%	23.2%	0.6%	100%

[4]. Normal Weight/Height: (-2 SD to 2 SD), Moderately Underweight/stunted/wasted: (-2 SD to -3 SD); Severely Underweight/stunted/wasted(below -3 SD); and Overweight/above normal (above 2 SD).

The existence of stunting is quite high in all communities. More children among the Paniyans and Kattunayackans are severely stunted (have very low heights for their ages); moderate stunting is highest among Adiyan and Kurichian children. Kurumans have the maximum proportion of children who have normal heights for their ages.

Table 3.6 Weight-for-Height among Children (3 months and above)

Social Group	Weight-for-Height				Total
	Normal	Moderate Wasting	Severe Wasting	Above normal	
Paniyans	61.0%	13.4%	**17.1%**	8.5%	100%
Kurichians	74.4%	5.1%	5.1%	15.4%	100%
Kattunayackans	73.3%	6.7%	4.4%	15.6%	100%
Kurumans	91.7%	2.8%	1.4%	4.2%	100%
Adiyans	77.8%	9.9%	4.9%	7.4%	100%
ST	75.2%	7.7%	6.7%	10.4%	100%
Non-ST	73.0%	9.5%	1.6%	15.9%	100%
Total	74.9%	7.9%	6.0%	11.2%	100%

Table 3.7 Stunting-cum-underweight (Children 3 months and above)

Social Group	Normal weight and height	Severely underweight and stunted	Severely/moderately underweight and stunted	Normal in one/ low in another	Other/ above normal values
Paniyas	22.0%	**18.3%**	23.2%	32.9%	3.7%
Kurichias	44.9%	6.4%	11.5%	37.2%	0.0%
Kattunayackas	30.0%	4.4%	21.1%	**43.3%**	1.1%
Kurumas	**72.2%**	**0.0%**	5.6%	20.8%	1.4%
Adiyas	38.3%	**2.5%**	22.2%	37.0%	0.0%
ST	40.4%	**6.5%**	17.1%	34.7%	1.2%
Non-ST	61.9%	1.6%	3.2%	31.7%	1.6%
Total	**43.3%**	5.8%	15.2%	34.3%	1.3%

In terms of wasting as well (*table 3.6)*, it is seen that Paniyan children have the highest proportion of wasting among them, infact severe wasting is more. Kurichians also have

a high proportion of children who have very low weights for their heights, followed by Adiyas and Kattunayackas. Wasting is lowest among the Kuruma children.

More percentage of children who are both underweight as well as stunted (*table 3.7)* are found among the Paniyas, Kattunayackas and the Adiyas, infact 18 percentage of Paniya children are have severely low weights as well as heights for their ages! Children who are underweight-cum-stunted are few among the non-tribal and Kuruman groups. Kattunayackan children have the highest proportion of those who are either stunted or underweights; it is among the Kuruman children that we find the highest number of those who have normal weights and heights for their ages.

Table 3.8 Severity of Malnutrition

Social Group	Underweight	Stunting	Wasting
Paniyans	**62**	**55**	**30**
Kurichians	**22**	**48**	**12**
Kattu.	**31**	**62**	**11**
Kurumans	8	23	4
Adiyans	**39**	**48**	**15**
Non-ST	9	**31**	**12**

When we assess the situation further in terms of severity of the issue (*table 3.8)*[5], it is seen that the severity of malnutrition is *very high (underweight children)* among the Paniyas, Adiyas and Kattunayackas, even for Kurichias – it is high. With regards to *stunting, severity is very high* among Kattunayackas, Paniyas, Adiyas and Kurichias; it is *also high* among the non-tribal children. As far as wasting is concerned, severity is *very high* among the Paniyas and Adiyas; and *high* among Non-tribes, Kurichias and Kattunayackas. Thus, in terms of severity of malnutrition,

[5]. The severity of malnutrition (% children falling below -2 Standard Deviation) is shown in the following table, as accessed from http://www.who.int/nutgrowthdb/about/introduction/en/ on 13th June'2016.

	Low	Medium	High	V. High
Stunting	<20	20-29	30-39	>=40
Underweight	<10	10 to 19	20-29	>=30
Wasting	<5	5 to 9	10 to 14	>=15

the only social group that appears not to fall in the high/very high categories are the Kuruman children.

3.2 Illnesses Among Children

Table 3.9 shows that almost 45 percent of the children surveyed suffered from some illness, two weeks prior to the survey, with highest illnesses reported from Kuruma children and least by Kattunayackas. This could be due to higher awareness, accessibility and utilization among Kurumas.

Table 3.9 Percentage Children Reporting Illness (last 2 weeks)

Name of Social Group							Tot.
Pani.	Kuri.	Kattu.	Kuru.	Adi.	ST	NonT	
41	35	34	**41**	37	188	34	222
46.6 %	42.2%	37.4%	**53.2%**	41.6%	43.9%	44.2%	44.0

Table 3.10 Type of illness

Type of illness		Name of Social Group							Total
		Pani.	Kuri.	Kattu.	Kuru.	Adi.	ST	NonT	
Total	Respiratory illness	82.9%	88.9%	88.2%	87.8 %	94.6%	88.4%	91.2%	88.8 %
	Stomach disorders	**12.2 %**	0.0%	0.0%	4.9%	5.4%	**4.8%**	2.9%	4.5%
	Skin ailments	4.9%	**11.1 %**	5.9%	7.3%	0.0%	5.8%	5.9%	5.8%
	Chicken pox	0.0%	0.0%	2.9%	0.0%	0.0%	.5%	0.0%	.4%
	Other	0.0%	0.0%	2.9%	0.0%	0.0%	.5%	0.0%	.4%
	Total	41	36	34	41	37	189	34	223

The main cause of illnesses among children is seen to be of a respiratory nature, either cold/ cough or seasonal flu with fever. Next, came the skin ailments or allergies, highest among Kurichia children. Lot of children have respiratory problems, allergies, asthma. Stomach disorders or diarrhea cases were low, but higher among scheduled tribes, with Paniya children reporting more cases (*Table 3.10*). Outbreaks of chicken

pox were said to be common in tribal colonies, as reported by anganwadi and ASHA workers.

Children suffering from diarrhea need to be given ORS in order to supplement the electrolyte loss from the body. As is seen from *table 3.11*, it is seen that majority of Paniya and Adiya children are not given ORS, whereas all Kuruma children receive ORS during diarrhea. Even though the number of cases is small, it does reveal something about awareness and care during illnesses.

Table 3.11 Received ORS during Diarrhea

Received ORS	Name of Social Group			Scheduled Tribes
	Paniyans	Kurumans	Adiyans	
	40.0%	**100.0%**	0.0%	50.0%

The presence of chronic illnesses is highest among the Kattunayackas and Paniyas. For the non-tribal children, tuberculosis forms the major chronic disease, followed by asthma. Among the scheduled tribes, asthma/ respiratory problems account for majority of the chronic diseases among children, followed by skin problems and epilepsy. Among the Kattunayacka children, skin allergies are the major chronic illnesses followed by epilepsy/ fits. Recovery is higher among non-scheduled children, as compared to scheduled tribes. More than 80 percent of the Kattunayacka and Paniya children have not recovered from their chronic illnesses.

3.3 Child Health Care Utilization

Birth Registration and Place of birth

The registration of births and deaths is mandatory for everyone, and important for recording the vital statistics of the population. Table 3.15 shows that cent percent of non-tribal, Kurichia and Kuruma children have a birth certificate, issued by the municipal authority. Whereas, more than one-fourth of the Kattunayacka children do not have any kind of birth registration. This is because of more cases of home deliveries and low levels of check up of newborns among this community.

Table 3.15 Birth Registered

Birth Registration		Name of Social Group							Total
		Pani.	**Kuri.**	**Kattu.**	**Kuru.**	**Adi.**	**ST**	**NonT**	
Total	**Certificate**	**84.1%**	100.0%	**72.5%**	100.0%	89.9%	88.8%	100.0%	90.5%
	Anganwadi	4.5%	0.0%	1.1%	0.0%	5.6%	2.3%	0.0%	2.0%
	Total	88	83	91	77	89	428	77	505

The overall data on place of birth of the children (table 3.16) reveals that majority of the children were born in institutions. But, more than 10 percent of the scheduled tribe children were born at home. This is highest amongst the Kattunayackas (27.5% children were born in homes), followed by Paniyas and Adiyas. No Kurichia children were home delivered; and home delivery cases are negligible among Kurmas and non-tribes.

Table 3.16 Place of Birth

Place of Birth		Name of Social Group							Total
		Pani.	**Kuri.**	**Kattu.**	**Kuru.**	**Adi.**	**ST**	**NonT**	
Total	**Institutional delivery**	82.9%	**100.0%**	**71.4%**	97.4%	89.9%	87.8%	98.7%	89.5%
	Home	**17.0%**	0.0%	**27.5%**	2.6%	**10.1%**	11.9%	1.3%	10.3%
	On way to hospital	0.0%	0.0%	1.1%	0.0%	0.0%	.2%	0.0%	.2%
	Total	88	83	91	77	89	428	77	505

When we analyze the institutional deliveries further (table 3.17), it is revealed that majority of the scheduled tribal children were born in government hospitals – all Kattunayacka and Adiya children who were born in institutions were born in government institutions only. In the case of non-tribes, even though a major percentage of children were delivered in government institutions, a significant proportion was born in private institutions too. This was also the case with Kuruma tribes.

Table 3.17 Type of Institutional Delivery

Type of Institution		Name of Social Group							Total
		Pani.	Kuri.	Kattu.	Kuru.	Adi.	ST	NonT	
Total	Government facility	95.9%	91.6%	**100.0%**	**69.3%**	100.0%	91.2%	**57.9%**	85.6%
	Private facility	4.1%	8.4%	0.0%	30.7%	0.0%	8.8%	42.1%	14.4%
	Total	73	**83**	**65**	75	80	376	76	452

In table 3.18, the place of birth has been analyzed according to birth order. This has some interesting revelations. It is seen that the proportion of home deliveries increases among the Paniyas with increasing birth order, wherein more than one-fourth of children of birth order 3 and above were delivered at home. For the Kattunayackas, the instance of home deliveries decreases a bit till the second birth order, but increases from the third birth order, with almost half of children of birth order 4 and above being born at home. Similar patterns are seen for Adiyas. For the non-scheduled tribes, the instances of home deliveries is negligible, but with higher birth order, we see an increase in the share of children born in private institutions.

Table 3.18 Place of Birth according to Birth Order

Birth Order		Name of Social Group							Total
		Pani.	Kuri.	Kattu.	Kuru.	Adi.	ST	NonT	
1	**Gvt.**	**90.3%**	89.2%	**72.0%**	66.7%	**100.0**	84.6	**56.0**	80.7%
	Private	6.5%	10.8%	0.0%	33.3%	0.0%	10.5	**44.0**	15.0%
	Home	3.2%	0.0%	**28.0%**	0.0%	0.0%	4.9%	0.0%	4.3%
	Total	31	37	25	33	36	162	25	187
2	**Govt.**	76.2%	88.0%	**90.0%**	67.5%	92.3%	81.1	**58.3**	76.2%
	Private	4.8%	12.0%	0.0%	30.0%	0.0%	12.1	**41.7**	18.5%
	Home	**19.0%**	0.0%	10.0%	2.5%	**7.7%**	6.8%	0.0%	5.4%
	Total	21	25	20	40	26	132	36	168
3	**Gov.**	68.4%	100.0%	**77.8%**	75.0%	81.3%	81.3	**45.5**	76.7%
	Private	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**54.5**	7.0%
	Home	**31.6%**	0.0%	16.7%	25.0%	**18.8%**	**17.3**	0.0%	15.1%
	onwayl	0.0%	0.0%	5.6%	0.0%	0.0%	1.3%	0.0%	1.2%
	Total	19	18	18	4	16	75	11	86
4+	**Govt.**	76.5%	100.0%	**53.6%**		63.6%	64.4	80.0	65.6%
	Home	**23.5%**	0.0%	**46.4%**		**36.4%**	**35.6**	20.0	34.4%
	Total	17	3	28		11	59	5	64

For majority children (table 3.19), their first check up was done within 24 hours of birth. For the non-tribes, Kurichias and Kurumas, all children were shown immediately after birth or within 24 hours. On the other hand, some 7 percentage of the Kattunayacka children had no check up after birth, followed by 4 percentage Paniya children.

Table 3.19 First check up after birth

First check up after birth		**Name of Social Group**							**Total**
		Pani.	**Kuri.**	**Kattu.**	**Kuru.**	**Adi.**	**ST**	**NonT**	
Total	**<24 hours**	83.0%	100.0%	75.8%	100.0%	94.4%	90.2%	100.0%	91.7%
	<2 days	9.1%	0.0%	8.8%	0.0%	0.0%	3.7%	0.0%	3.2%
	< 10 days	2.3%	0.0%	5.5%	0.0%	1.1%	1.9%	0.0%	1.6%
	Later	1.1%	0.0%	2.2%	0.0%	3.4%	1.4%	0.0%	1.2%
	Not done	**4.5%**	0.0%	**7.7%**	0.0%	**1.1%**	2.8%	0.0%	2.4%
	Total	88	83	91	77	89	428	77	505

Health Care Preferences

The health care preferences during illnesses (table 3.20) show that for majority of the children, the scheduled tribes prefer public facilities, whereas the non-scheduled tribes prefer private facilities. Moreover, parents of more than 70 percent Adiya children prefer public facility, followed by Paniyas and Kattunayackas. The private facilities are preferred by parents of majority of Kurichia, Kuruma and Non-scheduled tribe children; these communities also prefer AYUSH facilities, especially homeopathy. Kattunayackas, Kurichias, Kurumas and Adiyas also prefer traditional healers.

Table 3.20 First Preference for health care

First Preference for health care		Name of Social Group							Total
		Pani.	Kuri.	Kattu	Kuru.	Adi.	ST	NonT	
Total	Traditional healer	1.2%	**16.9%**	**20.5%**	**15.6%**	**12.6%**	**13.3%**	4.0%	11.9%
	Public facility	**64.0%**	24.1%	**54.5%**	33.8%	**74.7%**	**50.8%**	37.3%	48.8%
	Private	**29.1%**	**37.3%**	23.9%	**35.1%**	8.0%	26.4%	**48.0%**	29.6%
	AYUSH	3.5%	**16.9%**	1.1%	**15.6%**	0.0%	7.1%	**10.7%**	7.7%
	Home remedy	2.3%	4.8%	0.0%	0.0%	4.6%	2.4%	0.0%	2.0%

Table 3.21 Reasons for health care preference

Reasons for health care preference		Name of Social Group							Tot
		Pani.	Kuri.	Kattu	Kuru	Adi.	ST	Non T	
Total	Affordable	**33.7%**	13.3%	**28.4%**	14.3%	**33.3%**	**24.9**	14.7%	23.4
	Efficacy/satisfaction	**20.9%**	**43.4%**	**36.4%**	**28.6%**	28.7%	**31.6**	**37.3 %**	32.5
	Near	**20.9%**	0.0%	15.9%	18.2%	**34.5%**	18.1 %	17.3%	17.9
	Culturally acceptable	2.3%	**24.1%**	12.5%	14.3%	2.3%	10.9 %	6.7%	10.3
	Quick/ better care	14.0%	18.1%	4.5%	**24.7%**	1.1%	12.1 %	**20.0 %**	13.3
	Suits the child	5.8%	1.2%	2.3%	0.0%	0.0%	1.9%	4.0%	2.2%
	Available all time	2.3%	0.0%	0.0%	0.0%	0.0%	.5%	0.0%	0.4%
	Total	86	83	88	77	87	421	75	496

And the top reasons (table 3.21) given for these preferences are affordability, followed by efficacy and nearness of health facility by scheduled tribes (especially Adiyas and Paniyas), whereas, efficacy comes first for the rest of the social groups.

Place of treatment

From the table 3.22 it can be seen that majority of the children received treatment for their illnesses, but it was 10 percent higher for the non-tribal children. Almost 15 percent of the scheduled tribal children did not receive any treatment during illness; this was highest in the case of Kurichias and Adiyas, who resorted to home remedies first for common illnesses and discomforts of infants like- *vayambu, chukkuvellam (water boiled with dried ginger), jeeragavellam (jeera water), paalkayam*, etc.

Most of the non-tribes prefer private medical care, where they say they don't have to wait for long. Even tribes who live near towns, prefer private treatments. This means that if accessibility is not an issue, then people prefer private help – because of flexible timings and immediate care. Among them, some felt that private doctors are more concerned, sensitive and give less medicines, while others felt that recovery was fast in private treatments.

Table 3.22 Children who Received Treatment

		Name of Social Group							Total
		Pani.	Kuri.	Kattu.	Kuru.	Adi.	ST	NonT	
	Treatment Sought	**92.7%**	72.2%	88.2%	**95.1%**	75.7%	85.2%	**97.1%**	87.0%
	Total	41	36	34	41	37	189	34	223

Children who received treatments for their illnesses, majority of them were taken to a public facility by the scheduled tribes (as seen from Table 3.23) and to a private facility by the non-tribes. More than 85 percentage of Adiya children, followed by Paniyas and Kattunayackas - received treatment in public facilities. This shows that they are more dependent on the government health care system for treating their children. Some tribes said they had to go to private facilities because doctors were not available in the government health centres or even hospitals, sub-centres are closed most of the days[6] and even in PHCs, not all days are OPD days, even OPD timings are only till 1pm in the afternoon, and Sundays are closed. In cases where parents are

[6] Even during the field visits, it was observed that majority of the sub-centres remain closed the whole day.

working as labourers, then they have no option but to take their child to a private doctor because the government health centres close early in the evening.

A significant proportion of the Kurichia and Kuruma children also received treatments in AYUSH facilities, since many of them prefer giving their children homeopathy treatments. Interestingly, traditional tribal healers were consulted mostly by the non-tribes, followed by Kattunayackas. More than 50 percent of the Kurichia children received treatment in a private facility.

Table 3.23 Place of treatment

	Place of treatment	Name of Social Group							Total
		Pani.	Kuri.	Kattu.	Kuru.	Adi.	ST	NonT	
Total	Traditional tribal healer	4.9%	0.0%	6.7%	5.1%	3.6%	4.3%	**9.1%**	5.1%
	Public facility	**43.9%**	23.1%	**46.7%**	38.5%	**85.7%**	47.0%	27.3%	43.7%
	Private facility	**41.5%**	**50.0%**	**43.3%**	35.9%	10.7%	36.6%	**57.6%**	40.1%
	AYUSH facility	4.9%	**26.9%**	**3.3%**	**20.5%**	**0.0%**	11.0%	6.1%	10.2%
	Other	4.9%	0.0%	0.0%	0.0%	0.0%	1.2%	0.0%	1.0%
	Total	41	26	30	39	28	164	33	197

Switching over to another provider (table 3.24) when children did not recover is common among the non-tribes, where, almost 50 percent of the children who did not recover from their illnesses were taken to another health care provider for treatment. This switching over is very low for the tribes, except Kurumas. What can be inferred from this fact is that obviously the non-tribes have more access to variety of health facilities (physical, financial) as compared to tribes, which encourages them to switch over easily if results are not achieved within a time frame, or the fact that the tribes have enough trust and patience for their health providers, so that they do not switch over to another one.

Table 3.24 Percent Children who switched over to another provider

		Name of Social Group							Total
		Pani.	Kuri.	Kattu.	Kuru.	Adi.	ST	NonT	
	Switched	6.7%	0.0%	0.0%	40.0%	0.0%	**9.7%**	**50.0%**	20.9%
	Total	15	2	5	5	4	31	12	43

For children suffering from chronic diseases, majority of them are shown in government facilities, followed by traditional healers (table 26). Majority of the non-

scheduled tribal children are shown in private facilities, whereas majority of the scheduled tribal children are shown in public facilities (80 percent of Paniyachildren), followed by traditional healers (Kurichia, Adiya and Kattunayacka children). Some children with chronic conditions do not receive any treatment, they belong to Paniyas and Kattunayackas.

Immunization

The Indian government has made it compulsory to immunize children from – tuberculosis, diphtheria, pertussis, tetanus, polio, measles and vitamin A deficiency. Universal immunization has been a major health goal in the NRHM campaigns. The table 3.26 reveals whether the children have been receiving these vaccinations regularly. It can be seen that majority of the children have received immunizations regularly[7], still 6 percent of non-tribal children and 3 percent of tribal children have not received it regularly. This is highest amongst the Kattunayacka community (10 percent children have not been immunized regularly), followed by Paniya and non-tribes. Other children did not receive regular immunisations, only if the child was ill during that period.

Table 3.26 Receiving Immunizations Regularly

Receiving Immunizations Regularly	Name of Social Group							Total
	Pani.	**Kuri.**	**Kattu.**	**Kuru.**	**Adi.**	**ST**	**NonT**	
	93.2%	**100.0%**	90.1%	**100.0%**	**100.0%**	96.5%	93.5%	96.0%
Total	88	83	91	77	89	428	77	505

Completed levels of immunization for children above 24 months of age was analyzed for the various groups (table 3.27), even though a child has to get all his basic immunizations by the end of first year of age, here we take children above 24 months of age because sometimes immunizations get delayed due to some factors like-

[7] The respondents for the immunization details were mostly ASHAs, and in few cases, the mothers of the children. Most of the mothers did not know the name of the vaccines, One has to depend on ASHAs. That's why, this section was unable to provide information on each and every specific vaccine, as it might not be correct. Moreover, children may not get immunized at the exact due dates, because of unavailability of vaccines or because most of them get their immunizations done in camps organized in the colonies. If a particular vaccine was to be given at the completion of 9 months, the infant would have got it at 10 months of age. Or, the infant could have fallen ill during his due date, which would have led to late vaccination. So, keeping such factors in mind, the present section only focuses on children getting immunized *regularly* and *completed* vaccinations, and not on specific vaccines and their correct timings.

unavailability of vaccine or provider, illnesses etc. The table reveals that only Kurichia and Kuruma children have completed their immunizations. More than 12 percent of the non-scheduled tribe children have not completed their vaccinations, followed by Kattunayackas, Paniyas and Adiyas.

Table 3.27 Immunization completed (children above 24 months)

Immunization Completed	Name of Social Group							Total
	Pani.	Kuri.	Kattu.	Kuru.	Adi.	ST	NonT	
	92.3%	100.0%	90.3%	100.0%	96.4%	95.7%	87.2%	94.4%
Total	52	54	62	53	56	277	47	324

Majority of the children received vaccinations from government providers, but the ST children are more dependent on public facilities (Paniyas, Kattunayackas and Adiyas are completely), since they get their immunizations done during the immunization camps organized by the respective PHCs in or near their colonies, at the nearest sub-centre or anganwadi.[8] They generally avoid going alone, so they go along with other mother and their kids. Table 3.28 shows that a good proportion of non-scheduled tribe and Kuruma children received vaccinations from both government and private facilities. This happened in those cases where the child was born in a private facility, so he/she received the initial vaccinations of BCG, Hepatitis B- first dose, DPT -1 and Polio0 from the private hospitals.

Table 3.28 Place of Vaccination

	Place of Vaccination	Name of Social Group							Total
		Pani.	Kuri.	Kattu.	Kuru.	Adi.	ST	NonT	
Total	**Govt.**	**98.9%**	91.6%	**100.0%**	71.4%	**100.0 %**	**93.0%**	**63.6%**	88.5%
	Private	0.0%	**3.6%**	0.0%	**5.2%**	0.0%	1.6%	**7.8%**	2.6%
	Both govt & private	0.0%	**4.8%**	0.0%	**23.4%**	0.0%	5.1%	**28.6%**	8.7%
	Total	88	83	91	77	89	428	77	505

[8] The immunization days are usually fixed – under some PHCs, immunization camps are held every or alternate Tuesdays/ Wednesdays, in order to cover all the sub-centres and colonies that they are supposed to serve.

Out of the 4 children who had never received any vaccinations (table 3.29), 3 of them were non-tribes and only one was a Paniya. The non-tribal children did not receive vaccinations because their parents were scared of side-effects, and the Paniya child did not receive any vaccination because the health centre was too far away.

Table 3.29 Reasons for never giving Vaccinations

Reasons		Name of Social Group			Total
		Paniyans	ST	Non- ST	
Total	Scared of sideeffects	0	0	**3**	3
	no transport	**1**	**1**	0	1
	Total	1	1	3	4

Table 3.30 Reasons for not completing vaccination

Reasons for not completing vaccination		Name of Social Group					Total
		Pani.	Kuri.	Kattu.	ST	NonT	
Total	Scared of side-effects		**2**		2	**3**	7
	Not necessary	1	**2**	1	**4**		8
	Family did not allow		1		1	2	4
	Child was ill	2			**2**		4
	No time		1		**1**		2
	Scared to go out	1			**1**		2
	Total	4	6	1	11	5	16

Table 3.30 shows the reasons for not completing vaccination. It is seen that majority of the non-tribal children could not complete their vaccination because the family was scared of side-effects or the family did not allow the mothers to vaccinate the children. Among the scheduled tribes, the main reason for not completing

vaccinations was that they did not feel necessary to vaccinate, followed by illness, scared of side effects, no time or scared to go out.

3.4 Utilization of ICDS

The Integrated Child Development Services programme has a multi-sectoral approach to child well-being, including health, education and nutrition interventions, implemented at the community level by establishing 'anganwadi centres', wherein they "provide eight key services to 0 to 6 year old children and mothers, including – supplementary feeding, immunization, health check-ups and referrals, health and nutrition education to adult women, micronutrient supplementation, health referral and preschool education for 3 to 6 year olds.[9] The utilization of ICDS services is important for child growth and development, not only because they provide balanced nutrition, but also provide basic knowledge and value education, helping in the overall personality development of the children. The utilization patterns are similar for scheduled and non-scheduled tribes (table 3.31). The Kattunayacka children make the least use of Anganwadis. The registration is also lower among non-tribal children, Kurumas and Adiyas. For the Kattunayacka children and Adiya children, registration is low because there are lots of colonies which do not have any anganwadi nearby, even some Paniya colonies[10]. The reason for this is that Kurumas and non-tribes prefer to send their children to private schools and nurseries than government anganwadis, whereas the Adiyas take the children alongwith them to their workplaces or fields, or leave them in the care of their elder siblings as was observed during the fieldwork.

Table 3.31 Registered in Anganwadi (36 months and above)

Registered in Anganwadi	Name of Social Group							Total
	Pani.	Kuri.	Kattu.	Kuru.	Adi.	ST	NonT	
	83.3%	94.7%	39.0%	77.8%	79.1%	74.2%	70.3%	73.6%
Total	36	38	41	36	43	194	37	231

[9]Gragnolati, Michele, Caryn Bredenkamp, Monica Das Gupta, Yi-Kyoung Lee and MeeraShekar, (2006), "ICDS and Persistent Undernutrition: Strategies to Enhance the Impact", *Economic and Political Weekly,* 41(12), p. 1193-1201.

[10] Colonies like – Chandroth, Kottamuruttu

Table 3.32 Attendance in Anganwadi (3 Years and above)

Sex of the Child		Name of Social Group							Total
		Pani.	Kuri.	Kattu	Kuru.	Adi.	ST	NonT	
Total	Regular	66.7%	**83.3%**	50.0%	**85.7%**	50.0%	68.8%	**84.6%**	71.2%
	Occassionally	**26.7%**	13.9%	**43.8%**	14.3%	**38.2%**	25.7%	15.4%	24.1%
	No	6.7%	2.8%	6.3%	0.0%	11.8%	**5.6%**	0.0%	4.7%
	Total	30	36	16	28	34	144	26	170

Even though more scheduled tribe children are registered in the anganwadis, the attendance is higher for the Kuruma, non-tribal and Kurichia children. They make the maximum utilization of the anganwadis. Only 50 percent of the Kattunayacka and Adiya children attend the anganwadis regularly (table 3.32). In some Adiya and Kattunayacka colonies, parents send their children to anganwadis only when the teacher or the helper personally go to pick them from their homes, as the anganwadi is very far from their houses. But, the anganwadi workers say it is not possible to bring the children from their homes every day because they have other kinds of work to do as well. If they do that daily, then it would not be possible to open the anganwadi by 9.30, but only by 10.30 or 11, because the houses are located in different areas, in different directions. The helper has to clean and cook also. Similarly, many Adiya, Kattunayacka colonies are located a bit far from their nearest anganwadis and the paths between them are not properly maintained, narrow, steep, rocky, during the rains they are covered with bushes, with snakes and other dangers. So, mothers don't send their children daily, even if they are registered. And in some colonies, like – Mangakandi, the Paniya mothers complained that the teacher and the helper are not interested in running the anganwadi there, they say, "*they don't come regularly themselves, even if the children go there, they are not given proper care, then how can we send our children?*"

The reach and presence of the anganwadis is very questionable especially in remote colonies. The registration of children is done, but regular attendance is an issue. The children who attend regularly definitely benefit from the balanced meals given

here. But, those who do not and those below the age of 3 years, definitely suffer a lot, especially those of poorest households, children of single parents, unwed mothers, and single earner in the family.

3.5 Child Feeding Practices

Breastfeeding Practices

When it comes to breastfeeding the newborns (table 3.33), all the communities try to do it within one day of the birth (more than 90 percent children receive breast milk within a day), but only significant proportion of Paniya children (more than one-third) receive breast milk within an hour of birth. It is only when the delivery was complicated, with very low birth weight babies, that the breastfeeding gets delayed to more than one or two days.

Table 3.33 Breastfeeding Initiation

Breastfeeding Inititation		Name of Social Group							Total
		Pani.	Kuri.	Kattu.	Kuru.	Adi.	ST	NonT	
Total	Within one hour	**36.3%**	6.0%	12.8%	10.4%	5.9%	14.1%	16.9%	14.5%
	Within one day	56.3%	91.6%	79.1%	77.9%	81.2%	77.4%	76.6%	77.3%
	After 1 day	7.5%	**2.4%**	8.1%	**11.7%**	**12.9%**	8.5%	6.5%	8.2%
	Total	80	83	86	77	85	411	77	488

Table 3.34 Classified age upto which exclusively Breastfed

Age upto which exclusively Breastfed		Name of Social Group							Total
		Pani.	Kuri.	Kattu.	Kuru.	Adi.	ST	NonT	
Total	Below 3 months	0.0%	**10.4%**	1.2%	5.4%	2.5%	3.8%	5.6%	4.1%
	3 to 5 months	30.4%	51.9%	19.8%	56.8%	29.1%	37.2%	**94.4%**	46.0%
	6 m / above	**69.6%**	37.7%	**79.0%**	37.8%	**68.4%**	**59.0%**	**0.0%**	49.9%
	Total	79	77	81	74	79	390	71	461

Very interesting is the fact that no non-tribal child was exclusively breastfed upto 6 months of age or above and all of the Paniya children received breastfeeding for more than 3 months. (table 3.34); whereas majority of the scheduled tribal children received exclusive breastfeeding till the age of 6 months and above. Kattunayackas top the list here, followed by Paniyas and Adiyas. When we look at the average duration of exclusive breastfeeding (table 3.35), it is highest for Kattunayackas (6.4 months) and lowest for non-tribes and Kurichias. This could be because of two situations – one where there is nothing else in the household that would be appropriate to feed young infants, so the only dependence on breast milk for a longer time, and secondly, due to the higher levels of education (jobs/ skills/ aspirations) and higher resource (food) availability of the non-scheduled tribes leading to increased trust on external food supplementation and formula milks (with help from higher access to media) and robbing the infants of their best nutrition and immunity-builder? This is where the issue needs to be probed further.

Table 3.35 Average Duration of Exclusive Breastfeeding

Average Duration (months)	Name of Social Group							Total
	Pani.	**Kuri.**	**Kattu.**	**Kuru.**	**Adi.**	**ST**	**NonT**	
	6.0	4.5	**6.5**	4.7	6.0	5.6	**4.4**	5.4

Child Feeding and Consumption of Food Products

The age of initiation of food is important, in the sense that infants start requiring more nutrients for growth only after 6 months of age, so external feed is best given at this stage. Table 3.36 shows that negligible percentage of non-tribal children were given external feed after 6 months of age, most of them started receiving before that stage; whereas more than two-thirds of the Kattunayacka and Adiya children received external feed only after 6 months of age.

Table 3.36 Age at which semi solid/solid food started

Age at which food started		Name of Social Group							Total
		Pani.	Kuri.	Kattu.	Kuru.	Adi.	ST	NonT	
Total	< 3 months	0.0%	9.2%	1.2%	5.4%	2.5%	3.6%	5.6%	3.9%
	3 to 6 months	49.4%	52.6%	22.2%	58.1%	29.1%	41.9%	93.0%	49.8%
	6 months /above	50.6%	38.2%	**76.5%**	36.5%	**68.4%**	**54.5%**	**1.4%**	46.3%
	Total	79	76	81	74	79	389	71	460

The frequency of semi solid/ solid meals in a day (for children above 6 months of age) reveals the truth about food availability in the households, simultaneously revealing whether the children receive enough to satisfy their hunger. Children need to be fed quite frequently, 3 meals plus snacks is the miminum requirement of children. From table 3.37, it is seen that even though majority of the children receive more than 3 meals in a day, a significant proportion of Paniya, Kattunayacka children receive 2 meals or less; needless to say this is highly insufficient.

Table 3.37 Number of semi solid/ solid meals in a day (6 months/above)

No. Of semi/ solid meals in a day		Name of Social Group							Total
		Pani.	Kuri.	Kattu.	Kuru.	Adi.	ST	NonT	
Total	1 meal +snacks	**6.3%**	0.0%	0.0%	0.0%	1.3%	1.5%	1.4%	1.5%
	2 meals +snacks	**35.4%**	22.4%	**43.2%**	17.6%	27.8%	29.6%	14.1%	27.2%
	3 meals	58.2%	**77.6%**	56.8%	**82.4%**	**70.9%**	**68.9%**	**84.5%**	71.3%
	Total	79	76	81	74	79	389	71	460

Table 3.38 Number of semi solid/ solid meals in a day (12 months and above)

No. Of semi solid/ solid meals in a day		Name of Social Group							Total
		Pani	Kuri	Kattu	Kuru	Adi	ST	Non-ST	
Total	1 meal +snacks	4.1%	0.0%	0.0%	0.0%	1.4%	1.1%	1.5%	1.2%
	2 meals +snacks	**35.6%**	15.9%	**41.8%**	11.9%	19.7%	25.6%	10.6%	23.3%
	3 meals +	60.3%	**84.1%**	58.2%	**88.1%**	**78.9%**	73.3%	**87.9%**	75.5%
	Total	73	69	79	67	71	359	66	425

For children above 12 months of age, the picture is similar (table 3.38). More than 40 percent of Paniya and Kattunayacka children receive only 2 meals or less in a day, infact some Paniya children survive only on one meal. Actually, this is partly because less food is available in the house, and partly because these communities have had the habit of eating only one meal in a day, which some continue till today. On the other hand, more than 80 percent of non-tribal, Kurichia, Kuruma children receive 3 meals or more.

Table 3.39 Regular Consumption of food products (12 months and above)

Food Groups	Name of Social Group							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	Non-T	
Dairy products/egg	8.2%	27.5%	7.7%	**49.3%**	14.1%	**20.7%**	**66.7%**	27.8%
Fish	38.9%	66.7%	50.6%	**79.1%**	49.3%	**56.4%**	**80.3%**	60.1%
Pulses/beans	58.9%	**71.0%**	**69.6%**	58.2%	56.3%	63.0%	**72.7%**	64.5%
Dark leafy	94.5%	82.6%	82.3%	77.6%	74.6%	82.5%	78.8%	81.9%
Fruits	34.2%	**85.5%**	53.2%	76.1%	43.7%	57.9%	**87.9%**	62.6%
Meat Products	5.5%	7.2%	6.3%	17.9%	9.9%	9.2%	39.4%	13.9%
4+ food groups	13.7%	43.5%	20.3%	50.7%	16.9%	28.4%	**71.2%**	35.1%
TOTAL	73	69	78	67	71	358	66	424

Besides quantity (or frequency), it is also important to look at the quality or type of food they are consuming regularly, since different food groups provide different set of nutrients and strength and a balanced diet (at least 4 food groups regularly) is highly recommended for ideal growth. Table 3.39 reveals throws some light on this aspect. It

is seen that majority of the non-scheduled tribal children (12 months and above) regularly consume all the food groups, except meat, more than 70 percent consume four or more food groups regularly; this is very low for the scheduled tribes (less than 30 percent) and least for Paniyas, Kattunayackas and Adiyas.

The tribal children do not consume meat or dairy products regularly. Animal milk is something that all tribes avoid giving to infants. Rice kanji (porridge, lightly salted) is the main diet of infants and young children, slightly elder ones eat plain rice with some green leafy vegeatable, pickle or chutney tribes. Some young infants, about-to-be weaned or just weaned, are given rusks with weak tea - the only semi solid food that they have. There was not much variety from one day to next, with occassional consumption of fruits, eggs/fish (even rarer). While, in Kerala, even the non-tribes hesitate giving animal milk to infants and young children, and prefer rice kanji and rusk with weak tea, the non-tribes also feed them with lots of ragi porridge (highly nutritious), a variety of fruits, and by the age of 9-10 months, the children are fed almost everything the adults eat, in small amounts. Children going regularly to anganwadis can maintain a good diet, but, Paniyas, and Kattunayackas seldom send their children to the anganwadis, as they take them to work or leave them in the care of other people in the house. Most mothers leave for work early in morning, whereas anganwadis only open at 9.30. Their timings do not match. Thus, regular consumption of balanced meals, that consist of different food groups, is adversely affected.

3.6 Child Health and its Relation with Child Characteristics

The birth order classification shows more than 40 percent of children have a birth order of 3 and above in the Kattunayacka and Paniya communities; while among the Kurichias and Adiya tribes, majority children are first borns. As for the analysis on birth interval (see *Appendix-4*), all the social groups reveal intervals of 36 months and higher for majority of the children; it is interesting to see that among Paniyas, almost 5 percent of children have been born within only 12 months of interval, even though the number of cases is small the point is valid. Almost 20 percent of Adiya children have been born within 23 months of interval, followed by Kurichias and Kattunayackas; this is quite low among the non-tribes. When we analyse the birth weights by birth order (see *Appendix-4*), it is seen that for non-tribes, the proportion of children with birth weights above 3 kgs decreases with increasing birth order; whereas for the scheduled tribes, the case is opposite – the proportion of children with birth weights of 3 kg and

above increases with increasing birth order, this is especially the case with the Paniyas. For Kattunayackas and Adiyas also the case is similar, but is maximum for the second borns. The Kurichias show no changes in birth weights with birth order. Similar results are seen in the analysis of birth weights by birth intervals (see *Appedix-4)*. Only for the non-scheduled tribes, the picture seems clear, i.e., proportion of children with lower birth weights is decreasing with increasing birth interval, but for the scheduled tribes it seems that birth intervals as such are not having that much impact on birth weights. Only for Adiyas, some kind of trend is noticed; in the case of Kurumas, it is actually getting reversed – the higher birth intervals are resulting in higher proportion of children with lower birth weights. This needs to be probed further.

Table 3.40 Children with Low Birth Weight, <2.5kg (0-5 YEARS)

Low Birth Weight, below 2.5 kg (% Children 0-5 Years Age) by Children Characteristics								
	Social Group							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
Child Sex								
M	**50**	21.4	14.3	31.8	35.7	29.6	11.8	26.9
F	38.7	**38.9**	**42.4**	34.4	**51.3**	**41.5**	**20**	37.4
Birth Order								
1	39.1	27.8	30	27.3	**57.6**	36.6	17.4	33.9
2	**53.8**	33.3	26.3	**40**	33.3	36.7	13.9	31.4
3+	42.9	27.8	27.6	.	33.3	31.6	**20**	30
Birth Interval								
<24	**60**	28.6	30	.	**50**	35.9	**75**	39.5
>23	44.8	31.4	26.3	42.1	27.8	34.1	10.9	29.3

Analysis of birth weight by child characteristics (table 3.40) reveal that the percentage of LBW is high among female children, the maximum gap being seen among the Kattunayackans. Only the Paniyans seem to be exceptions, with higher male LBW children. *Birth order* acts differently in the communities, with Kattunayackas and Adiyans registering more LBW children among first borns; the Paniyans and Kurumans having more LBW children among 2ndborns; while the non-tribes have higher LBW among the 3rd or higher birth order children. Similar is the case with *birth interval,* where children born with BI of 23 months have higher percentage of LBW cases among

the Paniyas, Adiyas and non-tribes; but in the case of Kurumans and Kurichians, the proportions of LBW children increase in children born after 24 months of interval.

Table 3.41 Percentage of Underweight Children (3 months and above) by Background Indicators

Indicator	Social Group							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
Child Sex								
M	**69**	**28.6**	30.4	**12.2**	31.8	34.4	8.6	31.8
F	54.8	16.7	31.8	3.2	**45.9**	32.1	8.3	28.3
Birth Weight (kg)								
<2.5	66.7	19	36.8	17.4	**61.3**	**42.4**	.	39.5
2.5-3	65.2	29.3	19.2	5.7	16	25.3	15.6	23.6
>3	62.5	**8.3**	27.3	0	35.3	25	0	18.4
Birth Order								
1	60	15.2	**45.8**	.	**48.5**	34	8.7	30.6
2	50	**29.2**	28.6	13.2	30.4	27.8	8.8	23.8
3+	**70.6**	**28.6**	24.4	0	32	**38**	.	**35**
Birth Interval								
<23	**85.7**	**71.4**	**60**	.	.	**47.4**	.	**45.2**
>24	59.6	21.1	19.6	13.5	35.9	30.4	7	26.5
Exclusive Breastfeed								
<3	.	.	.	.	.	.	.	10.5
3to5	**79.2**	15.8	**50**	.	**52.2**	33.8	9.1	26
6+	54.7	34.5	28.1	.	33.3	34.2	8.6	**34.2**
No. of Meals								
<2	56.2	35.3	34.3	.	30.4	37.8	.	35.4
3+	66.7	19	30.4	5.2	42.9	31.2	8.5	27
4_Food groups								
Y	.	.	.	.	.	10	5.9	7.4
N	61.9	23.7	31.8	9	37.5	**33.9**	**9.3**	31
Reg_Immunization								
Y	60.8	23.1	**32.1**	8.3	38.3	33	9.1	29.5
N	**80**	.	22.2	.	.	**42.9**	0	31.6
Reg_Anganwadi								
Y	**69.6**	**21.2**	.	.	40.9	31.9	.	27.2
N	61.5	16.7	.	.	**57.9**	**45.1**	.	**41.1**

In table 3.41, analysis by child characteristics reveals that UW children are high among Paniya, Kurichia and Kuruma boys; and Adiya girls. It is interesting to see that children born with LBW have higher percentage of UW among them, but birth weight doesn't seem to matter for Paniyan children. Higher percentage of UW children are observed among first borns of Paniyas, Kattunayackas and Adiyas than other birth orders, but for Kurichias, it is the higher birth order children who are UW (even among Paniyas). Similarly, there are more UW children among those who were born within an interval of 23 months in all groups.

Another interesting indicator is duration of breastfeeding; it is seen from the table that overall, the percentage of UW children is higher among those who were exclusively breastfed for 6 months or more, and it decreases with decreasing duration of exclusive breastfeeding. Increase in the duration of exclusive breastfeeding seems to decrease the proportion of UW children only in the case of Paniyans, Kattunayackans and Adiyans.

Analysis by number of meals suggests that increased frequency of meals shows less percentage of UW children; but in the case of Paniyas and Adiyas, children who have 3 meals or more per day have more proportion of UW among them, which requires further investigation. The percentage of UW children is lower among those who regular consume 4 or more food groups and those who attend anganwadis regularly than those who don't in all the communities.

Stunted Children (>3 months age)

When stunting is cross-tabulated with child characteristics (table 3.42) it is seen that boy children have higher percentage of stunted than girls, except among Kurichians and Adiyans; LBW children are observed to be stunted more; those that were born within intervals of less than 23 months have higher percentage of stunting.

Table 3.42 Percentage of Stunted Children (3 months and above) by Background Indicators

Indicators	Social Group							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
Child Sex								
M	**57.5**	47.6	**69.6**	**26.8**	45.5	49.8	**41.9**	48.8
F	52.4	**52.8**	56.8	19.4	**51.4**	47.9	25	44.6
Birth Weight (kg)								
<2.5	**62.5**	**61.9**	57.9	26.1	51.6	51.7	**36.4**	**50.4**
2.5-3	52.4	48.8	57.7	22.9	48	44.6	35.7	43.2
>3	.	41.7	59.1	23.1	52.9	43.1	22.7	38.3
Birth Order								
1	51.7	42.4	54.2	**30**	**54.5**	46.3	40	45.6
2	**60**	**62.5**	**71.4**	21.1	43.5	47.6	26.7	43.6
3+	54.5	47.6	64.4	0	44	**53.1**	**38.5**	**51.8**
Birth Interval								
<23	**71.4**	**71.4**	**90**	.	**55.6**	**65.8**	.	**61.9**
>24	54.3	52.6	62.5	18.9	41	47.7	31.6	45.3
Exclusive Breastfeed								
<3	**75**	37.5	.	.	.	40	.	33.3
3to5	46.2	39.5	68.8	19.5	**60.9**	46.5	35	43.1
6+	**55.3**	**65.5**	65.6	**32**	40.7	**51.3**	.	**51.3**
No. of Meals								
<2	59.4	64.7	77.1	41.7	60.9	**63.9**	**63.6**	63.8
3+	52.3	44.8	56.5	20.7	42.9	42.4	26.9	39.8
4_Food groups								
Y	.	.	.	.	.	30	.	25
N	54.9	51.3	62.5	25.4	47.5	**49.4**	36.7	48
Reg_Immunization								
Y	51.9	50	**64.2**	23.6	48.1	48.1	32.2	46
N	**100**	.	55.6	.	.	**71.4**	.	66.7
Reg_Anganwadi								
Y	56.5	45.5	.	.	45.5	38.9	20	36.1
N	53.8	.	.	.	42.1	39.2	.	37.5

And more interesting is the fact that children who are exclusively breastfed for 6 months or more are more stunted (maximum among Kurichia children) as compared to those who were less breastfed, except in the case of Paniyans where stunting is more among children who are breastfed for less than 3 months. Similarly, higher percentage of stunted children are found among those who have 2 meals or less, who are not regularly immunised (except in the case of Kattunayackas), and less stunting among those who regularly consume 4 or more food groups.

Wasted Children (>3 months age)

Table 3.43 shows that wasting is higher among those born with LBW and those who have BW more than 3 kilos (this is especially so among the Paniyan children!); the first borns and those born in the order of 3 and above have higher wasting (except Paniyan chidren, where the second born have the highest stunting; and those born within BI of 23 months have higher stunting. In terms of feeding practices, it is seen that wasting is slightly higher among children who were exclusively breastfed for 6 months or more, and those who are fed 2 meals or less per day (except in the case of Paniyans – where higher wasting is found among children who eat 3 meals or more a day). There are no cases of wasting among children who consume 4 or more food groups regularly. Similarly, among those who attend anganwadis regularly, wasting is less.

Both Underweight-cum-Stunted Children (>3 months age)

As regards underweight-cum-stunted children, the table 3.44 shows that boys are at a slight disadvantage with higher proportion of UWCS among them, except in the case of Adiyas. The proportion of UWCS children is higher among LBW children, first borns and those born in the order of 3 or above and within intervals of 23 months. Similarly UWCS is less among Paniya, Kattunayacka and Adiya children who have been breastfed for 6 months or more (except among Kurichias and total children); it is also less among those who receive 3 meals or more (except among Paniyas), who are regularly immunized, those who consume 4 or more food groups regularly and those who attend anganwadi regularly.

Table 3.43 Percentage of Wasting among Children (3 months and above) by Background Indicators								
Indicator	Social Group							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
Child Sex								
M	32.5	9.5	.	.	13.6	13.6	.	12.3
F	28.6	11.1	15.9	.	16.2	15.3	18.8	15.8
Birth Weight (kg)								
<2.5	29.2	.	15.8	.	22.6	**16.9**	18.2	**17.1**
2.5-3	33.3	14.6	.	.	.	11.5	.	10.2
>3	**62.5**	.	13.6	0	.	**13.9**	18.2	10.2
Birth Order								
1	27.6	18.2	25	.	**21.2**	**18.8**	20	**18.9**
2	**35**	.	.	.	8.7	9.5	.	9
3+	30.3	.	11.1	.	12	**14.1**	.	13.5
Birth Interval								
<23	**42.9**	**.**	**.**	.	.	**15.8**	.	**16.7**
>24	30.4	.	5.4	.	10.3	11.1	.	10.2
Exclusive Breastfeed								
<3	.	.	.	.	.	..	.	.
3to5	33.3	10.5	.	.	13	12.7	11.7	12.4
6+	28.8	13.8	9.4	.	16.7	15.6	.	15.6
No. of Meals								
<2	21.9	11.8	**14.3**	.	.	15.1	.	13.8
3+	**36.4**	10.3	6.5	.	17.9	13.4	13.5	13.4
4_Food groups								
Y	.	.	.	.	.	0	.	.
N	30.5	10.5	11.4	.	15	**14.8**	8.2	14
Reg_Immunization								
Y	32.5	10.3	11.1	.	14.8	14.7	11.9	14.3
N	**0**	.	.	.	.	**.**	0	.
Reg_Anganwadi								
Y	30.4	.	.	.	.	9.7	.	10.5
N	30.8	.	.	.	42.1	**29.4**	.	**28.6**

Table 3.44 Underweight-cum-Stunted Children (3 months +) by Background Indicators (%)								
	Social Group							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
Child Sex								
M	**44.2**	**23.8**	**28.3**	**9.3**	20.5	25.2	**5.7**	22.5
F	34.1	10.8	22.7	0	**29.7**	20.5	2.7	17.7
Birth Weight (kg)								
<2.5	**50**	14.3	**26.3**	**16**	**35.5**	**29.2**	0	26.7
2.5-3	34.8	**21.4**	15.4	0	12	15.7	3	14.6
>3	.	.	18.2	0	29.4	15.1	0	11.1
Birth Order								
1	**41.9**	8.8	33.3	.	**27.3**	22.1	8.3	20.2
2	28.6	**25**	23.8	.	17.4	18.6	.	14.7
3+	**42.9**	**23.8**	22.2	.	**28**	**28.5**	.	**26.4**
Birth Interval								
<23	**57.1**	**57.1**	**50**	.	.	**36.8**	.	**33.3**
>24	34.7	18.4	17.9	.	25.6	21.3	.	18.2
Exclusive Breastfeed								
<3	.	.	.	.	.	13.3	.	10.5
3to5	**62.5**	12.8	**43.8**	.	**43.5**	27.1	4.5	19.9
6+	30.9	24.1	23.4	.	16.7	21.7	.	**21.7**
No. of Meals								
<2	39.4	29.4	28.6	.	26.1	28.9	.	26.5
3+	41.3	13.6	26.1	.	25	20.9	.	18
4_Food groups								
Y	.	.	.	.	.	10	.	3.7
N	39.1	18.2	26.1	5.6	23.8	**23.3**	5.5	**21.2**
Reg_Immunization								
Y	36.6	17.7	25.9	5.3	24.7	22.3	4.5	19.7
N	80	.	22.2	.	.	**42.9**	0	31.6
Reg_Anganwadi								
Y	47.8	14.7	.	.	22.7	21.7	.	18.1
N	46.2	.	.	.	**36.8**	**31.4**	.	**28.6**

3.7 Child Health Care Utilization by Child Characteristics

Children born in Hospitals (0-5 years age)

Table 3.45 Children born in Hospitals (0-5 years) by Background Indicators (%)

Indicators	Social Group							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
Birth Order								
1	96.8	100	70.8	100	100	95	100	95.6
2	81	100	90.5	97.5	92.3	93.2	100	94.7
3+	**72.2**	100	**63**	75	**74.1**	**73.9**	93.3	**75.9**
Birth Interval								
<23	85.7	100	70	100	100	90.2	**80**	89.2

Table 3.45 shows that majority children of the first (except Kattunayackas) and second birth orders have been born in hospitals. As the birth order increases, the proportion of hospital-born children decreases. In the case of birth interval, the proportion of hospital born children decreases if the interval is 24 months or more, in case of Paniyas and Adiyas (but in the case of non-tribes, the proportion of hospital-born children is less if the BI is 23 months or less).

Children receiving Treatment for Illnesses (0-5 years age)

Table 3.46 Children who Received Treatment During Illness (0-5 years, %)

Indicator	Social Group							Tot
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
Child Sex								
M	91.3	82.6	94.1	91.7	**66.7**	84.7	90.9	85.2
F	94.4	**58.3**	**82.4**	100	92.3	87	100	90
Birth Order								
1	100	**66.7**	100	100	87.5	89.9	100	91
2	100	81.8	90.9	90.9	70	86.9	95	88.9
3+	85	77.8	80	100	**63.6**	**79.3**	100	81

Overall, a higher percentage of female children (esp. Adiyas) receive treatment for illnesses in all communities, except Kurichias (where the treatment gap between male and female children is very high!) and Kattunayackas. Moreover, the proportion

receiving treatment is lowest for children who have a birth order of 3 or more (table 3.46).

Children receiving Immunizations Regularly (0-5 years age)

Table 3.47 Children Receiving Immunizations Regularly (0-5 years, %)								
Indicator	Social Group							Tot
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
Birth Order								
1	93.5	100	95.8	100	100	98.1	100	98.4
2	100	100	95.2	100	100	99.2	94.6	98.2
3+	**88.9**	100	**84.8**	100	100	**91.8**	**80**	90.4

Similarly, just like treatment-seeking behaviour, a higher proportion of first born or second born children receive treatment as compared to third borns and above. This is more so among non-tribes and Kattunayackas (table 3.47).

Children attending Anganwadis Regularly (>3 years age)

Table 3.48 Children Attending Anganwadi Regularly (36months/above, %)								
Indicator	Social Group							Tot
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
Child Sex								
M	75	**75**	50	82.4	**35.3**	65.4	**91.7**	68.9
F	**57.1**	93.8	50	90.9	64.7	**72.7**	78.6	73.8
Weight-for-age								
N/Abv	64.7	83.3	46.2	88	58.3	71.6	81.8	73.3
UW	66.7	.	.	.	.	**56.2**	.	56.2
Height-for-age								
N/Abv	66.7	78.9	45.5	87.5	52.6	69.3	83.3	**71.7**
ST	66.7	87.5	.	.	46.7	66.7	.	67.8
Weight-for-height								
N/Abv	65	81	57.1	85.2	64	72.9	80	73.9
WS	70	.	.	.	.	**45.8**	.	**51.9**

Among the Paniyas and non-tribes, a higher proportion of male children regularly attend anganwadis (table 3.48) as compared to a higher proportion of female children among the other groups, especially Adiyas and Kurichias. Similarly,

anganwadi attendance is regular among children who have normal weights and heights for their ages as compared to underweight, stunted and wasted children.

3.7 Child Feeding Practices by Child Characteristics

Children who were Breastfed Exclusively for 6 months or more (>6 months age)

Table 3.49 Children Exclusively Breastfed for 6/more months (6-60 months age, %)

Indicator	Social Group							Tot
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
Child Sex								
M	63.2	35.9	81.4	**45.2**	**77.3**	61.2	.	52.5
F	**75.6**	41.7	76.3	28.1	57.1	57.1	.	47.5
Birth Place								
I	72.3	38.7	78.2	38.9	68.6	57.9	.	47.9
H	57.1	.	80	.	66.7	68	.	66.7
Birth Order								
1	73.3	47.1	87	40.6	75.8	63.2	.	54.9
2	**63.2**	**30**	**68.4**	**34.2**	71.4	**50.4**	.	**39.1**
3+	70	33.3	79.5	.	56	63	.	56.4
Birth Interval								
<23	50	**71.4**	80	40	**100**	**74.3**	.	**66.7**
>24	68.9	23.5	75	35.1	54.1	53.7	.	44.3
No. of Meals								
<2	72.7	52.9	85.7	38.5	69.6	69.4	.	63.6
3+	67.4	34.5	73.9	37.7	67.9	54.7	.	44.6

Child breastfeeding by child characteristics (table 3.49) reveal that a higher proportion of male children (esp. Among Adiyas and Kurumas) are exclusively breastfed for 6 months/more, except Paniyas where it is higher for girls. The table also shows that those children who are born at home are exclusively breastfed more. The second/ third birth order children and those born after an interval of 24 months have the least proportion of being exclusively breastfed for 6 months/more.

Children regularly having 3 meals or more daily (>12 months age)

The frequency of meals reduces with increasing duration of exclusive breastfeeding – so, the earlier the children are weaned, more the number of meals the children have (table 3.50).

Table 3.50 Children regularly having 3meals/ more a day (1year+)

Indicator	Social Group							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
Child age upto which BF								
<3	.	100	.	.	.	**92.3**	.	**94.1**
3to5	65.2	88.6	68.8	86.8	76.2	79.7	87.1	82.1
6+	58	74.1	**54.8**	92	79.2	67.9	.	67.9

Children regularly consuming 4 or more food groups (>12 months age)

Table 3.51 Children regularly consuming 4/more food groups (1 Yrs+)

Indicators	Social Group		Total
	All ST	Non-tribes	
Child Sex			
Male	3.2	**33.3**	7.3
Female	2.4	19.4	5.3
Child age upto which BF			
<3 months	.	**50**	11.8
3to5 months	3.8	24.2	10.3
6+ months	2.4	.	2.4
No. of Meals			
<2	1	.	1.9
3+	3.4	**27.6**	**7.8**

Table 3.51 shows that child's and the duration of breastfeeding has a big influence on whether a child consumes a variety of food groups among the non-tribes. Such variations do could not found among the STs due to very low cases of children having 4 or more food groups regularly. The proportion of male children receiving 4 food groups is higher, and among non-tribes, it is high for those who were exclusively breastfed for less than 3 months age and those who have 3 or more meals daily.

Table 3.52 **Child Health Status and Health Care Utilization among the Different Groups**						
Child Profile	**Pani**	**Kattu**	**Adi**	**Kuri**	**Non-T**	**Kuru**
Young agegrp (<24mts)	*					
High Birth order	*	*				
Low BW	*		*			
LBW/high BO					*	
LBW/low BI					*	
No Exclusive BF upto 6 months				*	*	*
BF 6m +	*	*				
2meals/less/day	*					
<4 food groups	*	*	*			
No ORS	*		*			
Chronic Illness	*	*				
Recovery CI	*	*				
Avg. Weight	*					
Avg. Height	*					
Underweight	*	*	*			
Stunting	*	*	*			
Wasting	*	*	*			
No Birth Registration		*				
Home Delivery		*				
Home del./ higher BO	*	*	*			
No treatment/CI			*	*		
Incomplete Immunization	*	*			*	
Not attending Anganwadi	*	*	*			

(* represents the highest proportion of children in comparison with other groups)

3.8 Conclusion

A comprehensive picture of child health and health care utilization among the various communities (table 3.52) has been derived from the analyzed tables throughout the chapter. It should be noted that all the indicators are negative in character, and the stars are put in front of those groups which have the highest proportion of children in

those categories, as compared to other population groups. So, we see that in terms of *child health care utilization indicators,* like – no birth registration, home deliveries, home deliveries increasing with increasing birth order, no treatment for chronic illnesses, incomplete immunization and utilization of anganwadis, then -Kattunayacka children have the lowest utilization, followed by Paniyas and Adiyas. However, if we analyze the picture from other aspects like – higher proportion of children in younger ages (below 24 months), proportion of children in higher birth order, low birth weight, decreasing birth weights with increasing birth order and decreasing interval, exclusive breastfeeding upto 6 months and after 6 months, taking 2 meals or less per day, consumption of less than 4 food groups, receiving ORS, chronic illnesses, its recovery, average weights and heights, then – we see that Paniya children suffer the most in terms of nutrition and nutritional status, followed by Kattunayacka and Adiya. The overall picture reveals that Kuruma children are the healthiest with the highest health care utilization, closely followed by non-tribes and Kurichias.

Similarly, when child health and health care indicators are cross-tabulated with other characteristics, then interesting relations are observed. It is seen that birth intervals and birth orders play important roles in birth weight, nutritional status, place of birth, treatment sought during illnesses and to a lesser extent - immunization. In communities where breastfeeding duration is higher, the quality and quantity of food that a child receives is less (Kattunayacka, Paniya). Infact, it implies that the food availability in the household is so insufficient that mothers are forced to continue breastfeeding for longer periods. The quality of food seems and attendance in anganwadi are seen to important in the nutritional status of the children. Similarly, the attendance in anganwadi differs substantially for the male and female children and also varies among children according to their nutritional status, or it could be a two-way process: children regularly attending anganwadi could have better nutritional status and children with better nutritional status are the one who attend anganwadis regularly! However, the most important finding was the fact that at the time of birth, the average weights and heights of the Paniya, Kattunayacka children are at par or even better than the other groups; it is only after the age of 8 months that their growth curves seem to dip and it peaks at the age of 2 years. This shows that till the time of exclusive breastfeeding the children have similar measurements, but as soon as they start depending on external feeding, the Paniya, Kattunayacka and Adiya children lag behind.

Chapter – 4

HEALTH STATUS AND HEALTH CARE UTILIZATION OF MOTHERS

4.1 Background Details

The child health status can only be understood when the status of their mother's health and health care utilization is clear. This chapter presents an account of the mother's demographic, socio-economic details, personal habits and health, followed by their antenatal care and illness care. The status and behavior of mothers serves as ground for their accessing health care for their children as well. The background characteristics of mothers reveal that most of the mothers belong to the age group of 25 to 29 years, but the scheduled tribes also have a high proportion of mothers in the age group of 20 – 24 years, with Adiyas, Kattunayackas and Paniyas having more than one-third mothers from this young age category; whereas the Kurumas have the least proportion of mothers belonging to this age group. There are also cases of mothers who are below 19 years of age among STs. The average age of the mothers (Appendix 5) is lowest for Adiyas and Paniyas, and highest for the non-scheduled tribes and Kurumas. The difference in age of mothers between the highest and lowest average age is almost 3 years, and if we see the median ages, then it comes to four years, which is quite high. It shows the average ages at marriage and first birth. It can be seen that Kattunayacka mothers have the lowest average age at marriage and first birth, followed by Paniyas. On the other hand, Kurumas and non-tribal mothers have the highest average age at marriage and first birth. The difference between the highest and lowest averages is more than 5 years in both the cases!

More than half of the Kattunayacka mothers were married before the age of 18 years, followed by Paniyas and Adiyas. For the non-scheduled tribes, this is negligible. Moreover, more than one-third of Kattunayacka mothers gave their first birth before attaining 18 years of age, followed by Paniyas and Adiyas, which makes about 18 percent of all scheduled tribe mothers. It is negligible in the case of non-tribes and Kurumas. Majority of the mothers are currently married. But, among scheduled tribes we see few cases of unwed mothers and also who are divorced/ separated; such cases are nil among the non-tribes. There have been reports of increasing instances of unwed mothers among the scheduled tribes in this area due to their exploitation by non-tribes despite the tribal colonies being out of bounds for the general public. This point is important here, in the context of the survival and the development of the children,

because these mothers are (atleast in majority of the cases) outcaste or do not receive the social support that generally mothers do and the money that they receive from the panchayats is not enough for maintaining even a family of two people. This calls for some serious attention from the policy makers.

4.2 General Health and Illness

The general health status indicators of a person are his/her anthropometric measurements and episodes of illness. The standard indicators used to measure mother's health are height (<145 cms refers to a short stature) and body mass index (<18.5 is considered low/thin), both of which are very much related to her child's safe delivery and post-natal health and health care.

Table 4.1 Short-Statured Mothers (<145 cms. Height)

Height	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	Total
%	**39.1**	21	33.3	9.8	29.1	26.5	6.7	23
Mean height, cms.	**147.7**	151.4	150.5	152.7	149.9	150.4	**154.6**	151.1

Table 4.1 shows that Paniyans have the highest share of mothers who have a short stature, followed by Kattunayacka and Adiya mothers. The least proportion of short-statured mothers are among the non-tribal mothers. Even the mean height of Paniya mothers is 7 cms. lower than that of non-tribes.

Table 4.2 Body Mass Index of Mothers (%)

BMI	Paniyas	Kurichias	Kattunayackas	Kurumas	Adiyas	ST	Non - ST	Total
Low (<18.5)	***56.6***	*21.3*	***50.8***	*8.4*	***40***	***35.4***	*11.6*	*31.4*
Normal (18.5-24)	*40*	*68.9*	*47.4*	*67.8*	*56.4*	*56.1*	*60*	*56.8*
High (>25)	*3.3*	*9.8*	*1.7*	*23.7*	*3.6*	*8.5*	***28.3***	*11.8*
Total	60	61	59	59	55	294	60	354

The analysis of BMI among mothers (table 4.2, excludes pregnant women and those who gave birth recently) shows that a high percentage of the Paniya and Kattunayacka mothers are underweight, followed by Adiyas. Kuruma and Kurichia

mothers have the maximum proportion of normal BMI mothers, followed by non-tribal mothers. Infact, a good percentage of the non-tribal and Kuruma mothers are over-weight. The average weights are highest for the non-scheduled tribe mothers (more than 54 kgs.), followed by the Kurumas (53 kg). The lowest average weights are found for the Paniya mothers, whose average is only 40 kilos, i.e. – *14 kilos shockingly lower* than that of non-tribal mothers!

Reported illnesses (table 4.3) are higher among Paniyas (more than 30 percent mothers reported some illnesses in 2 weeks prior to the survey), followed by Kurumas, non-tribes and Katttunayacka (more than 20 percent mothers) as compared to other communities. Least cases of illnesses were reported by Kurichia and Adiya mothers. Among those who reported illnesses, majority of them suffered from some kind respiratory illness/fever (cold, cough), followed by other type of acute illnesses which mostly included – severe headache, earache, swollen feet, chicken pox, jaundice, pneumonia, dengue, selling of gums/ jaw, ENT infections etc. Chronic illnesss were reported by Paniya, Kurichia mothers, followed by Kurumas and Adiyas. These included mostly – chronic backache (mostly after child birth), tuberculosis, asthma, thyroid, heart ailments, high blood pressure etc. During the field work, it was found that one Adiya mother had died recently due to cancer. Chronic illnesses were reported to be least among the non-tribal and Kattunayacka mothers[1].

Table 4.3 Any Illness in last 15 days

	Name of Social Group							Total
	Pani.	**Kuri.**	**Kattu**	**Kuru.**	**Adi.**	**ST**	**Non- T**	
Any chronic illness	**3** **4.3%**	**3** **4.3%**	**1** **1.5%**	2 3.1%	2 3.0%	11 3.3%	**1** **1.5%**	12 3.0%
Respiratory/ seasonal fever	**12** **17.4%**	0 0.0%	**8** **12.1%**	**8** **12.3%**	1 1.5%	29 8.6%	7 10.8%	36 9.0%
Digestive disorders	0 0.0%	0 0.0%	2 3.0%	1 1.5%	0 0.0%	3 .9%	0 0.0%	3 .7%
other	**6** **8.7%**	0 0.0%	2 3.0%	3 4.6%	2 3.0%	13 3.9%	**5** **7.7%**	18 4.5%
Total	69	69	66	65	67	336	65	401

[1] Field observations on the responsiveness of the people revealed interestingly contradictory behavior. While, some of the Kattunayacka women, especially those in the remote colonies like- Gunduvady and Chandroth, were the most shy and clearly, unresponsive and unwilling to talk even; ***the younger generation among Kattunayackas (boys, girls, women)*** *we*re actually some of the most talkative and cooperative.

4.2 Health Care Utilization by Mothers

Place of All Deliveries

Regarding the place of delivery, table 4.4 shows the proportion of mothers who had all deliveries in institutions and home. It is clear that majority of the mothers had institutional deliveries, but more so the non-scheduled tribal and Kuruma mothers, followed closely by Kurichias. While majority of the women had all their deliveries in government institutions, a good proportion of non-tribal and Kuruma mothers had all their deliveries in private institutions only, throwing light on their physical, financial capabilities to access private healthcare. None of Adiya or Kattuanayacka mother had all their deliveries in private institutions, this is negligible in the case of Paniyas and Kurichias too. Only half of the Kattunayacka mothers had all institutional deliveries; infact more than 13 percent of them delivered all their children at home, followed by 6 percent Adiya and Paniya mothers. None of the Kurichia, Kuruma or non-tribal mothers had all home deliveries.

Table 4.4 Place of all deliveries

All Deliveries	Name of Social Group							Total
	Pa ni	Kuri.	Katt u	Kuru	Adi.	ST	Non T	
Private, %	2.9	4.3	0.0	**27.7**	0.0	6.8	**35.4**	11.5
Govt.,%	55.1	**84.1**	50.0	61.5	**67.2**	63.7	47.7	61.1
Pvt/Gvt.,%	**59.4**	91.3	**50.0**	93.8	67.2	**72.3**	**93.8**	75.8
Home,%	**5.8**	**0.0**	**13.6**	**0.0**	**6.0**	**5.1**	**0.0**	4.2
Total	69	69	66	65	67	336	65	401

Place of Delivery at the time of Last Birth and Checkup

The following table shows the proportion of mothers who had their last delivery in institutions (table 4.5). It is seen that all the Kurichia mothers had their last birth in institutions, followed by non-tribes and Kurumas. The Kuruma mothers, even if they live in some of the remotest colonies like – Maarodu, prefer institutional deliveries and get themselves admitted in hospitals, whether government or private.

On the other hand, almost one-fourth of the Kattunayacka mothers had their last *birth at home,* followed by 14 percentage Paniya and 10 percent Adiya mothers, resulting in almost 10 percentage of Scheduled tribe mothers having their last birth at home, compared to only one among the non-tribes.

Table 4.5 Had Institutional Delivery during Last Pregnancy

Percent Mothers	Name of Social Group							Total
	Pani.	Kuri.	Kattu	Kuru.	Adi.	ST	Non-T	
	85.5	**100.0**	75.8	96.9	89.6	89.6	98.5	91.0

And among those who had their last birth in institutions (table 4.6), it can be read that majority of them delivered in government institutions, with scheduled tribal mothers being more dependent on public facilities for delivery. The Kattunayackas and Adiya mothers who went for institutional deliveries, all of them delivered in public institutions. A few among Paniyas and Kurichias who went to private hospitals said doctors were not available in government hospitals, which forced them to take private help. This is not the case with the non-tribal mothers, almost 47 percent of whom went to private health care institutions for their last delivery. Even one-third of Kuruma mothers had delivered in private hospitals.

Table 4.6 Type of Institution (% Mothers)

Place of Delivery	Name of Social Group							Total
	Pani.	Kuri.	Kattu	Kuru	Adi.	ST	Non-T	
Government	94.9	92.8	**100.0**	66.7	**100.0**	**90.4**	53.1	83.8
Private	5.1	7.2	0.0	**33.3**	0.0	9.6	**46.9**	16.2
Total	59	**69**	50	63	60	301	64	365

Mothers receive an allowance for delivering in government institutions, for their first two children under the Janani Suraksha Yojana. The survey revealed that 25 percent of the scheduled tribal mothers did not receive the JSY amount for their last delivery, because of paperwork and repeated visits to the bank and the hospitals required in order to claim the money (table 4.7)[2]. They say it takes 3 -4 trips to the hospital to receive it and they end up spending more on transport than they get; or they are asked to come later because of unavailability of funds. So, most of them prefer to forego it (especially, those who delivered in far away hospitals like –

[2] Cost of transport per hospital trip: Rs. 300 to 700/-, depending on the location of colony. So, some of the mothers felt they had to spend more on travelling than the amount they will be getting, leading to them not claiming the money.

Kozhikode Medical College). Even among those who received, very few mothers received the full amount (*most of them only receive the transport amount* of some Rs. 700/). This was the case with more than one-third of the Kurichia and Paniya mothers who were eligible to receive JSY, whereas close to 90 percent of Kuruma mothers, followed by non-tribal and Kattunayacka mothers received the allowance due to them.

Table 4.7 Received JSY for last delivery

Received JSY for last delivery (% Mothers)	Name of Social Group							Tot
	Pani.	Kuri.	Kattu	Kuru	Adi.	ST	Non-T	
	64.9	62.2	**83.3**	**89.7**	74.4	74.2	**86.2**	75.8
Total	37	45	30	39	43	194	29	223

Table 4.8 shows the time of first check-up after last delivery. It can be seen that all Kurichia, Kattunayacka and Non-ST mothers had their first checkups within 2 days of delivery, whereas checkups were delayed for almost 10 percent Kattunayacka mothers. Infact, more than 5 percentage of Kattunayacka, Adiya and Paniya mothers had no check up at all after their last births.

Table 4.8 First check up after Last Delivery

First Check up	Name of Social Group							Total
	Pani.	Kuri.	Kattu	Kuru.	Adi.	ST	Non- T	
<2 days	89.9%	**100.0%**	83.3%	**100.0%**	92.5%	93.2%	**100.0%**	369
< 10 days	5.8%	0.0%	9.1%	0.0%	1.5%	3.3%	0.0%	11
No checkup	**4.3%**	0.0%	**7.6%**	0.0%	**6.0%**	3.6%	0.0%	12
Total	69	69	66	65	67	336	65	401

Among the reasons given by mothers for not going for institutional delivery in their last birth, the major factors that emerged were no time, no transport, do not trust services or no one to assist take them to health care institutions (table 4.9). There was one case of a non-tribal woman who had to delivery at home because they had no time to go to hospital. *It is interesting to see that no Kurichia, Kuruma, or non-tribal woman delivered at home due to "unavailability of transport", whereas one-fifth of Adiya, Paniya and Kattunaycka mothers had to deliver at home because of no transport or because the health facility was too far.* Some of them said they delivered

before the ambulances or hired jeeps could reach there. More than 40 percent of Adiya mothers and 30 percent of the Kattunayacka mothers revealed that they were *scared of going to hospitals* (because of the injections, the strict behaviour of nurses and staff), whereas for the Paniya mothers the major reason was that they *delivered at night* (during which time the transport is mostly unavailable, even ambulances don't come) and they had *no time* to go to hospitals. Discussions with Kattunayackan women showed that they *did not consider it necessary* to deliver in hospitals. ASHAs said the women go for hospital deliveries only for their first child, while the rest of the children were delivered at home, especially those Paniyans and Kattunayackans living in the remote colonies like – Madaparambu and Chandroth.

Table 4.9 Reasons for not going for institutional delivery at the time of Last Birth

Reasons for delivering at home	Name of Social Group							Total
	Pani	Kuri.	Kattu	Kuru	Adi.	ST	Non-T	
No time (delivery at night)	**5**	0	2	**2**	1	**10**	1	11
Too far/ no transport	**2**	0	3	0	**2**	**7**	0	7
Scared/ do not trust services	0	0	**5**	0	**3**	**8**	0	8
Not customary	1	0	**3**	0	0	4	0	4
No one to take care/ assist	**2**	0	**3**	0	1	**6**	0	6
Total	10	**0**	16	2	7	35	**1**	36

Many women also complained that they preferred home deliveries because you need *someone to assist you in hospitals*, then one has to spend on their food/ other expenses (someone is needed at home too, to take care of her other small kids) and husbands usually do not prefer to accompany them, especially if it is a peak working season (they would not forego a day's wage). ASHAs say that some home deliveries happen because the women forget their due dates, according to them, "*these tribal women don't give importance to most things, their memories and their system of time-keeping is very different from ours, they don't realize the importance of remembering their due dates. And then they say they are very busy in their household chores and outside work, that they forget these things. Even if we remind them and ask them to go and get admitted in hospitals just before their due date, they refuse to go and give plenty excuses.*"

4.3 Ante- Natal Care at the time of Last Birth

Regularly seeking ante-natal care is important to ensure proper growth and avoid infections and complications at the time of delivery. From table 4.10 it can be seen that almost all the mothers reported to have received ante natal check up atleast once during their last birth.

Table 4.10 ANC at the time of Last Birth

Ever Received ANC	Name of Social Group							Total
	Pani.	Kuri.	Kattu	Kuru.	Adi.	ST	Non- T	
	100.0%	98.6%	98.5%	100.0%	100.0%	99.4%	100.0%	99.5%
Total	69	69	66	65	67	336	65	401
No. Of ANC visits								
< 3	8.7%	1.5%	**12.3%**	1.5%	1.5%	5.1%	6.2%	5.3%
3/ more	91.3%	98.5%	87.7%	98.5%	98.5%	94.9%	93.8%	94.7%
Total	69	68	65	65	67	334	65	399

Of those who ever received ANC, majority of them went for 3 or more checkups. Here also, the case of Kattunayacka mothers gets highlighted when it is seen that about 12 percentage of mothers went for less than 3 ANC check-ups, followed by 8 percent Paniya mothers and non-tribes. Kurumas, Kurichias and Adiya mothers reported to have gone for 3 or more ANC visits during their last birth. A minimum of 3 ANC visits is necessary in order to monitor the health of the mother and foetus during the pregnancy period.

And the place of ANC for most of the mothers were public facilities (table 4.11) – Adiya and Paniya mothers were completely dependent on the public facilities for ANC. The private facilities were used by a good proportion of the non-tribal and Kuruma mothers during their last birth as also by a few Kurichia mothers.

Table 4.11 Place of ANC at the time of Last birth

Place of ANC	Name of Social Group							Total
	Pani.	Kuri.	Kattu	Kuru.	Adi.	ST	Non- T	
Govt. facility	**100.0%**	92.6%	98.5%	72.3%	**100.0%**	92.8%	67.7%	88.7%
Private facility	0.0%	7.4%	1.5%	**27.7%**	0.0%	7.2%	**30.8%**	11.0%
Both Govt. & private	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.5%	.3%
Total	**69**	**68**	**65**	**65**	**67**	**334**	**65**	**399**

Similarly, while majority of the mothers received two doses of tetanus injections and 100 iron/folic tablets/ syrup at the time of last birth, the case of Kattunayackas again comes into focus with 16 percentage of mothers not receiving, followed by seven percent of Paniya mothers (table 4.12). Some Kattunayacka mothers, in some of the remotest colonies, felt that the injections are '*very painful, and they are harmful to our health, so we don't need them, we don't need others to teach us what is good and what is bad for us'*. The ASHA workers complain that even among those who reported to have received the iron and folic tablets, it is doubtful as to whether all of them consumed them regularly, because during their house visits they find that the tablets lie unused as most of the women either forget to take medicine everyday amidst the daily chores and they complain that the tablets make them feel sicker. All the Kuruma mothers reported to have received two doses of tetanus and IFA tablets/syrup, followed by Kurichias.

Table 4.12 ANC at the time of last birth

% Mothers who Received	Name of Social Group							Total
	Pani.	Kuri.	Kattu	Kuru.	Adi.	ST	Non- T	
2 TT injections	92.8%	98.6%	83.3%	**100.0%**	95.5%	94.0%	96.9%	94.5%
100 Iron folic tablets/ syrup	92.8%	98.6%	**83.3%**	**100.0%**	95.5%	94.0%	98.5%	94.8%
Received full ANC	91.3%	97.1%	81.8%	98.5%	95.5%	92.9%	92.3%	92.8%
Total	69	69	66	65	67	336	65	401

To get the full picture, proportion of mothers who received full ANC[3] during last pregnancy/ birth was calculated. It revealed that majority of the mothers received full ANC, but 7 percent mothers (both ST and Non-STs) did not receive full ANC (table 4.12). More than 18 percent of the Kattunayacka mothers did not receive full ANC, followed by Paniyas.

Somehow, it is difficult to accept to ANC, Delivery and Immunization as indicators of health care "utilization' by population groups, since they are more dependent on the duties, compulsions or obligations of the 'providers' (targets, report submissions) as compared to 'health-care seekers', especially in Kerala which has

[3] Full ANC includes mothers who went for 3 or more ANC check ups, received 2 TT doses and 100 or more IFA tablets/ syrup.

always religiously met all the basic requirements of the health model in the country. Almost all literature comparing states in their health care utilization aspects, put Kerala in their top-performing states, with satisfactory evidences from secondary[4] or even primary sources. In such a situation, the real pictures emerge when we see the situation regarding the health-seeking behavior of people during illness – that is where their action is relatively 'voluntary'.

Treatment Seeking Behaviour

For mothers who suffered from illnesses, majority of them seemed to have sought treatment (table 4.13). All the non-scheduled tribe, Kurichia and Adiya mothers sought treatment for their illnesses, whereas some 14 percent of scheduled tribal mothers did not. The highest proportion of mothers who did not seek treatment from outside was found among Kurumas and Kattunayackas. The field work discussions revealed that Kurumas and Kattunayackas have a very good knowledge of local medicine, which they prepare with locally available herbs, plants and roots from forests. Until and unless the illness is very acute, they do not prefer to seek treatment outside.

Table 4.13 Treatment at the time of Recent Illness

Treatment sought (% mothers)	Name of Social Group							Total
	Pani.	Kuri.	Kattu	Kuru.	Adi.	ST	Non-T	
	95.2	**100.0**	76.9	71.4	**100.0**	85.7	**100.0**	88.4
Total	21	3	13	14	5	56	13	69
Place of treatment	**Name of Social Group**							**Total**
	Pani.	**Kuri.**	**Kattu**	**Kuru.**	**Adi.**	**ST**	**Non- T**	
Govt.	**18**	0	4	4	**5**	**31**	5	36
Private	2	**3**	6	4	0	**15**	**7**	22
Traditional	0	0	0	0	0	0	**1**	1
AYUSH	0	0	0	1	0	**1**	0	1
Total	20	3	10	9	5	47	13	60

Among those mothers who sought treatment, majority of the STs (Adiyas and Paniyas especially) went to government facilities, whereas the non-tribal, Kurichia, Kattunayacka mothers sought treatments more in private facilities.

[4] Das, R.K. and Purnamita Dasgupta, (2000), "Child Health and Immunisation: A Macro-Perspective", *Economic and Political Weekly,* 35(8/9), pp.645-55.

4.4 Reproductive Details of the Mothers

Starting with the total number of pregnancies of mothers (table 4.14), it can be observed that more than 40 percent of the non-scheduled tribe and Kuruma mothers have two pregnancies, whereas majority of the Kurichia and Adiya mothers have two to three pregnancies, while most of the Paniya mothers have more than 3 pregnancies. The maximum number of pregnancies is observed among the Kattunayacka mothers, among whom more than 40 percent have had more than 4 pregnancies.

Table 4.14 Total Number of Pregnancies (% Mothers)

No. Of Pregnancies	Name of Social Group							Total
	Pani.	Kuri.	Kattu	Kuru.	Adi.	ST	Non- T	
1	29.0	33.3	16.7	27.7	28.4	27.1	23.1	26.4
2	20.3	27.5	27.3	**49.2**	32.8	31.3	**41.5**	32.9
3	24.6	27.5	13.6	20.0	23.9	22.0	24.6	22.4
4+	**23.1**	11.5	**42.4**	3.1	14.9	19.6	10.8	18.2
Total	69	69	66	65	67	336	65	401

As for the instances of miscarriages/induced abortion (table 4.15), it can be seen that more than one-fourth of Kuruma mothers have had atleast one miscarriage/abortion, followed closely by Kurichia and non-tribal mothers. Abortions are found to be common among the non-tribal women, which they say was due to inadequate growth of the foetus. Interestingly, Kattunayakas and Adiya mothers show least number of miscarriages/ abortions. One Kurichia mother in Kollichaal (Thavinzhal) said – "*sisters (JPHNs) don't visit us. I have not seen them once in last 4 years. The ASHAs do not have much in-depth knowledge. There are no proper scanning, ultrasound facilities, even in towns; the reports of one lab do not match with that of the other. If a report shows some problem with the foetus, we are advised to abort, without any proper explanation. There are only one or two lady gynaecologists, and that too in the far away towns. Later, when we go to the lady doctors, they say there was no need for abortion. We don't know whom to trust and where to go. There is no proper guidance exactly when we need it the most*."

Table 4.15 Total Number of Miscarriages/ Abortions (% Mothers)

No. Of Miscarriages/ Abortions	Name of Social Group							Total
	Pani.	Kuri.	Kattu	Kuru.	Adi.	ST	Non- T	
None	81.2	78.3	**92.4**	73.8	**92.5**	83.6	80.0	83.0
1	18.8	**21.7**	7.6	**26.1**	7.5	16.4	**20.0**	16.8
2/ more	2.9	1.4	0.0	1.5	0.0	1.2	**4.6**	1.6
Total	69	69	66	65	67	336	65	401

On the other hand, when we observe the situation of stillbirths among the mothers (table 4.16), it is seen that Paniya mothers have experienced the maximum instances of stillbirths, followed by Kattunayacka and Adiya mothers. Field discussions revealed that a few of them had suffered injuries or fell down during work at the last stages of pregnancy, which resulted in stillbirths. There are no instances of stillbirths among Kurumas.

Table 4.16 Number of Stillbirths

% Mothers	Name of Social Group							Total
	Pani.	Kuri.	Kattu	Kuru.	Adi.	ST	Non- T	
	8.7	1.4	**6.1**	0.0	**6.0**	4.5	4.6	4.5
Total	69	69	66	65	67	336	65	401

Finally, the analysis on livebirths shows that majority of the non-tribe and Kuruma mothers have had only 2 or less livebirths, while more than one-third of mothers in the other social groups have had 3 or more livebirths – infact more than one-third of Kattunayacka mothers have had 4 or more livebirths (table 4.17).

Table 4.17 Total Number of Livebirths (% Mothers)

No. Of Livebirths	Name of Social Group							Total
	Pani.	Kuri.	Kattu	Kuru.	Adi.	ST	Non- T	
1	36.2	39.1	18.2	32.3	34.3	32.1	27.7	31.4
2	18.8	30.4	27.3	**61.5**	29.9	33.3	**52.3**	36.4
3	23.2	26.1	18.2	**6.2**	22.4	19.3	12.3	18.2
4+	**21.7**	4.3	**36.4**	0.0	13.4	15.2	7.7	14.0
Total	69	69	66	65	67	336	65	401

Table 4.18 Mothers with all live births surviving at present

All Live births Surviving, % Mothers	Name of Social Group							Total
	Pani.	Kuri.	Kattu	Kuru.	Adi.	ST	Non- T	
	98.6	98.6	**89.4**	98.5	97.0	96.4	100.0	97.0
Total	69	69	66	65	67	336	65	401

The above table shows the proportion of mothers with livebirths surviving at present (table 4.18). All the non-tribal mothers have all their livebirths surviving at present, whereas it is distressing to see that more than 10 percentage of Kattunayacka mothers do not have all their live births surviving at present, followed much behind by Adiyas.

Table 4.19 Total Number of Children Surviving (% Mothers)

Surviving Children	Name of Social Group							Total
	Pani.	Kuri.	Kattu	Kuru.	Adi.	ST	Non- T	
1	36.2	39.1	21.2	33.8	34.3	33.0	27.7	32.2
2	18.8	31.9	24.2	**60.0**	29.9	32.7	**52.3**	35.9
3	23.2	24.6	19.7	6.2	23.9	19.6	12.3	18.5
4+	21.7	4.3	**34.8**	**0.0**	11.9	14.6	**7.7**	13.5
Total	69	69	66	65	67	336	65	401

Child Deaths

When asked whether they any of their children below the age of 5 years died, more than 10 percentage of the Kattuanayacka mothers replied in the affirmative! This was nil for non-tribal and Kuruma mothers (table 4.20). This shows that child survival is a big issue among the Kattunayackas, which explains their reproductive behavior in favor of more number of pregnancies and births.

Table 4.20 Mothers who experienced Any Child Deaths (below 5 years)

Any Child Death, % Mothers	Name of Social Group							Total
	Pani.	Kuri.	Kattu	Kuru.	Adi.	ST	Non- T	
	1 1.4%	1 1.4%	**7** **10.6%**	0 0.0%	1 1.5%	**10** **3.0%**	**0** **0.0%**	10 2.5%
Total	69	69	66	65	67	336	65	401

As for the number of child deaths (table 4.21), 5 Kattunayacka mothers had one child death, and two mothers reported to have experienced two child deaths each. The instance of two child deaths is nil for the other communities.

Table 4.21 Number of Child Deaths (<5years age) to Mothers

No. Of deaths	Name of Social Group							Total
	Pani.	Kuri.	Kattu	Kuru.	Adi.	ST	Non-T	
1	1	1	**5**	0	1	**8**	**0**	**8**
2	0	0	2	0	0	2	0	2
Total	1	1	7	0	2	10	0	10

When the issue is probed deeper, it is revealed that majority of the children who died had not even completed one month of age, and more than 80 percent of them die before completing 4 months of age, and *half of them died before completing even one month* (table 4.22). Early neonatal mortality is especially high for Kattunayacka infants.

Table 4.22 Absolute age of dead child (in months)

Age at child death	Name of Social Group							Total
	Pani.	Kuri.	Kattu	Kuru.	Adi.	ST	Non-T	
less than a month	1 100.0%	0 0.0%	**5** **55.6%**	0 0.0%	0 0.0%	**6** **46.2%**	0 0.0%	6 **46.2%**
1 month	0 0.0%	0 0.0%	1 11.1%	0 0.0%	1 50.0%	2 15.4%	0 0.0%	2 15.4%
2 months	0 0.0%	1 100.0%	0 0.0%	0 0.0%	1 50.0%	2 15.4%	0 0.0%	2 15.4%
3 months	0 0.0%	0 0.0%	1 11.1%	0 0.0%	0 0.0%	1 7.7%	0 0.0%	1 7.7%
60 months	0 0.0%	0 0.0%	2 22.2%	0 0.0%	0 0.0%	2 15.4%	0 0.0%	2 15.4%
Total	1	1	9	**0**	2	13	**0**	13

The analysis on causes of death reveals that majority of child deaths happened due to severe respiratory illnesses/ asthma or sudden death of infant. All the Adiya mothers and one-third of the Kattunayacka mothers do not know the cause of their child's death (table 4.23).

Table 4.23 Cause of death

Cause of death	Name of Social Group							Total
	Pani.	Kuri.	Kattu	Kuru.	Adi.	ST	Non- T	
Severe Respiratory illness	1	1	**3**	0	0	**5**	0	**5**
Sudden death	0	0	**3**	0	0	3	0	3
Do not know	0	0	3	0	**2**	**5**	0	**5**
Total	1	1	9	0	2	13	0	13

4.5 Education and Work Status of the Mothers

Education of the mother is very vital for self as well as child health care utilization. Illiteracy (table 4.24) is rampant among the scheduled tribal groups of Kattunayackas, Adiyas and Paniyas; and those who are literate in these groups, a good proportion have not attained even primary educational level, except the Paniya mothers. As for the other groups, majority of the Kuruma, Kurichia and non-tribal mothers are educated upto secondary level/ matriculation, followed by higher secondary (there are no illiterate mothers here). A good proportion of the non-tribal and Kuruma mothers are graduates, while there are nil/negligible graduate mothers among Paniyas, Kurichias, Kattunayackas and Adiyas.

Table 4.24 Educational Level Attained by Mothers (%)

Educational levels	Name of Social Group							Total
	Pani.	Kuri.	Kattu	Kuru.	Adi.	ST	Non- T	
Iliterate	**20.3**	0.0	**37.9**	0.0	**20.9**	15.8	0.0	13.2
<primary	18.8	2.8	**24.2**	0.0	**26.9**	14.6	1.5	12.4
Primary	**42.0**	10.1	16.7	1.5	22.4	18.8	3.1	16.2
Middle	15.9	23.2	12.1	0.0	6.0	11.6	6.2	10.7
Secondary	2.9	**47.8**	6.1	**52.3**	14.9	24.7	**41.5**	27.4
Higher Secondary	0.0	14.5	3.0	**24.6**	7.5	9.8	**23.1**	12.0
Diploma/ ITI	0.0	1.4	0.0	3.1	0.0	0.9	0.0	0.7
Graduate	**0.0**	**0.0**	**0.0**	**18.5**	1.5	3.9	**24.6**	7.2
Total	69	69	66	65	67	336	65	401

The current work status of the mothers (table 4.25) reveals that majority of the mothers do domestic work in all the communities, highest among non-tribes and Kurichias and lowest among Adiyas. Among those that do go out to work, majority (more than 85 percent) of the Paniya, Kattunayacka and Adiya mothers work as

agricultural labourers, mostly dependent on daily wages, throwing light on their need for instant money. On the other hand, majority of the Kurichia and Kuruma mothers who work are MGNREGA labourers (more than half of working mothers), followed by government employees (with higher levels of education, they take up most of the posts reserved for scheduled tribes), also implying that they are not hard-pressed for money for their daily needs. As for the non-scheduled tribes, majority of the working mothers are engaged in regular salaried government employment (more than half), followed by self-employment in the capacity of shopowners and private employment.

Table 4.25 Current Work Status of the Mothers (%)

Current Work Status[5]	Name of Social Group							Total
	Pani.	Kuri.	Kattu	Kuru.	Adi.	ST	Non- T	
Cultivator	0.0	1.4	0.0	0.0	0.0	0.3	0.0	0.2
Self-employed	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.5
Agricultural labour	**20.3**	**0.0**	**21.2**	1.5	**29.9**	14.6	**0.0**	12.2
MGNREGA	0.0	7.2	3.0	12.3	0.0	4.5	0.0	3.7
Govt Employee	1.4	2.9	0.0	**9.2**	3.0	3.3	**6.2**	3.7
Private Employee	0.0	1.4	0.0	1.5	1.5	0.9	1.5	1.0
Housewife	**78.3**	**87.0**	**75.8**	**75.4**	**65.7**	**76.5**	**89.2**	78.6
Total	69	69	66	65	67	336	65	401

Mothers' work: the day-to-day life of people in the rural areas of Wayanad involves a lot of physical strain because of the hilly terrain. This is accentuated with the nature of people's work outside their homes. It is seen that a majority of Kattuanaycka, Adiya, Paniya women work as agricultural labourers, whereas the non-tribal, Kurichia, Kuruma women are employed in salaried jobs whether in private or public sector, or involved in livestock rearing or cultivation (in or around their own homes mostly). So, the strain on the women and their bodies varies with this fact. And this difference is very apparent when one observes people, as I saw in the field, an average Paniya woman (who has spent a significant period of her life working as an agricultural labourer in another's field) looks definitely more older-than-her-age, tired, dull, and has aches and pains in her body as compared to an average Kuruma or a non-tribal woman (who, also doing lot of manual work related to housework, livestock and cultivation, but mostly

[5]. Work Status: Self-employed in agriculture/ allied activity; Work Status: Self-employed as shopowner, tailor, any other business; Govt./Pvt. Employees who working are regular salaried workers.

for self or their own extended families, spend a significant time of their life in or around their homes – thereby more flexible for them to go back and forth from place of work to residence in case it is required (except when they work in some private or govt services, where again they are do not undertake strenuous physical activity). This is also related to the hours of work, the food availability and frequency of eating at home or outside, the quality of food, personal habits and the self-care (at home or health institutions) of these women, even though the effect of these factors might be different at the level of individuals. All these, in turn, do have a positive or negative effect on the health of the mothers (their degree of risk before, during and after delivery) and their children, even though the magnitude of the effect may again differ on individual children.

4.7 Personal habits and food consumption by Mothers

There is considerable difference in the number of meals consumed by the scheduled tribe and non-tribe mothers. More than 95 percent of the non-tribal mothers have 3 meals plus snacks in a day as compared to about half of the scheduled tribe mothers. Within the tribes, more than 85 percent of Kuruma and Kurichia mothers have 3 meals during the day, followed by half of Adiya mothers (table 4.26). More than two-thirds of the Paniya and Kattunayacka mothers have only 2 meals during the day, infact more than 10 percent of the Kattunayacka mothers have only a single meal during the day. During the fieldwork it was revealed that the Paniya, Kattunayacka and Adiya communities cook and eat only once in a day, even children. Those who do have more than 2 meals, include those mothers who go out to work as labourers who are served food by their employer. This also relates to the availability of food in the household.

Table 4.26 Percent Mothers according to Number of meals in a day

No. of full meals	Name of Social Group							Total
	Pani.	Kuri.	Kattu	Kuru.	Adi.	ST	Non- T	
1 meal	4.3	0.0	**13.6**	0.0	0.0	3.6	0.0	3.0
2 meals	**72.5**	14.5	**65.2**	7.7	50.7	**42.3**	3.1	35.9
3 meals	23.2	**85.5**	21.2	**92.3**	49.3	54.2	**96.9**	61.1
Total	69	69	66	65	67	336	65	401

During the field work, it was also observed that majority of the tribal mothers were in the habit of chewing tobacco throughout the day, which might have

an effect on their food consumption and weight. Table 4.27 shows that almost half of the scheduled tribe mothers are in the habit of chewing tobacco regularly, including more than three-fourths of the Paniya mothers, close to 60 percent Adiya and Kattunayacka mothers.[6] Even though the mothers did not report the consumption of alcohol, field observations revealed that alcohol consumption was also high among these communities. The cases of tobacco chewing and alcohol consumption is almost nil among the non-scheduled tribal mothers.

Table 4.27 Personal habits

Regularly Consume, % Mothers	Name of Social Group							Total
	Pani.	Kuri.	Kattu	Kuru.	Adi.	ST	Non- T	
Tobacco + alcohol	0.0	0.0	1.5	0.0	0.0	0.3	0.0	0.2
Chew tobacco	**76.8**	30.4	**59.1**	7.7	**61.2**	47.3	1.5	39.9
Drink alcohol	0.0	0.0	0.0	1.5	0.0	0.3	0.0	0.2
None	23.2	69.6	39.4	**90.8**	38.8	52.1	**98.5**	59.6
Total	69	69	66	65	67	336	65	401

4.8 Mother's Health and Health Care Utilization by Mother's Characteristics

Some of the relevant indicators of mother's health and health care use have been cross-tabulated with the background details of the mother (like- education, work, age, etc.) in order to see the relation between them. The analyzed indicators include – mothers with low BMI, mothers who had availed full ANC in last birth, mothers who had all their deliveries in institutions and those who had all their deliveries at home.

More percentage of UW mothers (table 4.28) are observed in the higher age groups (>35 years), those working as daily wage labourers, mothers who have 2 meals or less a day (it is reverse among Paniyas and Kurichias), mothers who have 2 children or less (except Adiyas, where UW cases are more among mothers who have 3/more children).

[6] *A casual discussion with a private doctor, practicing allopathy, who was very popular among the tribes for his treatment and medication, revealed that 'chewing tobacco is part of their age-old culture, which in my personal opinion is not wrong, it also subsides their hunger'. So, according to him, blaming only their personal habits for their poor health is wrong, he continued, "even majority of the older generation of non-tribal men and women in Kerala (even Tamil Nadu) chewed tobacco all the time, but this did not hamper their health status. Its more about the availability of food in their houses and the restriction on hunting and gathering food (tubers, fruits and plants) from forest that has affected their health."*

Underweight Mothers (<18.5 BMI)

Table 4.28 Underweight Mothers by Background Indicators (%)								
Indicators	Social Group							Total
	Pani.	**Kuri.**	**Kattu**	**Kuru.**	**Adi.**	**ST**	**Non- T**	
Mother's Age								
<24	50	.	46.4	.	33.3	42.4	.	**40.4**
25-34	57.6	18.5	51.4	8.2	51.5	32.1	11.1	27.9
>35	**87.5**	.	**66.7**	.	**60**	**55.2**	.	**45.7**
Mother's Work Status[7]								
HW	54.4	21.1	48.3	5.8	42.9	35.1	9.4	30.3
WL	**69.2**	.	54.5	.	**53.8**	**59.5**	.	**59.5**
RS	.	.	.	.	.	25	.	26.7
Mother No. Meals								
<2	56.9	55.6	51.9	.	**48.5**	**51.9**	.	**51.6**
3+	61.5	13	50	8.2	39.5	24.2	11.6	20.8
Total Children								
<2	59	27.9	**61.8**	9.8	31.7	34.4	14.8	30.5
3+	56.2	0	42.5	0	**60**	41.4	.	36.8

Mothers who availed Full ANC in Last Birth

Table 4.29 Mothers who received Full ANC in Last Birth (%)								
Indicators	Social Group							Total
	Pani.	**Kuri.**	**Kattu**	**Kuru.**	**Adi.**	**ST**	**Non- T**	
Age								
<24	90.6	100	91.7	100	100	95.1	80	93.9
25-34	91.5	96.8	71.1	98.6	90.9	91	93.3	91.5
>35	**77.8**	100	**60**	100	100	83.3	85.7	83.7
Mother's Education								
Ill.	84.2	.	**65.7**	.	94.4	**77.8**	.	77.8
<5	80	.	63.6	.	95.5	**78.7**	.	79
5 to 9	94.1	100	100	100	92.6	96.1	87.5	95.6
>10	100	98.2	100	98.7	100	98.7	91.1	96.5
Mother's Work Status								
HW	87.3	97.3	79.2	98.3	96.9	91.4	91.4	91.4
WL	100	.	**68.8**	.	90	**86.8**	.	86.8
RS	.	.	.	100	.	100	**80**	95.5
Total Children								
<2	91.3	96.4	**92.5**	98.6	100	96.2	**93.2**	95.7
3+	88.1	100	66.7	100	88.9	84	83.3	83.9

[7]. HW- Housewife, WL- Wage Labour, RS- Regular Salaried Worker

Similarly, more percentage of mothers availed full ANC (table 4.29) when – they belong to younger age group, have 2 or less number of children, higher years of schooling (it matters most among Kattunayackas and Paniyas), or a regular salaried job. It is especially low among Kattunayacka mothers above 35 years age, and those who have no education or less than 5 years of education. So, education and age matter substantially while availing ANC.

Mothers who had All deliveries in Institutions

Among Paniyas and Kattunayackas, a very few percentage of mother above 35 years of age had all their deliveries in institutions (4.30). Age matters for all the communities, but more among them. Similary, the more the years of formal schooling a mother had, higher the chances that all their deliveries will be in institutions. As regards to work, only 39 percent of mothers working as daily wage labourers had all their deliveries in institutions, as compared to housewives and regular salaried workers.

Table 4.30 Mothers who had All Deliveries in Institutions (%)

Indicators	Social Group							Total
	Pani.	Kuri.	Kattu	Kuru.	Adi.	ST	Non- T	
Mother's Age								
<24	71.8	91.6	63.9	100	94.7	79.5	100	81.1
25-34	55.3	96.8	44.4	89.8	52.3	71.6	91.6	75.3
>35	0	**71.4**	**10**	**75**	**33.3**	**30.5**	85.7	**39.5**
Mother's Education								
Ill.	**21.4**	.	31.4	.	**22.2**	**26.4**	.	**26.4**
<5	46.7	.	22.7	.	63.6	45.9	.	46.8
5 to 9	68.6	87.5	76	.	85.2	77.3	75	77.2
>10	100	96.4	100	89.5	95.2	93.3	94.1	93.6
Mother's Work Status								
HW	56.3	94.5	51.4	91.4	76.9	73.5	91.4	76.5
WL	50.8	.	**25**	.	**40**	**39.6**	.	**39.6**
RS	.	.	.	80	100	88.2	100	90.9

Mothers who had All deliveries at Home

The percentage of mothers who had all their deliveries at home (table 4.31, it is only there for the scheduled tribes as a whole because of few cases at the level of individual groups) increases with age, it is especially high above 35 years. Similarly,

more illiterate mothers and those working as daily wage labourers have had all deliveries at home compared to those who have slightly higher education or regular salaried work or housewives.

Table 4.31 Mothers who delivered All their Children at Home

Indicators	ST	Total
Mother's Age		
<24	3.3	3.03
25-34	5.9	4.9
>35	13.9	11.6
Mother's Education		
Ill.	16.7	16.7
<5	13.1	12.9
5 to 9	3.9	3.7
>10	0	0
Mother's Work Status		
HW	5.6	4.6
WL	11.3	11.3
RS	0	0

4.9 Child Health and Health Care Utilization by Mother's Characteristics

Table 4.32 Low Birth Weight, below 2.5 kg (% Children 0-5 Years Age)

	Social Group							Tot
	Pani.	**Kuri.**	**Kattu**	**Kuru.**	**Adi.**	**ST**	**Non- T**	
Mother's age								
<24	40.9	41.7	28.1	25	45.9	**38.3**	22.2	**37.1**
25-34	45.2	26.7	30.1	33.3	44.7	34.6	15.5	30.8
>35	**50**	33.3	**16.7**	33.3	0	25	14.3	22.6
Mother's Work Status								
HW	42.9	32.4	25.9	31	46.7	35.6	17.9	32.3
WL	.	.	.	.	.	36.1	.	36.1
RS	.	.	.	.	.	**43.8**	.	33.3
Mother's BMI[8]								
L	**50**	25	22.6	.	**56.7**	41	37.5	40.7
N	36.8	**30.2**	21.7	34.1	35.5	31.9	**7.1**	26.8
H	.	16.7	.	31.2	.	25	21.1	23.4

[8]. L- Low (<18.5), N- Normal (18.5- 24.9), H-High BMI (>25)

Mother's tobacco use								
Yes	**47.5**	**38.1**	22.2	.	42.9	38.8	.	39.2
No	35.3	26.3	**34.4**	30.4	41.9	32	15.1	27.6
Total Children								
<2	38.2	30.9	31.4	32.4	47.9	35.8	16.1	32.1
3+	52.2	26.1	24.2	40	34.4	33.6	16.7	31.3

Table 4.32 shows that m*other's BMI* affects birth weight, with majority of LBW children belonging to underweight mothers, the only exceptions being Kurichians, where majority of the LBW children belong to mother with normal BMI. BMI seems to affecting the birth weight of non-tribal children the most. Analysis by *Mother's age* shows that the proportion of LBW children is high among younger mothers, except Paniyans, where mothers above 35 years of age give birth to more LBW children. As for *mother's work,* for the whole sample it is seen that more proportion of LBW children belong to mothers working as daily wage labourers, but for STs, the proportion of LBW children is higher among regular salaried mothers. *Tobacco consumption* seems to result in a higher percentage of LBW children among Paniyans and Kurichians only; infact, among the Kattunayackans, the proportion of the LBW is higher for women who don't consume tobacco.

The marital status of mothers seems an important indicator of underweight children (table 4.33), with higher UW children belonging to mothers who are either separated/divorced/widowed/never-married as compared to those who are currently married. This is especially so for Paniyans and Adiyans. In the same manner, the proportion of UW children are more for mothers who are working as daily wage labourers, especially among Paniyans. Similarly, the percentage of UW children seems to be quite low only for mothers who have completed 10 or more years of education. Paniyan and Kurichian mothers who have 3 or more children have higher percentage of UW children, which is the reverse case for Kattunayackans and Adiyans, for whom the more the number of children, the less the percentage of UW children. Similarly, the proportion of UW children is higher for UW mothers, especially in the case of Kattunayackas, Kurumas and Adiyans. The UW children are more for mothers who have 1 or 2 meals a day as compared to those who have more, this is very glaring in the case of Kattunayackas.

Table 4.33 Percentage of Underweight Children (3 months and above) by MotherDetails								
Indicator	Social Group							Total
	Pani.	**Kuri.**	**Kattu**	**Kuru.**	**Adi.**	**ST**	**Non- T**	
Mother's Marital Status[9]								
CM	58.7	23.7	27	8.6	35.1	31.5	8.5	27.9
O	**88.9**	.	.	.	**100**	**72.2**	.	**72.2**
Mother's Work Status								
HW	56.7	26.1	32.4	7.3	38.6	32.9	7.8	28.7
WL	**81.2**	.	31.2	.	35	**47.2**	.	**47.2**
RS	.	.	.	.	.	20	.	15
Mother's BMI								
L	60	25	**32.4**	**33.3**	**46.7**	44	.	**41.4**
N	57.7	28.6	17.6	7.1	30	25.9	15.4	23.9
H	.	.	.	.	.	21.4	.	12.8
Mother No. Meals								
1	.	.	58.3	.	.	50	.	50
2	63.9	30	31	.	34.9	42.7	.	42.2
3+	63.2	22.1	15	7.6	40.5	23.8	8.7	20.1
Total Children								
<2	56.8	17.6	**40**	7.6	**41.3**	30	**9.3**	26.2
3+	**67.5**	**33.3**	24	.	32.4	38.2	5.9	35.1

A higher percentage of stunted children (table 4.34) is observed among mothers who are currently not married. The proportion of stunted children is high among mothers who stay at home and those who go for daily wage labour as compared to regular salaried mothers. Overall, mothers with low BMI have higher percentage of stunted children, but it is not the case among Kurichians and Adiyans. Mothers who have only one meal per day tend to have higher number of stunted children as compared to those who have 2 or more meals.

With regards wasting (table 4.35), higher proportion of wasted children belong to mothers who are currently not married, those engaged in daily wage labour, those who have 2 or less number of children (esp. Kattunayackas and Adiyas), those who are underweight (except Adiyas), and those who have 2 meals or less (except Adiyas).

[9]. CM – Currently Married, O – Other includes Unwed/ Divorced/ Separated/ Widowed

Table 4.34 Percentage of Stunted Children (3 months and above) by Mother Details

Indicator	Social Group							Total
	Pani.	**Kuri.**	**Kattu**	**Kuru.**	**Adi.**	**ST**	**Non- T**	
Mother's Marital Status								
CM	52.1	51.3	62.9	22.9	46.8	48.1	33.3	46
O	**77.8**	.	.	.	**75**	**66.7**	.	**66.7**
Mother's Work Status								
HW	54.5	53.6	**66.2**	20	**49.1**	**50**	32.1	47.3
WL	**60**	.	56.2	.	45	**51.9**	.	**51.9**
RS	.	.	.	.	.	20	.	25
Mother's BMI								
L	48.7	33.3	62.2	**50**	50	**51.6**	.	**49.6**
N	48	**52.4**	58.8	21.4	**60**	46.8	30.6	44
H	.	**50**	.	26.7	.	39.3	37.5	38.6
Mother No. Meals								
1	**75**	.	**100**	.	.	**93.8**	.	93.8
2	55.9	50	56.9	33.3	48.8	53.4	.	52.8
3+	47.4	50	60	22.7	45.9	41.4	34.4	39.9
Total Children								
<2	53.5	51	62.5	24.2	47.8	45.5	33.3	43.5
3+	56.4	48.1	64	16.7	47.1	**53.8**	.	52

Table 4.35 Percentage of Wasting among Children (3 months and above) by Mother Details

Indicator	Social Group							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
Mother's Marital Status								
CM	28.8	9.2	10.1	.	11.7	12.7	11.1	12.5
O	**44.4**	.	.	.	**75**	**50**	.	50
Mother's Work Status								
HW	27.3	11.6	11.3	3.6	14	13.8	10.7	13.4
WL	40	.	12.5	.	15	**21.2**	.	21.2
RS	.	.	.	.	.	13.3	.	15
Mother's BMI								
L	30.8	**25**	8.1	16.7	13.3	**18.5**	**28.6**	**19.1**
N	24	7.1	8.8	.	**16.7**	11	13.9	11.5
H	.	.	.	.	.	10.7	.	6.8

Mother No. Meals								
2	**35.6**	.	13.8	.	14	**21.6**	.	21.9
3+	21.1	8.8	.	.	**16.2**	8.6	9.8	8.9
Total Children								
<2	27.9	11.8	**17.5**	4.5	**19.6**	15	14.6	15
3+	33.3	7.4	6	.	8.8	13.5	.	12.3

The proportion of underweight-cum-stunted children (table 4.36) is higher for mothers who are not married currently, especially among Paniyas and Adiyas who work as daily wage labourers, those who have 3 or more children (especially Kurichias), low BMI and those who have 2 meals or less.

Table 4.36 Underweight-cum-Stunted Children (3 months +) by Mother Indicators (%)

Indicators	Social Group							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
Mother's Marital Status								
CM	34.6	18.2	24.7	5.5	22.1	21.3	4.2	18.7
O	**77.8**	**.**	**.**	**.**	**75**	**57.9**	**.**	**57.9**
Mother's Work Status								
HW	37.1	20	26.8	3.5	21.1	22.5	4.6	19.5
WL	**50**	.	25	.	**30**	**34**	.	**34**
RS	.	.	.	.	.	11.8	.	9.1
Mother's BMI								
L	35	.	**24.3**	**33.3**	26.7	28	.	**26.3**
N	32.1	23.8	17.6	2.3	26.7	19.1	7.7	17.1
H	.	.	.	.	.	17.2	.	10.4
Mother No. Meals								
1	.	.	**58.3**	.	.	**50**	.	**50**
2	40.6	**30**	24.1	.	25.6	30.4	.	30.1
3+	36.8	15.9	.	4.3	21.6	14.4	4.3	11.9
Total Children								
<2	37	11.5	27.5	4.3	23.9	18.9	.	16.2
3+	41.5	**29.6**	24	.	23.5	**29.1**	.	**26.9**

It seems that mother's age matters in hospital born children (table 4.37)– mothers above 35 years of age have the least proportion of children born in hospitals. Mother's educational level also matters a lot here, with the illiterate mothers having the lowest percentage of children born in hospitals, with increasing proportion of hospital-born children with each educational level. Even primary or below primary educated mothers have higher hospital-borns among Paniyas and Adiyas. Similarly, daily wage labourer mothers have less number of children born in hospitals compared to others (except Paniyas). The proportion of children born in institutions is higher for mothers who received full ANC in their last births, and those who have 2 children or lesser.

Table 4.37 Children born in Hospitals (0-5 years) by Mother's Characteristics (%)

Indicators	Social Group							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
Age								
<24	87.5	100	80.6	100	94.7	89.3	100	90.15
25-34	85.1	100	71.1	98.6	84.1	89.6	100	91.8
>35	**55.5**	100	**40**	**75**	100	69.4	85.7	**72.1**
Mother's Education								
Ill.	52.7	.	57.1	.	72.2	59.7	.	59.7
<5	80	100	59.1	.	**90.9**	77	.	77.4
5 to 9	**94.2**	100	**92**	96.6	**92.6**	**94.6**	87.5	**94.1**
>10	**100**	100	**100**	100	**100**	**98.8**	100	**99.1**
Mother's Work Status								
HW	81.7	100	73.6	98.2	90.8	88.5	98.6	90.2
WL	87.4	.	**56.2**	.	**85**	**77.4**	.	**77.4**
RS	.	.	.	100	100	100	100	100
Mother Full ANC								
Y	88.6	100	84.5	97.3	94	93.1	100	94.2
N	**33**	.	**25**	.	.	**30.6**	85.7	39.6
Total Children								
<2	91.3	100	77.5	98.6	100	94.7	100	95.7
3+	**73.8**	100	66.7	83.3	**75**	**76.5**	94.4	**78.3**

It is seen that a higher percentage of children belonging to young age mothers received treatment (table 4.38) as compared to mother who were 35 years and above (esp. Kurichia mothers). Educational level doesn't seem to matter much in seeking

treatment for children, except in the case of Adiyas – where treatment-seeking children increases with increasing educational level of mother. The percentage of treatment-seeking children is more for mothers who have 2 children or less, and those who are employed in regular salaried jobs.

Table 4.38 Children who Received Treatment During Illness (0-5 years, %)

Indicators	Social Group							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
Age								
<24	100	100	100	100	80	**93.7**	100	94.4
25-34	86.4	71.4	82.4	94.4	75	82.9	96.2	85.2
>35	100	66.7	75	100	.	82.3	100	84.2
Mother's Education								
Ill.	100	.	81.8	.	66.7	83.3	.	83.3
<5	100	.	100	.	77.8	89.5	.	90
5 to 9	88.9	85.2	91.7	93.9	75	79.7	95.8	80.6
>10	100	100	85.7	100	80	89.5	100	91.4
Mother's Work Status								
HW	91.2	75	87.5	96.9	76	**85.8**	96.7	87.6
WL	**100**	.	.	.	72.7	**85.7**	.	85.7
RS	.	.	.	100	.	100	.	100
Total Children								
<2	100	73.1	94.1	94.6	90.9	90	96.4	91.2
3+	87	77.8	82.4	100	**53.3**	**77.9**	100	**79.7**

Overall, more percentage of children belonging to young age mothers receive regular immunization (table 4.39), it is very low for mothers 35 years and above among the Paniyas. A higher percentage of children receive regular immunization among mothers who have 2 children or less (esp. Kattunayackas), or if they had received full ANC during last birth. The proportion of regularly immunized children is less for mothers engaged in domestic work or as daily wage labourers when compared to regular salaried mothers or others (self-employed in agriculture or shopowners).

Table 4.39 Children Receiving Immunizations Regularly (0-5 years, %)								
Indicators	Social Group							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
Mother's Age								
<24	96.8	100	97.2	100	100	98.3	100	98.4
25-34	93.6	100	84.4	100	100	96.3	91.7	95.4
>35	**77.7**	100	90	100	100	91.4	100	93
Mother's Education								
Ill.	**84.2**	.	**74.3**	.	100	**83.3**	.	83.3
<5	100	.	100	.	100	100	.	100
5 to 9	94.1	100	100	100	100	97.7	100	97.8
>10	100	100	100	100	100	100	**91.4**	97.8
Mother's Work Status								
HW	**91.5**	100	91.7	100	100	96.5	92.9	95.8
WL	100	.	**81.2**	.	100	94.3	.	94.3
RS	.	.	.	100	.	100	100	100
Mother Full ANC								
Y	94.9	100	93	100	100	97.7	92.9	97
N	**77.8**	100	**80**	.	100	83.3	100	86
Total Children								
<2	95.7	100	97.5	100	100	98.9	100	99.1
3+	90.5	100	**84.3**	100	100	92.6	**72.2**	90.6

Anganwadi attendance of children is more if mothers have a formal education of 10 years or more, but interestingly, it reduces for Adiya children with increasing mother's education (table 4.40). Similarly, it is low for children whose mothers are daily wage labourers as compared to children whose mothers are engaged in housework or as regular salaried workers.

Table 4.40 Children Attending Anganwadi Regularly (36months/above, %)								
Indicators	Social Group							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
Mother's Education								
Ill.	57.1	.	50	.	71.4	60	.	60
<5	83.3	.	50	.	42.9	58.8	.	58.8
5 to 9	62.5	80	40	.	50	62.5	.	62.7
>10	.	85.7	.	85.7	**37.5**	**79.6**	86.9	**81.7**
Mother's Work Status								
HW	60	86.7	54.5	78.9	61.9	71.3	83.3	73.6
WL	**77.8**	.	40	.	**33.3**	**51.9**	.	51.9
RS	.	100	.	100	.	88.9	100	90.3

Table 4.41 Children Exclusively Breastfed for 6/more months (6-60 months age, %)								
Indicators	Social Group							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
Mother's Age								
<24	**79.3**	45.5	70.6	50	**90.3**	**75.2**	.	**69.5**
25-34	64.3	36.8	86.8	37.9	58.5	53.3	.	43.5
>35	62.5	42.9	77.8	.	33.3	52.9	.	43.9
Mother's Marital Status								
CM	**71.4**	39.7	78.8	36.6	70.7	**59.9**	.	50.2
O	55.6	.	.	**66.7**	.	47.4	.	47.4
Mother's Work Status								
HW	73	42.4	79	43.6	78.2	63.1	.	63.1
WL	53.3	.	75	.	40	53.8	.	53.8
RS	.	.	.	.	.	29.4	.	22.7
Years of Schooling								
Ill.	52.9	.	**86.7**	.	50	**67.7**	.	67.7
<5	84.6	.	**75**	.	63.2	**72.2**	.	70.9
5to9	70.8	26.1	**77.3**	.	78.3	**65**	.	61.3
>10	.	44	**66.7**	36.9	83.3	**47**	.	33.2
Mother's BMI								
L	**79.5**	41.7	**90.6**	**50**	70	**74.8**	.	**70.1**
N	63.6	35	68.8	41.9	75	53.9	.	43.6
H	.	.	.	26.7	.	44	.	25.6

Mother No. Meals								
2	68.9	40	78.1	.	64.3	68.9	.	68.1
3+	72.2	38.5	82.4	36.8	75	51	.	38.1
Total Children								
<2	72.1	39.6	81.1	38.2	70.5	57.1	.	46.6
3+	66.7	37	77.3	.	67.2	63.3	.	56.7

Similarly, it is observed from table 4.41 that a higher percentage of children belonging to younger mothers are breastfed for 6 months or more, especially among Adiyas and Paniyas. It is also high among children whose mothers are currently married and whose mothers are involved in household duties. With increasing years of schooling, the percentage of children exclusively breastfed for 6 or more months is decreasing; *only* in the case of *Adiyas* – it is increasing with increase in education. In all communities, the share of exclusively breastfed children is higher among underweight mothers.

Table 4.42 Children regularly having 3meals/ more a day (1year+)

Indicators	Social Group							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
Mother's Work Status								
HW	53.8	81.4	53.3	86	80.9	70.8	88.1	73.9
WL	**71.4**	.	**75**	.	80	76.5	.	76.5
RS	.	**100**	.	88.9	.	**87.5**	**100**	**90.5**

The proportion of children (above 1 year of age, table 4.42) having 3 meals or more daily is among those whose mothers have regular salaried jobs or even work as daily wage labourers (among Paniyas and Kattunayackas). It does not differ much for Kuruma children.

Table 4.43 Children regularly consuming 4/more food groups (1 Yrs+)

Indicators	Social Group		Total
	All ST	Non-tribes	
Mother's Work Status			
HouseWife	2.6	23.7	6.3
Wage Labour	0	.	0
Regular Salaried	18.8	**60**	**28.6**
Mother's Years of Schooling			
Illiterate	0	.	0
<5	0	.	1.9
5to9	2.7	.	3.4
>10	5.1	**25**	**11.5**
Mother No. Meals			
2	.	.	0
3+	5.4	26.6	10.8

Since, the number of cases of children having 4 or more food groups (table 4.43) was very less, the calculations were done only for total tribes, non-tribes and combined. The percentage of children having 4 or more food groups regularly is high for mothers who have completed atleast 10 years of formal schooling and those working in regular salaried jobs.

4.10 Cases of Unwed Tribal Mothers

In the above kind of setup and background, the plight of the unwed tribal mothers is worse, because they not only suffer from the above mentioned disadvantages, but also receive virtually no support from the society, especially during the time of pregnancy, even though after the child is born some of them do get accepted by their families. *During the fieldwork*, I came across four such cases of unwed mothers, of which two caught my attention – one woman belonging to *Kuruma* community, and another belonging to *Paniya* community. The Kuruma woman (now, a mother of an 18-month child), belonging to a relatively better-off family in Noolpuzha Panchayat, was working as a home nurse in a non-tribal household, where she was in a relationship with a non-tribal man. After she got pregnant, the man left her and her family too abandoned her because according to them she had committed a big mistake. She lost

her job too and had to face lot of physical, emotional, financial and social difficulties during her pregnancy period and later. Only after her delivery, she started receiving some meager financial help from the Panchayat, and this is the only means of income she has till date for taking care of herself and her son, she would be able to start working only when her child gets admitted into an anganwadi at the age of 3 years. She lives alone in a small kachha hut with her child, and is still excluded from her family, but she is confident of getting a job (she has a diploma) and taking good care of her son in the near future.

The Paniya woman (belonging to a very poor landless family in Pulpally Panchayat, just in her late teens, now, a mother of an infant) had a son from a man, whose identity she did not wish to reveal, who left her after a short relation. The girl got pregnant, but in her case, her family and community (the small group of families living in her colony) did not abandon her. Even though she also had to face lot of physical, emotional, and financial difficulties, she had family and social support, which at least did not blame her alone for her position. She lives with her parents and elder sister in their small dilapidated house, and does not feel excluded; she will soon be working as a laborer like her parents (she only has primary education) and is not that confident of her child's future.

Both the women reported being treated in a not-so-nice way by the health personnel and doctors in their respective primary health centres and hospital, when they came to know that they were unwed. In both the cases, the structures of/ power relations between – socio-economic status, gender, community, class, health system (in their relations with their partners and the reactions of the society) – have all played similar roles in creating disruptions and disturbances in the lives of these women and their children, but the way their family and community support systems worked contrastingly in those instances is interesting. But what will matter in future are the paths that they are going (both mothers are in different positions – one is confident that her child will be *surviving well*, while the other is only confident of her child *surviving*) to take for their own well-being and that of their children.

Table 4.44 Mother Health, Health care and other aspects						
Mother	**Paniyas**	**Kattunayacka**	**Adiyas**	**Kurichias**	**NonST**	**Kurumas**
Marriage/First Birth bfr 18yr	*	*	*			
Unwed Mothers	*			*		*
No/Low Education	*	*	*			
Graduate					*	*
Agri. Labourer	*	*	*			
Regular job					*	*
Stillbirths	*	*	*			
Child Deaths		*				
Neonatal Deaths	*	*				
Do not know cause of death		*	*			
2 Meals/less	*	*				
Illnesses	*					
Low weight/height	*	*	*			
Institutional del.				*	*	*
Private Del.					*	*
All Home del.		*				
Did not receive Full ANC/ LB	*	*				
No transport for del./ LB	*	*	*			
No checkup after del.	*	*				
No treatment for illness		*				*
Govt. treatment	*		*			

(* represents the highest proportion of mothers in comparison with other groups)

4.11 Conclusion

The final table (*table* 4.44) gives an overall idea of the analysis done in the previous pages regarding the status of mothers and their health care utilization. Since most of the indicators are negative and the maximum number of stars that a particular community has, the worse is the situation of the mothers. A quick glance reveals that Kattunayacka mothers have the lowest health care utilization with regards to receiving full antenatal care and many instances of home deliveries (in fact many of the mothers had *all their deliveries at home*), closely followed by Paniya mothers. The indicators

on general socio-economic and health status again reveal that the Paniya and Kattunayacka mothers have wide differences from other groups, in terms of age at marriage and first births, education, occupation, number of meals, illnesses, neonatal deaths, and awareness about the cause of death of their children, and average anthropometric measurements. They are followed by the Adiya mothers, who seem to be *just escaping* from some of the negative aspects because more number of them work as labourers, which increases their access to instant money and food availability. The only two positive indicators mentioned here include mother who have attained education upto graduation level or above and those who are working as regular salaried government employees; in both these, the highest proportion of mothers belonged to non-tribal and Kuruma groups. Thus, Kurichia, Kuruma and Non-tribal mothers are much better-off regarding education, work, health status and health care as compared to others.

More maternal, infant and child deaths are observed and reported among some tribes here, unknown causes. This should have been analyzed further but because of the lack of awareness of cause of death (which would have shown whether the cause was a preventable one or not) and also the disinterestedness of the respondents, there was no further questioning. No data of child/infant death among non-tribes, somehow, makes us feel that the infant/ child deaths in tribes were preventable (neonatal deaths – in the first 28 days after birth – tend to be from factors related to birth, such as being born prematurely; postneonatal deaths are more likely to be the result of external causes[10]) – somehow these deaths makes us feel that "timely" access and utilization of health care services could have saved the children. The basic role of the modern health care services is to prevent maternal and child mortality (one is not even talking about preventing morbidity or overall well-being or public health) – that's the least one expects from a government health care system – if even this is not done properly – then questions need to be raised. So, early neonates and neonates clearly need to be checked upon regularly by the health workers in the area, because the mothers are mostly not aware of the cause or do not know how to explain. I regret and apologize for my inability, both because they were reluctant to talk about it and also because of the strangeness of my language, to qualitatively analyze and talk in detail to the mothers who experienced child deaths and talk to an old lady whose daughter died soon after her delivery at home. Such

[10] Shaw

instances and experiences definitely deserve a patient and careful examination of events and pathways that eventually lead to 'death' of a newborn infant or a mother, because it is very important to ask and know 'why they died the way they did'.

From initial field observations, just looking at them, we could clearly see the differences in the health of women and children, which had nothing to do with their height or weight, but the strength in their eyes, and how active they were. Looking at women, even at first glance, from their activeness, the brightness of their eyes, their build and their voice, their demeanour, the differences in the health of women was somewhat comprehendible – if health can be said to constitute all these elements too, which result in someone 'feeling healthy'. Paniya women definitely looked weaker and paler, compared to any other. Kuruma women looked the healthiest, they were sturdier and brighter compared to other groups.

The field discussions and observations showed that autonomy was not the biggest issue for Adiyan, Paniyan, and Kattunayackan tribal women, as many decisions were taken jointly by men and women, their main issue was the lack of aspirations, coupled with lack of resources to take up those aspirations, if they had any. Infact, autonomy seemed to be an issue more in the case of non-tribes and Kurichians, where the day-to-day decisions were taken more by the elders or in their absence, the males in the house, but then it doesn't matter in the sense that most of them at least are above poverty line and have a better sense in availing health and education, most importantly, they have high aspirations for which they somehow manage to find loans, and work towards those goals.

Thus, it has been observed that the average heights, BMI, institutional deliveries are lower among the Paniya, Kattunayacka and Adiya mothers. In case they do go for deliveries or treatments, they are almost completely dependent on the public health centres and hospitals. The health of the children and their health care utilization if very much related with the mother's socio-economic and health conditions. As it is seen that the proportion of LBW and malnourished children is higher among mothers who are themselves underweight, who have two meals or less a day, who are not married currently, and who are working as daily wage labourers. Similarly, the child health care utilization as regards to immunization and treatment during illnesses is higher for mother who are young, who have 2 children or less, and who have a regular salaried job. For Adiyas, children attending anganwadi reduces with increasing levels of mother'education. Overall, the percentage of children breastfed exclusively for 6

months or more reduces with increasing levels of education; only among Adiyans it is increasing with increasing level of education. The number of meals and consumption of 4 or more food groups is higher among children whose mothers are working, especially those who have a regular salaried job. Thus, mother's reproductive health, health care and child's health, health care and feeding haibits are all dependent on mother's socio-economic characteristics.

Chapter – 5

HEALTH CARE INSTITUTIONS

An understanding of the current nature of the health care institutions in our study area requires a brief study of the history of the establishment and spread of modern health care system in Kerala; the role and presence of traditional healing systems, which then lead us towards the acceptance and availing of services provided by the state health systems. Here, the focus is on the attitudes and opinions of the different levels of health personnel, from medical officers to ASHA workers and anganwadi workers and the issues faced by them in the area.

5.1 Establishment of the Modern Health Care System

The base for the present modern health care system in Kerala was established by the governments of Travancore and Cohin in the latter half of the 19th century, when they directed their attention towards- *identifying* the principal causes of death (at the time they were - cholera, small pox, malaria and other infectious diseases) and *removing the conditions* conducive to their occurrence (insanitary conditions, unavailability of proper health care).[1] So, the then rulers of these two principalities focused on implementing balanced health policies that had both *preventive and curative aspects.* From 1870s onwards, in order to prevent cholera and small pox deaths, the Travancore dynasty undertook the tasks of regular repairing, disinfecting and maintenance of public tanks, proper disposal of wastes; through the Royal Proclamation of 1879, small pox vaccination was made compulsory for all public servants, students in schools and jail inmates – and all were protected by 1935; during 1930s and 1940s, the principalities conducted massive health surveys in order to identify and treat infections like – hookworm infestation, malaria and filariasis. In the *urban areas* they focused on proper waste disposal, street lighting, disinfecting wells/tanks, removal of nightsoil from public roads, gravelling of roads and lanes, control of sanitation in markets and slaughter houses etc., in the *rural areas* also they began sinking of new wells, sweeping and lighting of roads, and sanitizing the markets in order to control epidemics. The sanitation of markets was given special attention at the time of fairs and festivals, when they even constructed temporary toilets for the use of public. During the 1930s, the

1 Panikkar P.G.K. and C.R. Soman, (1984), “Health Status of Kerala: Paradox of Economic Backwardness and Health Development”, Centre for Development Studies, Trivandrum.

Cochin and Travancore rulers also undertook measures to increase *public health education,* by focusing on topics like – personal hygiene, preventable diseases and increasing health and civic consciousness among the public through lectures, cinemas, leaflets and newspaper articles. Finally, they set up a good *health infrastructure* with a large network of dispensaries, primary health centres and hospitals so that the people have easy access to these institutions, providing efficient maternal and child care facilities, also the health workers made frequent house visits. This was followed by some health promoting and ill-health preventing measures in the non-health sectors like – *agriculture* – where rice was substituted because of increasing prices with cheaper tapioca, and milk, eggs and meat got substituted with fish which was again cheaper during 1950s and 1960s; an effective *public distribution system* was established which benefitted most of the households even though it had little redistributive effects; and *housing* schemes were started for one lakh landless labourers in 1971, alongwith other measures like – land reforms, primary schooling, opening of libraries, vernacular newspapers etc. all of which increased the availability, accessibility, awareness and utilization of amenities among the public.[2]

In Wayanad, the modern health care system was started by the Christian Missionaries even before the coming of the British rule. With the coming of the British, this system received even more impetus and an official status. The establishment of hospitals and dispensaries was felt acutely because of the difficult climatic conditions, high incidence of malaria in the region. Some of the traditional *vaidyars* (healers), who got converted to Christianity, opened some of the hospitals here. The *'cultural hegemony'* of the colonial rule that stressed on the superiority of the Western Medicine as compared to indigenous medicine on the one hand; and the 'love, sympathy, service and humanitarian efforts of the missionaries' who preached the 'gospel of Jesus' through medical service on the other, resulted in rapid conversions and acceptance of allopathy cure at the cost of traditional preventive and curative systems, which was attacked *scientifically* as well as *culturo-religiously.*[3] The continuation of these practices alongwith drastic changes in land use, cultivation and forest cover and access to them, resulted in the indigenous people feeling lost and unable to practice their

2 *Ibid.*

3 Sheeba, K.A. (2012), "The PostColonial Kurichiya Community In Wayanad and Their Healing Tradition", *Project Report of the Minor Research Project of UGC 2010-11.*

traditional lifestyles and healing practices anymore with destruction of their ecological spaces.

5.2 Presence and Practice of Traditional Healing Systems

Medicine is a part (product) of culture. Diseases and traditional healing systems are a product of the environment (nature of land, elevation, weather, climate, forests, soil, flora, fauna)-human interactions (food, settlements, lifestyle, work, leisure, culture). Nair defines *tribal medicine or ethnomedicine* as "the medical beliefs and practices of tribes that have evolved in their own cultural and ecological milieu. It involves beliefs, knowledge, methods of diagnoses, therapeutic practices and pharmacopoeia educed from trial and error experiences of the tribes using herbs and other substances to treat diseases common among them."[4] From the field observations, it has been noticed that Kurichians and Kurumans have been successful in maintaining their healing tradition which they follow very religiously (mainly due to the fact that they managed to keep their "spaces' intact – land, livelihood identities); whereas the Paniyans, Adiyans – even though they also had some indigenous medicine systems earlier – are not able to maintain their traditional practices, mainly because of loss of their spaces (land, habitat, forests) – that formed the basis of their culture. Even Kattunayackans seem to be slightly better off in this aspect since majority of their settlements are found near forest boundaries, which helps them to collect their medicinal materials, infact most of them resort to traditional medicine first thing during illnesses, but they are not ready to talk about it openly.

Traditional healers are different from ayurveda/unani/siddha healers, in that their *knowledge is mainly oral/ practised inter-generational*, usually inherited from their forefathers, so, many of them practise it as a family tradition, as a 62 year-old non-tribal woman healer in Pothumoola, Thirunelly, who mainly treated children for respiratory diseases, asthma, stomach problems, said- "I learnt everything from father, who taught me to diagnose disease just by checking the pulse *(nadi*) of the patient"; every healer has his/her own method, ingredients, which they seldom share even with their own family – although all of them *collect their medicinal herbs, plants and other products from forests*. All the healers said forests are the best sources, and that the same plants grown at home will not have the same effect. Neither do they collect the plants

4 Nair, Vishwanathan (2008), "Tribal Health and Medicine in Kerala", D.C. Press, Kottayam, Kerala

or other articles before hand, even collection is done only when there is requirement. Many of the local healers *do not store medicines* – they make it afresh, because they feel that the medicine is strong and effective only then.

Although all of them treat whoever goes to them with discomfort, a few among them say they feel *shy to treat outsiders*. As a young Kattunayacka woman in Pulpally commented about her mother, “she is very old and very knowledgeable about diseases and their treatment, about which she learned from my grandmother. But, she doesn’t like bragging about it like lots of others do. We know only the people in our settlement, so she treats only people whom she knows. When outsiders come, she does not speak anything, only gives them the medicine. This may be because she is not comfortable with their language. Otherwise, her medicines are perfect, she treats – asthma, stomach ailments, infant colic, illnesses of children, stones etc. So, our acquaintances come to her first in case of any problem.” They say they do not charge any money, so people pay them as per their whim.

Kuruma women healers are locally very popular in Kottanodu, Noolpuzha. They have a system in which every month continuously for 6 days before new moon (*amavasya*), they give their infants and children upto 5 years of age a concoction that is said to prevent cold/cough/allergies/asthma. This is taken by almost all the children here regularly without fail. Even the non-tribal mothers went to these healers for their children. Kurichia healers are the most popular, with even people from far away regions coming to them, mainly non-tribes with lots of complicated issues. As a middle-aged male Kuruma healer Chandu, who has been practising for the last 22 years and treated respiratory diseases, fevers, epilepsy, stated – “this is not ayurveda, this is *pachha marunnu* (green medicine), every one of us specializes in some treatment. People who come to us are basically those who have exhausted all other options.” But, most of the healers also felt that people take their children to traditional healers only when they are not in a position to see the doctors in towns.

Some of them are registered with the government, with KIRTADS and some of the most professional practitioners like- *Achappan Vaidyan in Kolichaal,* have contributed a lot to tribal medicine and trained many Kurichia youth in it, who now practice all over Kerala. KIRTADS organizes annual camps, exhibitions and workshops for the traditional healers, where many of them participate. But, they also feel that such short camps are not enough to spread knowledge and even treat people. The time-tested ethno-medicinal practices of the tribal and non-tribal communities in India and Kerala

are increasingly being documented and their relevance re-established with the help of local healers and guides[5][6]. The tribal healers have medicines for acute and chronic illnesses ranging from- bronchial asthma, rheumatism, skin diseases, diabetes, backache, digestive diseases, to mental illnesses[7]. Some healers deal with general illnesses, while some specialize in treating specific diseases. Infact, the traditional doctors - the *Vaidyars practicing Ayurveda* are increasingly being consulted by the educated, urban non-tribes,[8] who come from far, even from other districts to get treatments for various discomforts because they prefer holistic treatments (where long-term changes in lifestyle is required like – diet, activity etc.) and to feel *close with nature* even if they have to pay more for these treatments. But, the locals, living near the Vaidyar, prefer the public medicine, mainly allopathy, which is freely available, works quickly in reducing the symptoms and doesn't require much changes in their lifestyles.

Then, there are also instances of magico-ritualistic healing among the tribes – the *mantravadis* (healers-cum-oracles who perfom rituals, with the help of chants, dances and black magic) of Kurichians[9] and Paniyans, for e.g the *Gaddika* ritual among the Adiyans, which, according to Indu, is like a "dance-drama and is meant to cure ailments like – small pox, chicken pox and also for deliveries, based on the belief that it can drive away evils spirits, illnesses, diseases and bad situations."[10] Such rituals are

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5 Udayan P.S., M.K. Harinarayanan, K.V. Tushar and Indira Balachandran (2008), "Some common Plants used by Kurichiar Tribes of Tirunelli Forest, Wayanad District, Kerala in Medicine and other Traditional Uses", *Indian Journal of Traditional Knowledge,* 7(2), p.250-255.

6 Silja, V. P., K. Samitha Varma, and K.V. Mohan (2008), "Ethnomedicinal plant knowledge of the Mullu Kuruma Tribe of Wayanad District, Kerala", *Indian Journal of Traditional Knowledge,* 7(4), p. 604-612.

7 Simon Sabu M., T. Selvin Jebaraj Norman, Kuru Suresh and Vijayan Ramachandran (2011), "Ethnobotanical Knowledge on Single Drug Remedies from Idukki District, Kerala for The Treatment of Some Chronic Diseases", *International Journal of Research in Ayurveda and Pharmacy,* 2(2), p. 531-534.

8 Matsuoka, Sachi (2015), 'The Changing Role of a Vaidya (non-codified traditional doctor) in the Community Health of Kerala, Southern India: A Comparison of Treatment-seeking Behaviours Between the Vaidya's Patients and Community Member", *Journal of Ethnobiology and Ethnomedicine,* 11(57), p 1-9.

9 Sheeba K.A. (2012), "The PostColonial Kurichiya Community In Wayanad and Their Healing Tradition", *Project Report of the Minor Research Project of UGC 2010-11.*

10 Menon, Indu (2015), "Gaddika: Ritual and Reality in the Culture of Adiya Tribe", *International Conference on Studies in Humanities and Social Sciences (ICSHSS),* July 29-30, p. 28-31.

effective, she continues, because they "address fears and mental strains of a subjugated community, building their confidence as they pronounce gods constant assistance and benevolence", involving 'occultism, magic and mysticism and some tribal antidotes" for diseases that are caused by supernatural and also natural forces. The attempt is to remove the sicknesses of the individuals and the community more at a psychological level than at a physical level, and to achieve the expected impact, they resort to dances, animism, customs, myths which are powerful enough to portray "servitude of a tribal society and their constant struggle against their landlords, ending with their *liberation.*"

5.3 Cultural Practices

There are also certain routine practices regarding diet, activities and other rituals and medicines which different communities adhere to. Against popular perceptions regarding tribal communities in general, the field work found that the stress on "cultural practices" of the tribal communities is getting unnecessary attention. The impact of these practices is high precisely because of inaccessibility (timely) to health services; if they were made available at the right time, the relevance and impact of these habits could be reduced. In reality, as has been seen during the fieldwork and interactions with mothers and grandmothers, these practices are equally (infact, *much more) present among the non-tribes* (since they have more capacity to buy and stock things like – honey, ghee, other medicines, and pay for rituals as compared to tribes). Which is to say, that the tribes are more dependent on modern medicine than is perceived or understood by the modern media.[11] And why are the cultural practices stressed only in the case of research among tribes and their health and why doesn't it attain the same relevance when health studies are done among the non-tribes? This is because the tribes simply do not have the kind of access that the non-tribes have. Non-tribes are stricter when it comes to adhering to rituals.

Practices during Pregnancy and Child birth- The traditional ways of antenatal, natal and post-natal care are certainly followed with respect to the kinds of food that

11 This is what the researcher was trying to find out, whether the tribes any rituals or used any local medicines related to child birth and delivery time, but the researcher got only one response that was common to Paniyas, Adiyas and even Kattunayackas – that they do use natural remedies and green herbs, but nothing special for pregnant women or newly-born children – since they either do not have the means (which was the case in majority of the households), also they have lost the knowledge and skills required for a lot of their practices and healing due to inaccessibility to forests, change in livelihoods and time anymore. The non-tribes, the Kurumas, the Kurichias - on the other hand, practice both traditional and modern systems according to their judgements and necessities.

are given to the woman, the kinds of activities that she is allowed to do etc, more so, in the case of non-tribes (they are asked to hear good music, say prayers for calming their mind; made to eat more, bend and stretch more for easing delivery; some foods are taboo, especially after child birth, where special food is prepared for them in the house for the first one or two months; they are given regular oil baths so that their body recuperates fastly; even the new borns are given regular oil baths and small portions of traditional medicines called *ora marunnu*, which is a mixture of nutmeg and a few other items bought from the shops that sell native medicines, made as a paste with mother's milk, which is said to provide immunity and strengthen the infant physically and mentally) as was observed in field, also the Kurichians and Kurumans are strict when it comes to following their customs and practices. They follow it alongwith modern medical care. The details of such practices could not be collected from the tribal communities, especially the Paniyans, Adiyans and Kattunayackans, who said they don't have any special practices during delivery. The mother works till the time of delivery, and resumes her regular chores one or two days after her delivery in the poorest households, but may get more attention, rest and diet in others. No special diet or food is followed, they eat whatever they used to eat before pregnancy, in fact most of them said they work a lot more during the last stages of pregnancy for ease of delivery, '*we don't have elaborate systems of mother and child care, where both are provided rest and service by the rest of the family and the community, we are not used to such delicate handling and also cannot afford it, but yes, we have our own pacha marunnu (green medicines) that we give to women, infants and children whenever they feel sick'*.

Traditional Diet and Knowledge:- Interaction with the tribal women, elders, and healers revealed that they are quite concerned, as Pushpagandan and George remark, about *the loss of 'local traditions and knowledge systems and the resulting poor health of mother and child more so among the rural poor*', with increasing destruction of the rich bio-diversity (plants, animals) and native food in the tribal belts on the one hand, and increasing consumption of pesticide-ridden food, water and air, that pass through aluminium/other metallic vessels and lead pipes on the other – aggravating the physical and mental problems of the poor.[12] They say that the non-tribes in Kerala are now

12 Pushpagandan, P. and V. George (2010), "Ethnomedical practices of rural and tribal populations of India with special reference to the mother and childcare", *Indian Journal of Traditional Knowledge,* 9(1), p. 9-17.

countering it with: cultivating vegetables in their own kitchen gardens, growing local fruits like - papaya and medicinal plants, spices in their own homes, increasing use of less-damaging utensils like- stainless steel, earthern vessels (they are going back in time with increasing realizations, but they are also much more costlier than aluminium now!), something that the landless tribes like – Paniyans, Adiyans cannot afford to do in their present conditions, maintaining home gardens and buying stainless steel utensil have their costs. They are not very particular about what kind of food they eat, like – the Kurichians, Kurumans and non-tribes.

Even the traditional practices of collection and consumption of *wild food plants* in a biodiversity hotspot of Wayanad by the mothers and children are increasingly vanishing, as Garcia found in her study among Paniyas, Kurumas and non-tribes, "*mothers are the transmitters* of knowledge about food habits to their children, specifically providing information about WFPs that *do not contain chemicals,* are *healthy and medicinal.* But, they also complain that their access to WFPs is diminishing, also the tastes of the younger generation are changing who prefer the modern foods prepared with chemicals, so they are least interested in the collecting and consuming WFPs, even though majority of the tribal mothers do it. There is also a growing process of *social stigmatization* related to WFPs, even though the children and the mothers are aware that WFPs are *good and healthy,* but since they are also related with *low status and poverty,* the children feel ashamed to acknowledge them in their routine life in schools and play."[13]

For example, during the field survey, it was observed that the tribes regularly collect and cook different varieties of green leaves regularly, like – *churuli, pulincheera;* consume roots, yams and tubers like – *tapioca, noorai, chena (elephant foot yam), kachil* (the yams and tubers were also consumed by non-tribes); alongwith that they also collect a variety of mushrooms, crabs and other small games[14]. The Kurichians, Kurumans and non-tribes grow the roots and tubers in their plots (even some of the Paniyans, Adiyans who have land), also grow – *ragi,* they have fruit tress like – jackfruit, mango, etc, some of the non-tribes also grow mushrooms. Even though

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13 Garcia, Gisella Susana Cruz (2006), "The Mother-Child Nexus. Knowledge and Valuation of Wild Food Plants in Wayanad, Western Ghats, India", *Journal of Ethnobiology and Ethnomedicine,* 2(39).

14 Nair, Vishwanathan *op.cit.*

all the communities consume different kinds of vegetables, roots, fruits, fishes, crabs, and other small games, still there are some slight differences. For example, the Paniyans are looked upon by others because they are said to consume particular green tubers, mushrooms and sometimes beef, which the other groups do not approve of. So, the kind of food items consumed also creates differences in social status. The Kurichians are given the highest status because they observe touch pollution, and take baths as soon as they go home, they rely almost wholly on their own produce, their cooking methods are said to be retain the nutritive value of the food, and most importantly, they mostly *avoid eating from restaurants.*[15] So, the current conditions call for conservation and proper documentation of traditional medicinal and lifestyle systems, alongwith spreading its practices among the younger generation, both tribal and non-tribal which should be introduced at the school and community level in order to promote interaction and respect for traditional food and medicine.

5.4 Health Infrastructure in the Field Area

The field survey also included the study and observation of the public health institutions in the region, which included two Community Health Centres, three Primary Health Centres, and three Sub-Centres.[16]

The SCs were all pucca buildings, with water, toilets and power. They were stocked with iron and folic tablets, paracetamol medicine, ORS and such simple drugs and first aid. Only one of them had phone connection, and in one of them the JPHN was not residing in the SC. In the month preceding the date of survey, the nurse in Aloorkunnu reported one neonatal death immediately after birth at home, and the Karassery SC also recorded two neonatal deaths, all belonging to STs. The cause for the deaths was not known since all happened suddenly at home.

15 *Ibid.*

16 The three SCs were – Aloorkunnu and Moozhimala SCs (Pakkom PHC), and Karassery SC (Noolpuzha PHC). Only three SCs could be surveyed because most of them were closed most of the days, they opened only during immunization and other camps. Also because most of them had only one staff – the female JPHN, who also had to go for house visits and other meetings.

Table 5.1 Accessibility and Infrastructure of Public Health Institutions

Infrastructure/ Accessibility	CHCs		PHCs		
	PERIYA	PULPALLY	NIRAPPATH	PAKKOM	APPAPARA
Panchayat	Thavinzhal	Pulpally	Noolpuzha	Pulpally	Thirunelly
Location (in main town/ away)	Away	Main town	Away	Away	Away
Public Transport Available (bus)	Yes	Yes	Yes	Yes	Yes
No. Of PHCs	0	5	0	0	0
No. Of SCs	8	0	6	4	8
All PHCs/SCs Connected with Pucca Road	Yes	Yes	Yes	Yes	Yes
Farthest PHC/ SC	Poroor (17kms.)	Noolpuzha (>50kms.)	Eruthukkal (>12kms.)	Moozhimala (>15kms.)	Chekotu col. (26 kms.)
Average Distance of SCs	11.8 kms.	-	6.9 kms.	10.8 kms.	16.5 kms.
Own Emergency Patient Transport	Yes	Yes	Yes	No	Yes
Open 24*7	Yes	Yes	Yes	No	Yes
All 7 days OPD	Yes	Yes	Yes	No	Yes
Nearest Hospital	District	Taluk	Taluk	District	District
Time to Reach Nearest Hosp.	>1hour	1 hour	1 hour	1 hour	>1 hour
Building	Pucca	Pucca	Pucca	Pucca	Pucca
Condition	Under Repair	Moderate	Good	Good	Moderate
Cleanliness	Poor	Poor	Fair	Good	Fair
24*7 Water Supply	Yes	Yes	Yes	Yes	Yes
24*7 Power Supply	Yes	Yes	Yes	Yes	Yes
Toilet	Yes	Yes	Yes	Yes	Yes
Phone	Yes	Yes	Yes	Yes	Yes
Computer/Internet	Yes	Yes	Yes	Yes	Yes
No. Of Beds	18	40	10	1	20
Store Room	Yes	Yes	Yes	Yes	Yes
Deep Freezer	Yes	Yes	Yes	No	Yes
Laboratory	Yes	Yes	Yes	Yes	Yes
All Drugs in Stock	Yes	Yes	Yes	Yes	Yes
Oxygen Cylinder	Yes	Yes	Yes	No	Yes
Labour Room	No	Bad State	Not Used	No	No
Operation Theatre	No	Bad State	Not Used	No	No
Incubator	No	No	No	No	No
Fixed Immunization	Wed.	Every Wed.	Every Wed.	Every Wed.	Every Wed.

As regards to the accessibility of the CHCs and PHCs, most of them were located near bus stops and had pucca roads to reach them otherwise (*Table 5.1)*. However, only the CHC in Pulpally was located in the main town, the other CHC in Periya was located a bit away from the main town, and it had no PHCs under it, only sub centres. The Medical officer in Periya was quoted as saying, "it's good that the CHC is located a bit away from the main town, this saves us the trouble of treating people with even slight illnesses like – simple aches or pains, who otherwise would have come if it was in the main town. So, we only get patients who really need attention." All the CHCs and PHCs have in-patient facilities and own emergency patient transport (either jeep or ambulance), except the Pakkom PHC in Pulpally, which is a newly constructed small building (there are no beds) and has out-patient facility only on Monday, Wednesdays and Fridays. The patients in Pakkom are referred to the nearby CHC in Pulpally in case they require admission.

Among the PHCs, the one in Appapara in Thirunelly Panchayat seems to be the remotest, with the maximum distance from the nearest hospital; it also has the maximum number of sub-centres which are, on an average, located at a distance of more than 15 kilometres, the farthest sub-centre being more than 25 kms. This seems to be the reason for the PHC to have the maximum number of beds for in-patients.

The main *issues* that require attention in all the CHCs and PHCs include: *vacancies and inadequate staffing, the absence or bad state of labour rooms* and *operation theatres. None of them have incubators for new-borns.* Majority of these institutions look quite vacant most of the days, not all the staff is available all the time – everyday some group of staff (either the Chief Medical Officers, or the Medical Officers, or the Junior Public Health Nurses) would have gone to attend some meetings (either of Health Department, or the Panchayat, or the Block Development Officer) or camps. All these places look like arrangements to dispense vaccines, prepare reports and give simple medicines and contraception. No place is equipped to handle emergencies. Half of the staff in these institutions is contractual; lots of posts are vacant, especially specialized doctors like – gynaecologists and obstetricians. Therefore, complicated illnesses, deliveries, emergencies – are either referred to the District Hospital in Mananthavady or Sulthan Bathery taluk hospital (that take about an hour on an average from most of the colonies); slightly more complicated ones are referred to Kozhikode Medical College (which easily takes four hours to reach). So, people prefer not to go to sub centres or PHCs - they either go to private hospitals (that are full

of patients), or go to main government hospitals directly, as they know they will be referred to these places anyways and want to save time 'running from one referral to another'.[17]

5.5 Health Personnel in the Field Area

The recent reports of the Directorate of Health Services in Kerala have revealed that there are 9 CHCs, 14 PHCS and 204 SCs in Wayanad. The total population of Wayanad is 816558, which shows that one CHC serves 90,728 population, a PHC serves 58,325 population and a SC is serving 4002 population in the district.[18] This shows that the PHCs are having a bigger population dependent on them and only 8 of these PHCs are 24*7.[19] Similarly, it has also been reported that in Kerala there is a large shortfall in availability of Pediatrician (required number is 90 and shortfall is 85!), or any kind of specialist, where 116 specialists are required, the shortfall is 107![20]. As part of the fieldwork, different levels of medical and paramedical workers were interviewed, including – Chief Medical Officer of a CHC, Medical Officers of PHCs, Health Inspectors and Junior Public Health Nurses of PHCs and Sub-Centres, and several Accredited Social Health Activists (ASHAs).

On Infrastructure and Inadequate Staffing

A very dejected and disinterested CMO of CHC Pulpally, who has been here for the last 20 years, opines - "Kerala's health sector achievements were due to the worker movements in 1960s and 70s and high level of awareness; currently, there is no such public stimulation, no socio-political will. Everything is wrong with the present state of healthcare where in-patients are getting more attention than outpatients; the population expected to serve by CHCs, PHCs, and SCs is increasing every year rather than decreasing (pointing to less investment in infrastructure in rural and remote areas,

17 As one non-tribal jeep driver stated – "it is quite difficult to arrange for transport at nights, rains even for medical emergencies for the remote colonies – the *most difficult task is to get the patient out of the colony;* once the transport is arranged, it is better to go to private hospitals or the main government hospitals directly rather than waste time in middle-level health centres."

18. The standard population to be served by a CHC, PHC and a SC are: 1,20,000; 30,000 and 5,000 respectively. For a tribal area, it is: 80,000; 20,000; and 3,000 respectively.
19. Health at a Glance, Standardised List of Modern Health Institutions, 2014, Govt. of Kerala, Directorate of Health Services, www.dhs.kerala.gov.in, accessed on 15th July'2016

20. Report of the High-level Committee on Socio-Economic Health and Educational Status of Tribal Communities of India, 2014, Ministry of Tribal Affairs, Govt. of India, www.indiaenvironmentalportal.org.in/files/tribalcommittee, accessed on 15th July'2016

thus increase in the load of work), lack of motivation among staff and doctors to work in Wayanad and their indifferential attitudes coupled with staff absenteeism and vacant posts, increased absence of preventive and promotive health care systems (spreading of health awareness) but increased focus on curative health care and specialized/ sophisticated hospital care for personal and political gains", are all contributing to increasing ill-health among the people.

The Medical Officers say "*population is increasing, but infrastructure is not*. Government is running health centres and hospitals with contract staff. There have been no permanent appointments recently. There is a need to create more posts according to population ratio – both para-medical and medical." The Medical Officer in CHC Periya, who joined recently, reported, "most of the posts are adhoc here, a CHC should atleast have a paediatrician, a gynaecologist/ obstetrician and a surgeon". Also, they say they "require new buildings and equipments. Private hospitals are popular because they are able to get quick approvals and build good infrastructure within a very short time."

On Other Staff

In the case of one particular CHC, the staff was blamed for not providing proper attention and care to patients who came after being referred by particular PHC or SC; this was attributed to some personal enmity of the staff and the doctors. Thus, people suffer because of bitter *interpersonal relations* between the staff of sub-centres/ PHCs and CHCs. Even the doctors working here do not want to continue, since they feel they would get better opportunities outside.

As the CMO of CHC Pulpally remarked – "The staff in the health institutions is good, but they are all here for their jobs, not completely dedicated or committed to their work and duties. The JPHNs are completely neglecting their field visits in the tribal colonies because of the increasing influence of ASHA workers who are not properly trained for this kind of work, so there is not much inspection or supervision there in terms of sanitation or health awareness. So, the ASHA network should be stopped. The State health care system should be strengthened."

On Tribes and Tribal Colonies

The CMO stated – "it is more important to provide safe drinking water, good housing, with proper sanitation and good nutrition to all here, "*malnourished and weak parents living in poor surroundings with low utilization of health care will give birth to malnourished and weak children, so the cycle continues*". He continued – "malnutrition is the major issue, it makes the treatment of infectious diseases and anaemia difficult.

Alongwith that, the problems of drinking water and sanitation and poor living conditions, compound the health troubles. The second most important issue is that of *home deliveries,* which are difficult to predict or prevent. Last month also there was an instance of maternal and infant death in the tribal colony. These events are quite disturbing." Home deliveries are a major issue in this region, especially among Paniyas and Kattunayackas. The health personnel in Pakkom PHC state – "the tribes have become habitual to government subsidies, love freedom, they are not disciplined, rather they expect everything from government. In the case of pregnant women, their tribal neighbours do not accompany them to hospitals, even if transport is arranged. They never go and admit themselves in hospitals. Whereas the non-tribes, living in the same areas, go and get themselves admitted before due date so that they don't have to deliver at home."

There are frequent instances of emergency medical camps being organized in the colonies during outbreaks of any disease. It is called an outbreak if 2 or 3 people of the same colony fall ill with the same disease within a short time. The outbreaks of cholera, typhoid, chicken pox, skin infections are common in the area. One Medical Officer stated- 'tribes never follow our advice on cleanliness and hygiene, also they don't use the ORS packets or iron-folic tablets that we give them.' The main infectious diseases are mostly water-borne in the colonies, because of unclean drinking water sources. The tribes are advised to boil the water, but they seldom do that.

The Medical officers say that the living conditions in the tribal colonies are a major issue for health. The CMO asks "How is it possible to improve overall health without addressing the housing, sanitation and food security issues? Promises are made in all meetings but no action is taken."

The health inspectors and nurses opine that the tribes, mainly the Paniyas, the Kattunayackas and the Adiyas 'have no aspirations. The parents (who are illiterate themselves) do not pressurize their children to go to school regularly and study hard. The children, taking advantage of this leniency, go to pick ginger, arecanut, mango, jackfruit during the peak seasons and sell it for some money. Once they attain this habit of earning small money intermittently, their interest in education and other activities stops forever.'

Most of the health personnel and medical officers, including the CMO feel that "*colonization* should be stopped, because the tribes are spatially marginalized again in this system, they should be allowed to settle along with the non-tribes and not live only

among their own tribe, so that their level of interaction and aspirations increase. It's not that they don't have money, the problem is they spend everything they earn quickly by eating out, drinking and buying things. They don't save anything for future. When they don't have any money, they don't mind being on empty stomach. Living within the colonies is the major reason for their backwardness. Otherwise, the repetition of ill-health and poverty would be unstoppable."

On Their Role

The duties of a chief medical officer include – out-patient and in-patient care, attending medical camps during immunizations and outbreaks, administrative work like - attend block level meetings of the health department, arrange for infrastructure and equipments through Hospital Management Committee at the level of the Block Panchayat. The Medical Officers in the PHCs also had similar duties, but they had to do minimum four field visits a month, alongwith being present in all the medical camps. The Medical Officers seemed satisfied with their roles, except for the administrative duties, as one MO stated – "medical duties only would be preferable. Lot of administrative work hamper our medical work."

It was observed during the visits to the Primary Health Centres that all meetings, camps, fixing of dates for immunizations, arrangements of duties were done by the respective health inspectors of those PHCs, who had served more number of years in that area than the Medical Officers, who were relatively younger and new to their positions and area.

The CMO remarked- "there is a need to focus on primary preventive health care rather than higher level curative care. This has been turned upside down. My post is not effective enough to bring change. It is difficult to coordinate between different departments – forest, food safety, panchayats and police. We cannot take decisions independently because approval from all fronts is required, which means there is lot of political intervention. But, if anything goes wrong, the health department is held responsible for sure."

The Junior Public Health Nurses (JPHNs) are supposed to do the house visits alongwith ASHAs of the respective colonies, especially for checking up on the pregnant women and young children. But, many ASHAs complain that the JPHNs do not accompany them regularly, they accompany them only during the polio campaigns. The JPHNs say they are overburdened with meetings, trainings, camp duties and formation of reports, they simply do not get the time to visit colonies frequently. *Infact, all the*

health personnel say they are getting increasingly busier with lots of surveys and report submissions and trainings, which leaves them with lesser time and energy for their real duties of house visits, health awareness and patient care. They say they do try to accompany the ASHAs whenever they can, because if anything goes wrong in their area, the JPHNs are answerable and not the ASHAs. And, most of the JPHNs live far from the colonies, in or near towns. Travelling to the colonies regularly requires lot of time, its impossible to do both health centre duty and field visit every day, especially visit those households and colonies that are remote. They also blame the ASHAs for spreading ill-will among the tribal women regarding the JPHNs, as one JPHN of a PHC says, "*I have been working among the tribal women for the last 28 years, and alongwith my colleagues and doctors, spreading health awareness among them, we are the ones who introduced the ASHAs in the colonies. And now, the ASHAs think they are more effective than us when it comes to convincing the tribal women in utilizing ANC and deliveries. Yes, I agree, some of the ASHAs are good, but most of them are political activists (they are member in different political parties) and not serve the tribes. They have shops, fields and party work. They do not do proper field visits – not interested in marking pregnancies and immunizations. The nurses have to inform them of new pregnancy cases. Only half of them are committed. They want to control the medical staff here, but not interested in bringing any real change in the mindsets and awareness of people here. They have more time in their hands and other intentions to visit the colonies compared to us, for establishing "networks" and getting a foothold in the area. Otherwise, they are not bothered. Obviously tribal women are more comfortable and open with them. But, that doesn't mean we are ineffective or lazy."* they feel that ASHA posts should only be given to women who are committed and not to those who want to take advantage of the people's expectations and channelize it differently.

Then, there are also some JPHNs who don't visit the colonies regularly and are dependent on the ASHAs completely for their monthly reports and reporting of pregnant women and immunized children. As there was this nurse in Appapara, who accompanied the researcher alongwith the ASHA, to an Adiya colony. It could be plainly observed that she wanted to keep a physical distance from the tribal women. Once when we had to cross a narrow stream to reach a colony, the nurse asked the ASHA worker - *"is it okay to step on the water? Don't these people pollute it?"* For this, the ASHA gave the reply- "*it is okay. The Adiyas do not pollute, it is the Paniyas."* Same attitude of impatience and insensitivity was observed during the distribution of

supplementary food packets to adolescents and lactating women in colonies[21], when the JPHN ordered the jeep driver - "give food packets only to those who come to take them, those who don't come to take food now, need not be given food next week onwards." They were only bothered about finishing the distribution process quickly and comfortably. Such reactions and responses make the tribes feel distant from health personnel[22], and defeats the whole purpose for which these programmes were made in the first place.

5.6 Accredited Social Health Activists (ASHAs)

The role of the ASHAs mainly include identifying households with pregnant women and assisting them in accessing regular ANC, ensure that they consume iron and folic tablets, and accompany them in availing institutional deliveries. Along with that, they have to keep a list of 0-6 age group children, their birth details, their immunization details, and make sure all of them get immunized on time. The other tasks include- checking up on the colonies regarding cleanliness and sanitation, and chlorinating the wells and assisting the anganwadi workers or the nurses during camps, surveys and house-to-house follow-ups for polio drops. The ASHAs are appointed by the Panchayat, they get some nominal stipend of Rs. 800 per month plus some additional amount as per the number of cases of immunization in a year, and number of women they brought for institutional deliveries. The field survey was done mainly with the assistance of some 10-12 ASHAs, majority of whom were non-tribes, only one was a Kurichia.

All ASHAs were of the view that child health care utilization was not an issue among Kurichias or Kurumas, who not only fully accessed the facilities but also had well-developed systems of traditional medicine and nutrition. Most of the issues regarding utilization were mainly faced by- Kattunayackas, followed by Paniyas and Adiyas. A popular ASHA among them stated – 'Kattunayackas don't take much effort in accessing child immunization and ANC. Paniyas seem to be better.' Similarly, many

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21 Every Saturday and Sunday, food packets – usually biryani on Saturdays and eggs, milk, and *nenthira pazham* (one of the healthiest variety of banana) on Sundays - are given to adolescents and pregnant or lactating women, prepared by Kudumbashree units, distributed by ASHAs and JPHNs in all the tribal colonies.

22 It is important to mention that ***majority of the health personnel in the CHCs, PHCs and SCs were non-tribes, only a few were Kurumas or Kurichias. During the field survey, we did not meet a single Adiya, Paniya or Kattunayacka health worker or Panchayat worker.***

ASHAs in Pulpally Panchayat, who were covering the Paniya and Kattunayacka colonies, complained that the tribes never used the chlorine packets to purify the well water, and the iron and folic tablets are simply stacked up in their homes; neither did they use the ORS packets that are given to them when children have diarrhea. The ASHAs covering the Kuruma settlements in Noolpuzha, or the Kurichia settlements in Thavinzhal did not have any such complaints.

All the ASHAs love their work (as they say it concerns women and children), as one said, “I love my job. I visit all the tribal colonies in the Panchayat and the people are very attached to me. The tribes now trust us. Because of our efforts tribes are now going for hospital deliveries. In order to keep up the motivation and cooperation among tribes, it was very essential to be friendly, honest and soft with the people here. It takes a lot of time for an ASHA worker to gain their trust before they agree for vaccinations, ANC and hospital deliveries. It is a lot about being committed, dedicated and efficient to make the interaction smooth and positive. We cannot intervene suddenly and take decisions for them.” Another ASHA, (who covered some remote Kattunayacka colonies with us) opined – “initially, it was a lot of hard work as establishing good relations with the remote tribes was very difficult because of language problem, due to which the response was extremely slow, they showed no interest in health care or contraception; but now things seem to be slowly changing – still we have a very long way to go in order to persuade them to go for regular check-ups on their own without being dependent on us and the most sensitive part is to persuade them to give up home deliveries”. Once she went to admit a Kattunayacka woman on her due date, but “that woman came back from the hospital before the delivery. Most of the women are – scared of hospitals, injections, strict/ bad treatment by staff; most importantly there is no one to accompany them during delivery and post-delivery times because husbands cannot afford to miss work days, so the women do not like being alone in hospitals, as they are used to the company of other women or their men whenever they step out of the colonies. Earlier it was very difficult to even talk to them because of language and their fear of outsiders (every time we came, they used to run into the forest and hide - even now they hide whenever we come with doctors for vaccinations), but its changing now. Now, most of the people listen to us, but some are very rash – they say they know how to take care of their kids and themselves, don’t need advice from outsiders, whenever they are asked to be regular with immunizations and visits”.

But after 8 years of working hard, some of them do have complaints regarding their salaries and the jobs' temporary nature, and transport. They feel that Rs.20 per immunisation is not enough. Many of them say they like the work, and its goals, which makes it highly satisfying, but it is a heavy drain on their energy, time and even money. They don't get regular wages. They got their dues only once or twice in a year, one said she received only about Rs. 11,000/- for a whole year's work, which included thrice-a-week colony visits (most of the ASHAs have 5 to 6 colonies under them, which might be far, for which they have to arrange own transport), registering pregnant women, children, giving vitamin A, visiting during polio camps, again follow ups, taking the pregnant women for deliveries, arranging transport, submitting monthly reports in PHCs, SCs, etc.

It is actually *a full-time job*, not a part-time twice-a-week or thrice-a-week one! And all this, amidst heavy rains, the narrow and rocky paths to colonies, and in remote forest colonies, encounters with wild elephants, wild buffaloes and snakes are not uncommon. An ASHA in Noolpuzha said, "the only difficulty about the job is the *transport issue* - we have to walk a lot of distance into interior areas, where there is no safety from elephants, so these areas need better road connectivity and transport 24 hours as even the jeeps ply only till 6 pm and night time commuting in vehicles is very restricted here. So, people go directly to hospitals, than go to sub centres or PHCs which they know are again going to refer them to taluk or district hospitals only." In fact, most of the colonies are quite difficult to reach, transport costs for visits are more than their income. So, some remote colonies do get neglected, and are only attended to during camps. Another ASHA was quite bitter, "it is not possible for us to visit every pregnant woman every day to ensure that she takes the iron and folic tablets, provide us a proper and regular means of transport, we might even feed them the tablets with our own hands, we anyways spend a lot of our own money in going to these colonies, since it is not possible to walk to the most distant ones. Some ASHAs are lucky to have colonies that are near their homes."

One of them stated- *"the health inspectors, the nurses and doctors have fixed working hours, permanent job, high regular salaries for sitting in one place and working; the tribes get everything given to them at their doorstep for free just for sitting in their homes; but we ASHAs, who actually do lot of work, have no fixed hours, no permanent job, and no income"*. Some of the ASHAs have started their own tailoring business, or they take care of their land/livestock and *being an ASHA becomes*

secondary. Still, many of them strive to do their duties to their best. Some say that they feel like quitting their posts, but are only hanging on because they like the people and hope that one day their posts will be made permanent.[23]

But then, there are also a few who say, "we were told beforehand that as ASHAs we will not be getting any salary, nor will it be permanent- so why raise hue and cry now? I am very happy with my work. I like to assist these people." This was sided by Nalini who, remembering an instance, said- "*in one of the colonies that I cover, there was a case of home delivery some 3 years ago at night time. When we went there early in the morning with the doctor, we saw that the infant had died and the mother was bleeding heavily. Even though we were terribly upset that we could not save the infant, we were able to avert the death of the mother. When we realise that our timely actions could save even one life, then we feel proud to be an ASHA."*

Definitely, the networking and **role of ASHA workers is very important** in this field area, as was observed during the fieldwork. The relations between the ASHAs and tribal women, especially Kattunayackas, is very cordial in most of the colonies. Therefore, removing the ASHAs would not be the most ideal thing to do in such remote areas, where the JPHNs either do not have the time or lack interest or patience to gain the trust of the tribal women. Many ASHA workers, who have been working in these colonies since the introduction of NRHM for the last 8 years, strongly feel that their hard work and regular contact with the women in the field, in the remote colonies has definitely improved the maternal and child health utilization of the tribal mothers. Though, it has to be accepted that even for the ASHAs, it is very difficult to visit the remotest colonies very frequently, especially during the rains, and they are gradually losing their level of enthusiasm and interest because of low monetary benefits of being an ASHA, along with the sarcasm and ill-wills of the *nurses and doctors of the PHCs and CHCs, who feel that ASHAs are not qualified enough to deal with medical issues* and blame the ASHA network to be the main reason behind the increasing sluggishness among the JPHNs.

But then, most ASHAs feel "*only medical knowledge and strict implementation will not bring results as they forget the basic fact that inter-personal interaction and skills are more important in establishing trust among women and mothers, alongwith*

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23 Infact, during the field survey of January'15, one day all the ASHAs were on strike, demanding that their salaries be increased and their posts be made permanent.

making them aware about the need and the ways to take care of themselves. And for this, one needs to convince them patiently which has taken us years, so that they can trust us, and know we are not there to harm them – some very important things for which JPHNs do not have the time".

Other Issues

There is also the problem of *under-reporting* in the health centres, who have to prepare monthly reports on home deliveries. During an interview, the medical officer a PHC referred to a case of a recent home delivery in a colony, but when the researcher looked for its record in the monthly report of that PHC, it mentioned zero home deliveries – which means that particular case went unrecorded. This could have happened due to a small mistake, but it matters a lot in policy discussions.

Most of the deliveries take place in the two district hospitals at Mananthavady and Sulthan Bathery (the PHCs do not even have gynaecologists or obstetricians) which are themselves quite far from the colonies; on top of that, the risky or complicated cases of delivery (high blood pressure, twins etc) are referred to the Kozhikode Medical College which is, on an average, 4 hours from the colonies. More tribal women are marked as risky cases of delivery than non-tribal women[24] (maybe because of the nature of their work, nutrition, general health, and previous delivery), and they are most reluctant to go to hospitals for deliveries because of the nature of setup (or their previous experience[25], as all the health personnel agreed on one point – *the tribal women, esp. Paniyas and Kattunayackas are reluctant to go to hospitals, even if the nurses or doctors take a vehicle and are ready to accompany them*) and lack of assistance. The medical camps organized during the different days of the month, are not enough for the health problems of these people. They need more holistic ways of healing, not just allopathic medicines, integrate plural systems of medicine since lot of their children and elders suffer from chronic forms of diseases, at the same time making efforts towards providing them their 'spaces' that were snatched away from them.

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24 As reported by ASHA worker.

25 The ASHA workers reported than many tribal women did not like to deliver in hospitals because there was no one to assist them from their home or colony. Secondly, even if women gave their first birth in hospitals, they refused to come to hospitals for their successive births because of their previous experience where they were made to feel small, passive, lonely, had to follow strict orders, and had to give birth in a strange setup with so many apparatus, which was very stressful for them.

5.7 The Conditions in Anganwadis

During the field survey, observations were also made about the conditions of seven anganwadis present in or near the colonies, the details of which have been given in *Table 2*. It shows that teachers and helpers mostly belong to the non-tribal group, except in the case of Kurichia settlement, where both the staff are Kurichians, and the Kuruma settlements, where the helpers are Kurumans. On an average, there seem to be around 15 children, above 3 years of age, who attend the anganwadi regularly, and the proportion of ST children appears high in most cases. Two of them do not have drinking water facility (either well, or pipe), so they bring from neighbouring households. Similarly, three do not have toilet facilities, in one anganwadi, the children use the one in the teacher's home, which is very near. *None of the anganwadis have electricity available, there are no fans or lights in any of them.* One of the anganwadi in Chekadi was a fully kachha one, made with bamboo sticks and thatch and mud floor, and it was almost about to fall. They were waiting to get shifted to a pucca one soon. All the other were pucca buildings, either government-owned or rented.

Compared to Pulpally, the condition of anganwadis in Noolpuzha, Thavinzhal and Thirunelly Panchayats seem to be much better. All of them have gas for cooking food daily. Most of them do not seem to have a proper boundary wall or a play area for the children. The typical setup consists of a big hall, with a big window, little chairs and tables for children, some alphabet charts and pictures, some toys, an almirah for keeping the registers, paper for the teacher, and a weighing machine. Most of them had a small metal ride just outside the room, but it was either broken or unfit for play.

The condition in rented anganwadis is worse, where toilets and drinking water are a big problem. And mini anganwadis, where there is only one lady worker who has to double up as the teacher-cum-cook, are worse off with less space, but the number of children who come here are same as in main anganwadis. Faulty weighing machines are a common complaint in many. All the anganwadis maintain a register of women and children, provide supplementary nutrition to all, and education.

Table 5.2 Infrastructure and Conditions in Anganwadis

Name	Nitra	Mada-paramb	Velutho-ndi	Kolichaal	Chek-adi	Marodu	Kuni-yoor
Location	Thirunelli	Pulpally	Noolpuzha	Thavinzhal	Pulpally	Noolpuzha	Thirunelli
Teacher	NonT	NonT	NonT	Kurichian	NonT	NonT	NonT
Helper	NonT	NonT	Kuruman	Kurichian	NonT	Kuruman	NonT
No. Of Children	16	12	13	20	13	14	11
ST Children	14	11	4	18	8	14	8
Drinking water	Yes	No	Yes	Yes	Yes	Yes	No
Toilet	Yes	No	Yes	Yes	No	Yes	No
Power	No	No	No	No	No	No	No
Building	Pucca	Pucca	Pucca	Pucca	Kachha	Pucca	Pucca
Condition	Bad	Bad	Good	Good	Bad	Good	Good
Cleanliness	Ok	Bad	Ok	Good	Ok	Good	Ok
Ventilation	Ok	Bad	Good	Good	Ok	Ok	Ok
Kitchen	Yes	No	Yes	No	Yes	Yes	Yes
Gas	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Boundary	No	No	No	No	No	Yes	Yes
Play area	No	No	Yes	No	No	Yes	No

Daily Routine:- The work of the *helper* usually starts at 9.30, before the teacher and the children arrive - she opens the anganwadi, cleans the room and the surrounding area first thing, and then, in case there are no pipes, she fills up water from the well for drinking, cooking and cleaning. The teacher usually comes 5-10 minutes later. Some of the teachers also bring some children with them, whose houses fall in their daily walking route. All the children come by 10. After this, different anganwadis function differently. In some, the children are simply allowed to play while the teacher attends

to some paperwork and the helper cooks. While, in others, there are daily prayers, regular classes where they are taught the national anthem, alphabets and rhymes, there are also different themes for different months of the year and in that particular month the children are informed on different aspects of that theme, like – sun or water or trees with the help of songs, stories, pictures. Some of the teachers also took them for nature walks in the village, showing them trees and plants. The usual menu almost everywhere included- *ragi drink at 11 am*, a kind of porridge made by cooking ragi in water, added with sugar and milk powder, served in a tumbler to all the kids; lunch is *salted rice kanji mixed with green lentil at 12.30 pm*, and *upma around 3 pm*, both of which are served in a steel plate and all the children are made to sit in a row and given their food, which they have to eat themselves. Sometimes, they are given eggs, groundnut cakes made in jaggery, and *payasam/kheer* on special occassions. After lunch, all the kids are made to lie down for an hour on mats spread on the floor and asked to sleep. By 3.30, the mothers came to pick up their children, and the teachers went for house visits. They maintained a register of all the pregnant women and children till the age of 6 years, even if they did not attend the anganwadis. They register births and deaths, details of pregnant women, anthropometric measurements during the house visits. Non-tribal pregnant women are given upma in the anganwadis, which they have to come and collect everyday, which only a few did. The anganwadis are inspected by the respective ICDS Supervisors in that area, who in turn, have to report to the Panchayats. The Panchayats provide the goods and provisions required by the anganwadis.

Many teachers complained that their area was very big, and only the children living nearby attend the anganwadis regularly. One teacher in Appapara, Thirunelly said the location of the anganwadi was faulty, since she had 5 to 6 Adiya colonies under her, but the children from only one or two colonies are able to attend, the others were not in walking distance, and the anganwadi is not even located near a road. She had to pick a few children while coming from her home daily, and drop them back. Since she had to pick up children from their homes, the anganwadi starts late. The children, on most days, got tired of walking so long. Another teacher working for the last 6 years in Thirunelly, said – "Only nearby children come regularly. The colonies are far away, some are more than 2 kilometres from here. It is difficult for mother and children to walk difficult terrain every day. Even we do not have time to go and bring them every day. During the rains, even the existing paths become unwalkable. The non-tribal houses are far away, so pregnant women also couldn't come every day, which was

resulting in wastage of food. So, we stopped cooking upma for general pregnant women. Tribal pregnant women get wheat and oil from us once a month". But, wherever, the anganwadi was located near the non-tribal settlements, the non-tribal pregnant women came to receive their food regularly. Another teacher in Noolpuzha stated "most of the children here attend regularly because our anganwadi is very good. The most regular children are those of Kurumans, whereas the Kattunayackas are the least regular. Two Kattunayacka children are absent now because they are having some skin allergy, mainly because of so many dogs in their houses. The dogs are said to be a protection against the elephants, but they always give diseases." One Anganwadi teacher asked- *"if the tribal pregnant women and lactating mothers of the remote colonies can come to take their monthly quota of wheat and oil and the amritham podi[26], then why can't they come to leave their children in anganwadis daily?"* But, another complained, who has been working as an anganwadi teacher for the last 15 years in Noolpuzha,– "the tribal mothers do not even come to get their supplementary nutrition regularly; they expect us to go and give it to them, even then they feed it to their dogs and goats." One teacher in Pulpally and another in Noolpuzha, working for the last 7 and 10 years respectively state – "The response from the Kattunayackas and Paniyas is not good, they are all registered but just not interested in bathing and dressing up their children and sending them here, they are so lazy. We visit them sometimes, but we cannot go daily, their houses are far."

The helpers and teachers are all satisfied with the nature of their work, as an anganwadi teacher in Pulpally, states- "anganwadi systems are best to teach kids values, and make them independent as there is no pressure on them unnecessarily. We are personally involved with each and every child, and make sure to converse and interact with every child daily. The mothers also feel comfortable with us, since they see us every day and the interactions are easy. The private schools and nurseries, start alphabets and rhymes, without any focus on teaching values, creating awareness, or even making them independent." Another teacher said – "It is also an opportunity to know your community better, build social networks, and to be attached with people around."

26 Amritham podi is a multi-cereal based powder which is fed to infants in the form of porridge. Lactating mothers are given this after their infants attain 6 months of age till the age of 3 years. The ASHAs say the tribes don't feed it to their infants, rather they make dosas with the podi and consume it themselves, or they feed it to their dogs.

Issues:- However, they also feel *overburdened*. All the teachers opined that they had to do too *many tasks* every month, which left them with very less time to attend the children properly and engaging them qualitatively. Many teachers felt bad that they were not able to spend every working day with the children, '*if we see practically, we get only 10 - 12 days per month properly to engage with kids. The rest of the days go in all kinds of – field visits, training classes, visits to panchayat offices and ICDS offices, paper work, writing and submitting reports, accompanying health personnel, ASHAs and others during immunizations, polio programmes and surveys. On such days, only the helper stays with the children. How can we teach anything valuable to children? So, we need more staff to do all the miscellaneous work here. We get absolutely no time to teach quality things to our children.*" So, there is no continuity and the parents and children also lose interest, resulting in most of the non-tribes in the area sending their kids to private schools and nurseries. All the teachers and the helpers complained that they were receiving were *very low salaries* compared to other government staff, the salary of a teacher was Rs.5000/ pm, and that of helper was Rs.3000/pm at the time of survey[27]. They demanded that their pay should be at par with other government teachers and helpers because managing and engaging small kids is more difficult task than simply teaching bigger children. One stated – "we have six working days, only Sundays are free. Even then, many of our Sundays go in surveys and polio camps. Our job involves *–health work-social work-house visits-regular teaching*. Our days are full. We need better salaries, good infrastructure and good social support."

The Paniya, Adiya and Kattunayacka mothers respond, "going once a month and going daily is different. The anganwadis open only at 10 am and close by 3.30 pm, but we have to go to work by 7.30-8 am and return only at 5 or 6 pm, then how can we leave our children in anganwadis, and they cannot be allowed to go alone because the anganwadis are far and the paths to reach them are not that safe." In some colonies, like- Mangakandi, there is an anganwadi, but the teacher seldom comes, even though all the children are registered. The parents say the teacher never tried to reach them or talk to them, seldom visited the households there, and does not show much interest in her job, so they don't send their children.

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27 In the beginning of 2016, their salaries were increased to Rs. 10,000 and Rs. 8,000 respectively, after continuing protests and demonstrations by the anganwadi workers in Kerala.

5.8 Conclusions

Thus, the chapter has clearly brought out the observation that the tribes are not averse to using modern medicine but the facilities need to reach them better and closer to their settlements or colonies. The systems of traditional medicines are still strong only among those whose colonies are near forest boundaries, from where they can pick their herbs. For most of the illnesses, the tribes, especially Paniyas and Adiyas readily go to government health centres or camps, or even private doctors if their purse permits because they also increasingly want quick relief from their illnesses. But, the observations on public health centres and their conditions have also brought out the facts that the infrastructure is not enough to deal with emergencies or any complicated illnesses. There is only one major district hospital at Mananthavady, which has the specialized doctors. The PHCs and CHCs, as the medical officers themselves report, have shortage of permanent specialized doctors like- pediatricians, obstetricians or gynaecologists or even surgeons. The doctors and the JPHNs complain the remoteness of location of the tribal colonies to be a big issue, and blame this remoteness to be the reason why they themselves do not prefer to visit the colonies. Then, how can they blame a sick mother or child or any ill person for that matter (for whom the distance to the health centre might be difficult to cover) for not seeking immediate medical advice for illnesses or deliveries or any acute episodes?

Even though there is the possibility of relatively effective indigenous methods and medicines for illness treatment among tribes; who are thought to have been traditionally capable in their use of herbs and leaves for various purposes including health care; there is lack of initiative by tribes as well as the government to promote their traditional knowledge in a systematic manner.[28] Moreover, with the destruction of the rich forests and their bio-diversity, changes in the climatic conditions in the region, land use-land cover changes, changes in lifestyles and Deprived ST groups tend to display high levels of resignation and to lack the capacity to aspire; consequently their health perceptions often do not adequately correspond to their real health needs.

But, for the last two decades, the state government seems to be focusing only on the curative aspects of health, as Soman and Panikkar state on the prevailing health situation of *low mortality and high morbidity* in Kerala, which 'can at best avert death

[28] Maharatna Arup (2000), " Tribal Fertility in India: Socio-Cultural Influences on Demographic Behaviour", *Economic and Political Weekly*, Vol. 35 (34), pp. 3037-3047

or mitigate the effects of diseases, but cannot reduce the incidence of the latter (tackling morbidity requires more preventive and promotive measures, positive changes in nutrition levels and conditions of living)'. That is why Kerala has one of the highest morbidity rates, even though the duration of a morbidity episode might be less because of timely medical attention due to better levels of health consciousness'. They continue to say 'even availing medical care promptly involves *money cost* as well as *opportunity cost*.' So, rather than unduly praising the state government for its curative health care, which anyways educated and aware people will avail, it is more important to question why the governments are not focusing on improving health through better nutrition, housing, sanitation and proper drinking water.

As Panikar and Soman continue to state – 'economic and social development break the vicious circle of poverty and ill health, because increased socio-economic status not only increases the access to health care, level of knowledge, and response and recovery of a person during a morbidity episode but *also ensures* cultural acceptance of various health services and reduces the feelings of social distance between oneself and health practitioners. So, focusing only on curative aspects and direct intervention like- mid-day meal scheme might be counter-productive, which actually increase the dependence of people on local power structures or on outside assistance instead of increasing their potential productivity or contributing to a more equitable distribution of resources, working against the establishment of the capability and the sense of self-reliance that are vital for change. Significant and lasting improvements in health and nutritional conditions require social and economic changes that can be brought about only when the poorest perceive changes or opportunities for changing their lives and have greater access to the productive resources necessary for them to do so. Rather the focus should be on – maintaining kitchen gardens and poultry farms in schools, credit for fishermen, alternate low-cost housing using local materials, safe water by using low-cost bamboo pipes, reviving ponds/wells with brick-lime rings and disinfecting them, increasing pit-latrines/ bore-hole latrines that waste least water, providing health education among children and providing guide books to teachers'.[29]

Nisha[30] (2011), while writing on the health-seeking behaviour of scheduled tribes in Wayanad, reports that there is increasing awareness towards importance of

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29 Panikar and Soman, *op.cit.*

30 Nelson, *op.cit.*

health and health-care with education and also due to introduction of modern health-care facilities by government, even though certain barriers like- inconvenience, expense, unpleasant, painful and upsetting situations and cultural barriers – are still operating. All the communities are aware of the immunization programmes and readily agree to them, except some Kattunayackas. All of them prefer different types of medicinal systems for different types of ailments. The Paniyans and Adiyans, who always want quick relief, go for allopathic medicines if they have cash ready, otherwise they attend the medical camps. But, the Kurumans, Kurichians, Kattunayackans try their own herbal remedies first for various illnesses like – cold, cough, stomach problems – only if it is not cured, they go for allopathy; for other diseases like - jaundice, fever, snake bites they prefer their own medicines. They also prefer ayurveda medicines if they have chronic aches, rheumatism, and general weakness. And this is also dependent on the location of their colonies. If their residence is near the health centres, or towns, the tribes even go for private allopathy for their children.[31] If they are away from the health institutions and towns, then they resort mainly to home remedies and traditional healing first.

The provisions and utilization of health care services might not be very relevant for the well-to-do sections, whose health needs (risks and vulnerabilities are less) are different from the poor or the not-so-well-to-do sections. It is precisely for this reason that it is very important to study and understand the nature of health care utilization, among under-five children, who are the most vulnerable age groups in any population, that too in a socio-economically and culturally excluded "population" of scheduled tribes. This is due to the very basic fact that their risks and vulnerabilities are very high (socio-economic backwardness) and therefore, are more dependent on the government-provided systems of health care. Even though the government run health institutions provide immunizations and organize medical camps regularly, still the people find it difficult to access health care for the mothers and children during times of need, which is increasingly making them dependent on private care. If only for this reason alone, the government should try to take health care institutions (atleast perform normal and high-risk deliveries at a closer distance, even consider home deliveries in the case of

31 There are also some private health institutions that cater to the tribes, and charge nothing or nominal fees from them.

remotest tribal colonies or the most hesitant mothers) and staff closer to tribal colonies, rather than expect them to come and utilize (even if the treatment is free, the transport costs are very high, and there is no guarantee that the doctor will be available most of the time)[32].

The anganwadis, if accessed regularly, can provide some sort of protection against hunger for children above the age of 3 years if some solution is created for those Paniyan, Kattunayacka and Adiya children who are not able to access them because their parents are working, or not interested, or whose houses are very far. But how to ensure regular adequate support, nutrition and healthcare for the children below 3 years of age, mainly those who belong to the remotest and the poorest colonies and households who are left in the care of the elders, or older siblings most of the days is still a major question, where we see them lying or simply running about naked or with inadequate clothing; running noses, skin infections and coughs are a common sight, growing up in surroundings that are clearly not-so-well-maintained, because malnutrition and neglect of illnesses at this stage could have serious health impacts later in their adult life.

All the arguments make complete sense only when health care and medicine is learned as a 'science', but practiced as a 'service', which is not 'sold'. And that's the reason why the tribes (in fact even non-tribes) prefer their healers and ASHA workers to government doctors. As Farmer says – "Physicians need social theory (including anthropology) in order to resocialize their understanding of who becomes sick and why, and of who has access to health care (or more broadly, human rights) and why. Allowing *market forces* to sculpt the outlines of modern medicine (that at its best will work towards *managing social inequality and keeping the problem under control*) will mean that these unwelcome trends will continue until we are forced to conclude that even the practice of medicine can constitute a human rights abuse."[33]

32 Even during the fieldwork, it was observed that majority of the sub-centres remained closed (because there is only one staff – nurse is usually gone for some meeting or other work- the nurses were available to accompany us to the field only when the ASHAs were unavailable); even in PHCs, we didn't see any doctors – only the office staff and some nurses; only the CHCs had lot of staff and doctors – but even here the infrastructure, the beds were not good enough; it didn't seem as if they were used often.

33 Farmer,*op.cit.* p.138

Chapter – 6

SOCIO-ECONOMIC SITUATION OF HOUSEHOLDS AND POPULATION IN WAYANAD AND TRIBAL EXCLUSION IN KERALA

The present chapter attempts to explain the current socio-economic conditions of the surveyed households and population (the families of the children under study), with regards to the location of the settlements of the various groups; the household assets like – land, vehicle; household debts; housing conditions and amenities like – drinking water, power supply; educational levels of the people and their current work status. The settings and the capabilities of the families where children grow up and spend their childhood have attained increasing relevance over the years. The second section of the chapter is a theoretical exploration of the historical and political processes that have led to the present differences in the child health, health care and socio-economic conditions of the communities under study and also to the establishment and workings of the public institutions in the area.

I. SOCIO-ECONOMIC SITUATION OF HOUSEHOLDS AND POPULATION IN WAYANAD

6.1 Location of Colonies/Villages

In the hilly district of Wayanad, the accessibility of the villages or tribal colonies is not that much dependent on the distance from the town, but more on the availability of right transport at the right time. As we can see from *Table* 6.1, higher proportion of scheduled tribe households are located in remote villages or colonies[1]. Most of the Kattunayacka households have remote locations, followed by Adiyas. This does not imply that they are very far from the nearest towns, but its more about their

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[1] Here, the colonies were decided to be remote or accessible based on the difficulty and timing of access. Here, **Remote locations** are those: that could be far away from the town with few/ no bus services (elephant/ wild buffaloes zones), specially no movement during evening/nighttime, so that even access by other means of transport is dangerous. In most cases, only one bus plies in the route. Walking by foot is dangerous, during rains, they become marshy. Such colonies can also be found near towns.
Accessible locations are those: that could be near/far from town, but usually having frequent bus services, also accessed by other transport any time, even night time, having all-weather roads. Even the accessible locations are difficult to reach during the rains.

*Pani.-Paniyans, Kuri.-Kurichians, Kattu.- Kattunayackans, Kuru.-Kurumans, Adi.- Adiyans.

location either near or inside the forests, or hilly areas or both, that are also the areas of wild elephants and buffaloes and absence of roads. So, transport into and outside these colonies/ villages is impossible during night time; even during day time the transportation is limited, only one or two buses ply in these routes with minimum frequency. So, remoteness in this context is more about availability and accessibility of transport than anything else.

Table 6.1 Location of the Households (%)

Location	Name of Social Group							Total
	Pani.*	Kuri.*	Kattu.*	Kuru.*	Adi.*	ST	NonST	
Accessible	84.8	65.6	40.6	67.2	51.6	62.1	**73.4**	64.0
Remote	15.2	34.4	**59.4**	32.8	48.4	37.9	26.6	36.0
Total	66	64	64	64	64	322	64	386

The Paniya colonies in Pulpally Panchayat were observed to be mainly located amidst agricultural fields and low hills – since Paniya are the biggest tribal community here, the colonies were also very big; a few were located in or bordering forests. Field observations show them to be in a bad state in terms of cleanliness of the colony, most of the houses were kachha, placed closely with each other, looked dilapidated, and neglected.

The Kattunayacka colonies, again in Pulpally Panchayat, were located in some of the most remote places, most of them in or near forests[2], they were the least networked (in terms of roads, daily contact and interaction) with other communities/non-tribes; some Kattunayacka colonies were also seen amidst agricultural fields. As compared to the Paniya colonies, the Kattunayacka colonies were very small, but their families were big, and the houses were small and closely placed.

The Adiyas colonies of Thirunelly Panchayat were also mostly located in hilly areas, forest borders, plantations, which were also the corridors of elephants and gayals. The paths to these colonies were very meandering, narrow and rocky, even though most of the colonies were quite close to main roads and bus stops. Like the Paniya, the Adiya

[2] During our visits to many of these colonies, we saw recently uprooted trees by elephants, in some places inside forests, we came very close to the presence of wild elephants. Even one or two bus routes pass through the forests, but the frequency of buses and their timings are fixed. They don't operate at night.

of Thirunelly also had big colonies. The placing and size of houses was similar to that of Paniya.[3]

Most settlements of the Kuruma in Noolpuzha Panchayat were also quite remote, bordering large agricultural fields, forests, and some near towns. Most of them possessed land, so the settlements were big, spacious, houses were comparatively larger. Even though reaching some of the Kuruma settlements was difficult (they were very far from bus stops, inside forests, and jeeps had fixed timings[4]) and risky (because it was an area of wild elephants) since they had to be reached by foot, still the paths were big and well-maintained.

The Kurichia in Thavinzhal Panchayat have some of the most spacious and spotless settlements among the tribes. Their settlements were mostly located on large hilly tracts. Their houses were not closely spaced, infact the arrangement was different with their houses being at a higher slope, surrounded by pepper and coffee plants all around their main house, from where they could also look at their family paddy fields. They, undoubtedly, had the *cleanest* spaces, they regularly swept their yards and the narrow paths all around their house. Even here, access was a bit difficult, first to reach their settlements, which were very far from bus stops, though other means of transport could reach them. Distance between each house is more, since there is lot of land - and every inch of land has been put to use; in slopes, they grow coffee/pepper, in plains they grow rice/ginger. It took the maximum amount of time to survey Kurichia settlements because one has to walk a lot to cover even a few houses. The number of houses in every settlement was small but the area they occupied was very big.

*Howsoever good the transport system may be, many settlements are difficult to reach, 24*7 accessibility is still a big issue here, especially night times and rainy months, when even accessible places become inaccessible. They have some of the most beautiful but the most risky locations.*

Since, the sample of non-tribal households was also taken in and around the surveyed tribal colonies, their accessibility and remoteness is also seen to be similar to that of tribal households. The non-tribal settlements were located just outside the tribal colonies, near the roads, or outside the borders of forests. Some of the households,

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[3] Field observations reveal that cleanliness of the colony is an issue among Adiya, Paniya, and Kattunayacka, even though they might keep the inside of their houses somewhat better.

[4] To reach some settlements, we had to walk more than 30-40 minutes from the main road into the forests, like – Manimunda, Pilakavu, Pambankolli in Noolpuzha Panchayat.

though, were also located inside the forests, nearer to the remote tribal colonies. So, they also had similar difficulties in transport and accessibility.

6.2 Demographic Characteristics of Households

Out of the total non scheduled tribe households, more than two-thirds are joint families. Among the scheduled tribes, the distribution is similar for nuclear and joint families (see *Appendix-1*). Majority of the Kattunayacka households are nuclear in set up, while most of the other tribes have higher percentage of joint families or extended families. The system of extended families is almost non-existent in the case of non-tribes. Majority of the surveyed households among both STs and Non-STs are male-headed. The proportion of female-headed households is higher among non-tribes, Adiyas and Kuruma communities.

6.3 Household Assets

Owning a house has always been considered as the biggest asset that a household can have. Ownership of the house among the different social groups (table 6.2) shows that majority of the Kurumas, Non-scheduled tribes and Kurichias own and built the house in which they live (more than 90 percent). They mostly live in villages throughout the district of Wayanad. In the case of Paniyas, Kattunayackas and Adiyas, it was seen that even though they own the house in which they live, it was not built by them; they have been provided these accommodations by the government. These communities live in tribal colonies established by the government.

Table 6.2 Ownership of the House

Own House	Name of Social Group					ST	Non-T	Total
	Pani.	Kuri.	Kattu.	Kuru.	Adi			
Own	3.0%	**90.6%**	3.1%	**95.3%**	3.1%	38.8%	**92.2%**	47.7%
Gvt.built	**95.5%**	0.0%	**96.9%**	4.7%	**93.8%**	58.4%	0.0%	48.7%
Other[5]	1.5%	9.4%	0.0%	0.0%	3.1%	2.8%	0.0%	2.3%
Total	66	64	64	64	64	322	64	386

[5] Temporarily living in sheds, or simple one-room arrangements made of plastic sheets, bamboo and thatch.

From Table 6.3 it can be seen that in terms of land ownership the Kurichias stand at the top with more than 90 percent households owning land, followed by 80 percent non-scheduled tribes and 70 percent Kuruma households. Land ownership is least among the Kattunayackas, Adiyas and Paniyas.

Table 6.3 Ownership of Land (% Households)

Own Land	Name of Social Group							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
	27.3	**93.8**	7.8	**70.3**	15.6	42.9	**79.7**	49.0
Total	66	64	64	64	64	322	64	386

Table 6.4 Current Use of Land (% HHs)

Current Use	Name of Social Group							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
Agriculture	33.33	**98.33**	80.00	**91.11**	70.00	84.78	**96.08**	87.83
Small Vacant plot	**66.67**	1.67	20.00	8.89	30.00	15.22	3.92	12.17
Total	18	60	5	45	10	138	51	189

Table 6.5 Area (categories)

Area (cents)	Name of Social Group							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
Less than 50	**94.4**	13.3	**80.0**	17.8	**50.0**	30.4	9.8	24.9
50 to 100	0.0	10.0	0.0	17.8	20.0	11.6	21.6	14.3
100 to 200	5.6	**31.7**	0.0	**40.0**	20.0	29.0	**43.1**	32.8
200 to 500	0.0	**26.7**	20.0	**24.4**	10.0	21.0	15.7	19.6
500and above	0.0	18.3	0.0	0.0	0.0	8.0	9.8	8.5
Total	18	60	5	45	10	138	51	189
Mean area, cents	**3.73**	**224.95**	5.23	88.63	11.52	66.42	**142.88**	79.10

The data on current use of land (table 6.4) shows that majority of the households own agricultural land that is put for same use, except the Paniyas, most of whom own a very small piece of land or plot attached to their house, that mostly lies vacant.

Among those households which own land, it is more interesting to see how much land is owned by the different groups (table 6.5). It is not surprising to see that more than 90 percent of the Paniya households own less than 50 cents of land, followed by Kattunayackas and Adiyas. Majority of the non-tribal, Kuruma and Kurichia households own 1 to 5 acres of land (100 cents = 1 acre). The Kurichias turn out to be the topmost owners of land, with about 18 percentage of their households owning land above 5 acres, followed by 10 percent non-tribes. This is mainly because of the nature of their families which is mostly joint in nature (where brothers and their families live together), and land is jointly-owned and cultivated. None of the households in the other social groups own land more than 5 acres. The average land area owned by a Kurichia household is 225 cents, followed much behind by non-tribes with 143 cents (here, joint families mostly mean a couple with their kids and parents, so even the nature of joint families is different).

Table 6.6 Any livestock

% HHs with Livestock	Name of Social Group							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
	10.6%	59.4%	12.5%	59.4%	9.4%	48.4%	30.1%	33.2%
Total	66	64	64	64	64	64	322	386

Similar is the picture with owning any livestock (table 6.6). Close to 60 percent of both Kurichia and Kuruma households report owning livestock, followed by almost half of the non-tribal households. Adiyas, Kattunayacka and Paniya groups have the least share of households owning any livestock.

Owning a motor vehicle becomes important in this area, keeping in mind the accessibility of the colonies/ villages and also the issue that is being dealt here. Having a motor vehicle in these locations equips people to access health care, especially during times of emergency. So, an analysis of possession of vehicles is not out of context. From table 6.7 it can be read that very few proportion of households in the study area reported having a three or four-wheeler vehicle. The highest share of households was found among the non-tribes.

Table 6.7 Percent HHs possessing 3 or 4 wheeler motor vehicle								
	Name of Social Group							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
HHs	0.0%	12.5%	0.0%	7.8%	1.6%	**20.3%**	4.3%	7.0%
Total	66	64	64	64	64	64	322	386

Even in the possession of two-wheeler vehicles, the proportion of households is low. About 40 percent of the non-tribal households have a two-wheeler, followed by 30 percent Kuruma households. It is nil or almost negligible in Paniya, Kattunayacka or Adiya households.

Table 6.8 Possess any 2 wheeler motor vehicle

	Name of Social Group							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
HHs	0.0%	6.3%	1.6%	**29.7%**	3.1%	8.1%	**40.6%**	13.5%
Total	66	64	64	64	64	322	64	386

Having a mobile phone has similar uses, with regards to contacting and networking. Among the surveyed households, it was found that 100 percent non-tribal households had a mobile phone, closely followed by Kurumas and Kurichias. As for the Kattunayackas, 60 percent households do not have a mobile connection, followed by Adiyas and Paniyas (table 6.9).

Table 6.9 Have mobile phone

	Name of Social Group							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
HHs	57.6%	90.6%	40.6%	96.9%	56.3%	**68.3%**	**100.0%**	73.6%
Total	66	64	64	64	64	322	64	386

In the possession of television sets, majority of non- scheduled tribe households possess TV sets while majority of the tribal households do not (table 6.10), except of course the Kurumas and Kurichias.

Table 6.10 Have Television set

	Name of Social Group							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
HHs	16.7%	**65.6%**	15.6%	**68.8%**	32.8%	**39.8%**	**95.3%**	49.0%
Total	66	64	64	64	64	322	64	386

In order to arrive at an overall picture of ownership of assets, table 6.11 shows households with all the above-mentioned assets.[6] Here also, the share of non-tribal households dominates the other groups, followed by Kurumas. None of the Paniya, Kattunayacka or Adiya households possess all of the assets.

Table 6.11 Households with all assets

% HHs with all assets	Name of Social Group							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
	0.0%	12.5%	**0.0%**	23.4%	**0.0%**	7.1%	**26.6%**	10.4%
Total	66	64	64	64	64	322	64	386

If we remove possession of vehicles from the above table, then it is seen that the share of Kurichia households is highest (more than 45 percent) in the possession of the rest of the assets, followed by non-tribes and Kurumas (table 6.12). Even here, no Paniya, Kattunayacka or Adiya households figure in the analysis. It goes to show that they have absolutely no assets to fall back upon in situations of crises.

Table 6.12 Households with own house, land, livestock, tv and mobile

All assets (excludes vehicles)	Name of Social Group							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
HHs	**0.0%**	**45.3%**	**0.0%**	**39.1%**	**0.0%**	16.8%	**43.8%**	21.2%
Total	66	64	64	64	64	322	64	386

[6] HHs possessing own house, land, livestock, tv. Mobile, any vehicle

6.4 Housing Conditions and Amenities

Analysis of type of houses reveals that more than 80 percent of the non-scheduled tribal households are pucca houses, whereas majority of the ST houses are semi-pucca (table 6.13). Half of the Paniya households are of kachha type.

Table 6.13 Type of house (% HHs)

Type of house	Name of Social Group							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
Pucca	19.7	29.7	37.5	37.5	12.5	27.3	**81.3**	36.3
Semi-Pucca	30.3	**59.4**	**43.8**	**57.8**	**62.5**	**50.6**	17.2	45.1
Kachha	**50.0**	10.9	18.8	4.7	25.0	22.0	1.6	18.7
Total	66	64	64	64	64	322	64	386

By observation, it was noted that more than two-thirds of the non-ST households are of in good condition, in terms of building materials, surroundings, ventilation etc. As for the scheduled tribal households, they are equally distributed in the three categories. Majority of the Paniya and Adiya households are in a dilapidated condition with Kachha or Semi-kachha built, unclean surroundings, improper disposal of waste, insufficient ventilation etc. Only 6 percent of Paniya households were noted to be in good condition (table 6.14). The houses built recently for the Kattunayacka in some colonies have ceramic-tiled floors. It was further known that only Kattunayacka have been provided such houses.

Table 6.14 Condition of house (built, surroundings, ventilation, drainage)

Condition of house	Name of Social Group, % Houses							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
Good	6.1	**45.3**	**37.5**	**46.9**	18.8	30.7	**76.6**	38.3
Liveable	43.9	34.4	34.4	37.5	37.5	**37.6**	23.4	35.2
Dilapidated	**50.0**	20.3	28.1	15.6	**43.8**	31.7	**0.0**	26.4
Total	66	64	64	64	64	322	64	386

Some families, it was observed, were living in temporary living arrangements called "sheds", which usually consisted of a kachha thatched/ tin roof, covered with blue plastic sheets (rains) with bamboo walls, mud floors, one room, and kitchen. These sheds were seen in all panchayats. The small land (3 -5 cents), on which they were built, may or may not belong to that family – it might belong to their relatives or government. These arrangements were temporary; when asked, the people replied that the government will provide them with proper houses only when the family first lives in such sheds, through decisions taken during the oorukoottams. This takes time – from a few months to one year. To show to the government that the family needs a home, the people build and live in such sheds. Even some of non-tribal families are seen to be living in such sheds.

Table 6.15 Source of drinking water

Source of drinking water	Name of Social Group, % HHs							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
Piped frm own well	0.0%	21.9%	1.6%	29.7%	1.6%	10.9%	**60.9%**	19.2%
Piped frm stream	0.0%	**54.7%**	0.0%	1.6%	29.7%	17.1%	7.8%	15.5%
public tap	16.7%	10.9%	6.3%	1.6%	**45.3%**	16.1%	1.6%	13.7%
own well	0.0%	1.6%	0.0%	15.6%	1.6%	3.7%	**10.9%**	4.9%
public well	**83.3%**	7.8%	**92.2%**	**45.3%**	17.2%	**49.4%**	17.2%	44.0%
neighbour pipe/ well	0.0%	3.1%	0.0%	4.7%	4.7%	2.5%	1.6%	2.3%
Other	0.0%	0.0%	0.0%	1.6%	0.0%	.3%	0.0%	.3%
Total	66	64	64	64	64	322	64	386

As for the source of drinking water, it is seen from table 6.15 that more than 60 percent of the non-scheduled tribe households and some Kuruma and Kurichia households have piped connections from their own well, whereas majority of the scheduled tribe households (Kattunayackas, Paniyas and Kurumas) have to

fetch their drinking water from a common or Panchayat well.[7] Field observations revealed that, in some of the Paniya (like – Madaparambu) and Kattunayacka (like – Gunduvady, Chandroth) colonies, one Panchayat well is shared by more than 10 households; therefore, if the water in one well becomes unfit for use due to some reasons[8], then a lot of families get affected and this in turn puts more pressure on other wells in the area, which then have to serve more than 20 households daily; water shortage in such areas is felt acutely during the dry seasons. Whereas, in Kuruman settlements, one well was at most shared by 3 - 4 households.

In one Kuruma settlement in Noolpuzha, the residents felt that the Panchayat should have listened to them regarding the location of a common well.[9] While building wells, panchayats should consult the residents of the area too regarding the location of well. Most of the Kurichia households have piped drinking water that is sourced from streams or canals in forests, wherein households get water from what they call "hosepipes"(forest cholas/ *kenis*), which consist of a lengthy hose (big, thick rubber tubes) that carry fresh water from streams or ponds, located inside the forests and hills to the houses or just outside the houses. As for majority of Adiya households, and some Paniya households received drinking water from a public tap, which is either located in their plots or nearby, sometimes they got water daily, sometimes every alternate day.

Table 6.16 reveals that the location of the source of drinking water is within the house for most of non-scheduled tribal households, whereas on the other extreme are the Kattuanayacka households, a major share of whom have their water sources

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[7] Wayanad is an area where the quality of water is not that good, a comment by a doctor: "the drinking water quality of our CHC is itself questionable, then what to say about the drinking water in the tribal colonies".
The ASHA workers are instructed to encourage the tribes to chlorinate the wells regularly, especially before the monsoons – but how much of it is followed, is questionable, because the tribes do not like the taste of chlorinated water – they just throw away the chlorine packets. So, supervision was required during cleaning wells.

[8] In one of the colonies, the people said they were not using the water of one of the wells because a rat had fallen into it some 2 weeks ago. Even after complaints, no one had come to clean the well. This shows the apathy of the Panchayats towards the needs of the people in colonies. This has made the well unusable, and the whole colony is dependent on the second well. Immediate attention to such complaints need to be given.

[9] In Kottanodu, Noolpuzha Panchayat – a recently constructed well remains unused because it is near the septic tank of a house. So, here the consent of locals should have been taken before constructing the well. Its a waste of resources.

50metres or away from their house (a few have to travel more than half a kilometre to fetch water[10]). For the others, the source is located in their own street or less than 50 metres. Though Wayanad receives a good share of monsoonal rains, many areas in the district face shortage of drinking water during the dry months from March - May.

Table 6.16 Location of Source of drinking water

	Name of Social Group, %HHs							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
In house	0.0%	39.1%	3.1%	29.7%	6.3%	**15.5%**	**71.9%**	24.9%
own yard	13.6%	**43.8%**	3.1%	18.8%	**39.1%**	23.6%	3.1%	20.2%
Own street	**48.5%**	14.1%	**45.3%**	**39.1%**	37.5%	37.0%	18.8%	33.9%
>50 mts.	**37.9%**	3.1%	**40.6%**	12.5%	17.2%	22.4%	6.3%	19.7%
>500 mts.	0.0%	0.0%	**7.8%**	0.0%	0.0%	1.6%	0.0%	1.3%
Total	66	64	64	64	64	322	64	386

Table 6.17 Availability of Toilet facilities

Availability of toilet	Name of Social Group, % HHs							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
In -house	31.8%	**82.8%**	75.0%	**84.4%**	48.4%	64.3%	92.2%	68.9%
Shared	6.1%	0.0%	1.6%	0.0%	1.6%	1.9%	7.8%	2.8%
No/ open field	**62.1%**	17.2%	23.4%	15.6%	**50.0%**	**33.9%**	0.0%	28.2%
Total	66	64	64	64	64	322	64	386

[10] In Kattunayacka colonies like – Edamala Michabhoomi, and Paikkemoola, women had to walk more than half a kilometer to fetch water from a Panchayat well. This was used for drinking, cooking, cleaning, bathing. Many days the children have to go to schools without bathing and unwashed uniforms, for which they were scolded by their teachers, who order them to take baths and come. So, their regular attendance in schools also stops.

. Availability of proper sanitation facilities is considered as one of the most important preventive health measures in a society. From the table 6.17, it can be seen that there is no non-tribal household that is not without toilet facility, whereas, almost one-thirds of scheduled tribal households do not have any toilet facility in or near their house. This is more so in the case of Paniyas and Adiyas (more than half the households do not have toilet facilities).

It was observed in the field, especially in Paniya, Kattunayacka colonies, that even in houses that have been built with toilets, the tribes do not use it. They place a stone slab or ply to cover it, then use the small space to store wood or hang clothes. This is because they consider it improper to defecate near their houses, they are not habituated to such a system. In some newly constructed Kattunayacka houses, the people are ready to use the toilets, but they say the septic tanks are very small, which results in the flushed water coming out. So, they are simply not in a condition to use it. In some colonies, the tribal households were sharing toilets (like- in Mangakandi, two houses were sharing one toilet). In such cases, there was no proper maintenance, and bathrooms were mostly open thatched sheeted arrangements. Most of the Kuruma, Kurichia and non-tribal households, even where they shared with other households, the condition of toilets and bathrooms was good.

Table 6.18 shows that a high proportion of Paniya and Adiya households do not even have the comfort of a properly covered kitchen. In such households, cooking is done outside the main building of the house, which extends either towards the front or the back, with little or poor covering with plastic or tin sheets.

Table 6.18 Availability of a Proper covered Kitchen

% HHs	Name of Social Group							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
	72.7	87.5	82.8	96.9	73.4	82.6	**96.9**	85.0
Total	66	64	64	64	64	322	64	386

Regarding LPG connection (table 6.19), it can be seen that about 75 percent of non-tribal households have LPG, as opposed to only 10 percent ST households. The reason for this is given to be the fact that there is so much abundance of firewood in this region – Kurichias and Kurumas have own land, and the other tribes collect firewood from the forests (in fact, it is true for Kerala as a whole), that people generally do not prefer LPG. Another reason that is cited is that the tribes are scared of using cooking gas.

Table 6.19 Have LPG connection

HHs	Name of Social Group							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
LPG	6.1%	1.6%	3.1%	**35.9 %**	6.3%	10.6%	**75.0 %**	21.2 %
Total	66	64	64	64	64	322	64	386

When it comes to power supply, it is observed that majority of the households have power (table 6.20), except those of Kattunayackas (half of them do not have power supply), Paniyas and Adiya households (40 percent). Some of them had power supplies earlier, which were later cut-off because of non-payment of bills.

Table 6.20 Availability of Power Supply

HHs	Name of Social Group							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
Power	59.1%	**81.3 %**	48.4%	**79.7 %**	59.4%	**65.5 %**	**98.4 %**	71.0 %
Total	66	64	64	64	64	322	64	386

Poverty is a major fact among the scheduled tribal households as is shown in table 6.21. More than 80 percentage of Paniya, Kattunayacka and Adiya households are below poverty line. The lowest share of BPL households is found among the Kurichia community.

Table 6.21 Possess BPL Card

HHs	Name of Social Group							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
BPL	**89.4 %**	12.5%	**84.4 %**	23.4%	**81.3 %**	58.4%	**21.9 %**	52.3 %
Total	66	64	64	64	64	322	64	386

Also in the case of availing banking facilities, these 3 communities of Adiyas, Kattunayackas and Paniyas fall much behind – with more than 20 percent households not having a single bank account (table 6.22). This is highest among Kurichia, Kurumas and Non-tribes.

Table 6.22 Anyone having Bank account

HHs	Name of Social Group							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
Bank A/C	78.8%	**98.4 %**	71.9%	**96.9 %**	70.3%	83.2%	**96.9 %**	85.5 %
Total	66	64	64	64	64	322	64	386

Majority of the households surveyed avail the PDS facility (table 6.23), majority of them have ration cards, and those who have, all of them avail good from PDS shops regularly. For many of the Kattunayacka, Paniya and Adiya households, the goods from rations shops are the only food products available in the house to eat, especially during the lean agricultural seasons, as was found during the field work, even though the ration shop owners were blamed for not providing the full amount of wheat/ rice/ sugar that they are entitled to.[11] The Kattunayacka are especially entitled to get *kadala* (kala chana, a very nutritious pulse) from the ration shops. No other tribal group is provided *kadala*.

[11] One tribal family, is supposed to get - 5kg rice/week and 2kg wheat/month, 1 -2 kg sugar/ month, 1 - 4litre kerosene/month . But, many Paniyan households complained that they don't get the wheat at all, while other items they get regularly but sometimes not the whole amount.

Table 6.23 Have Ration Card

HHs	Name of Social Group							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
Ration Card	86.4%	89.1%	84.4%	95.3%	89.1%	88.8%	93.8%	89.6 %
Total	66	64	64	64	64	322	64	386

6.5 Household Debts

The debt profile of the households reveals that more than 90 percent of the non-tribal households have incurred some debts (table 6.24), followed by Kurichia and Kurumas. Debts are lowest among Paniyas and Adiyas (more than 70 percent do not have any debts), followed by Kattunayackas. This is not because they do not require money but because they do not possess the capacity to repay big amounts of money, so they avoid debts as much as possible.

Table 6.24 Any Debts

HHs	Name of Social Group							Total
	Pani	Kuri	Kattu	Kur	Adi	ST	NonT	
Indebted, %	**25.8**	**67.2**	39.1	57.8	**26.6**	43.2	**90.6**	51.0
Total	66	64	64	64	64	322	64	386

More interesting is the purpose for which the loans are taken, which is given in table 6.25. The non-tribal and Kurichia households (about 55 percent each) have taken loans for agriculture purposes, to buy land, for cultivation, or livestock; while more than 40 percent of the Kuruma households have taken loans for house construction, followed by non-tribes. On the other side, there are the Paniya (76 percent) and Adiya households (47 percent) who have mainly incurred debts for health and hospitalization purposes and deliveries; while the Kattunayacka households have taken loans mainly for running household expenses. The nature of debts reveals the stages of financial situation of these social groups – Kattuanayackas take loans for daily survival needs, implying that they do not even have enough savings to satisfy their daily needs; Adiyas and Paniyas incur debts for health purposes, implying that their financial situation doesn't allow them to handle

emergency health crises. These debts only worsen their economic conditions. As for non-tribes, Kurichias and Kurumas, the nature of their debts reveals that they basically take loans in order to build on their capital resources and make investments,that mostly give a boost to their economic conditions.

Table 6.25 Purpose of Debt

% HHs	Name of Social Group							Total
	Pani	Kuri	Kattu	Kur u	Adi	ST	NonT	
Agriculture	5.9	**54.8**	8.0	32.4	11.8	29.0	**56.1**	36.9
House	5.9	16.7	8.0	**40.5**	17.6	20.3	24.6	21.5
Health	**76.5**	16.7	**36.0**	8.1	**47.1**	29.0	12.3	24.1
Marriage	0.0	4.8	0.0	8.1	5.9	4.3	1.8	3.6
Vehicle	0.0	2.4	0.0	0.0	5.9	1.4	1.8	1.5
business/ employment	0.0	0.0	4.0	2.7	0.0	1.4	3.5	2.1
HH expenses	11.8	4.8	**44.0**	5.4	11.8	13.8	**0.0**	9.7
Total	17	42	25	37	17	138	57	195

Table 6.26 Amount of Debt (Categories)

Amount (Rs.)	Name of Social Group, %HHs							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
< 10,000	**88.2**	19.5	**64.0**	16.2	56.3	**39.7**	**0.0**	28.1
10,000 to 50,000	11.8	58.5	32.0	37.8	37.5	**39.7**	17.9	33.3
50,000 to 1 Lakh	0.0	12.2	4.0	32.4	6.3	14.0	**25.0**	17.2
1 to 5 Lakhs	0.0	7.3	0.0	13.5	0.0	5.9	**44.6**	17.2
>5 Lakhs	0.0	2.4	0.0	0.0	0.0	**0.7**	**12.5**	4.2
Total	17	41	25	37	16	136	56	192
Avg.,Rs.	896.8	30752.7	3451.7	29381.0	3402.7	13410.9	**256613.6**	53196.0

The analysis of the amounts of debt reveals that majority of the non-scheduled tribal households had debts of over Rs. 1 lakh (table 6.26). Whereas, majority of the scheduled tribal households had debts of less than Rs, 50,000. Most of the Paniya, Kattunayacka and Adiya households had debts of less than Rs. 10,000.[12] The average amount of debt for the various groups show that a non-tribal household has an average debt of Rs. 2.5 lakhs, which is only Rs. 13,000 in the case of scheduled tribes. It is least (about Rs.900) for the Paniyas.

Table 6.27 Any member in Self-Help Groups

	Name of Social Group,% HHs							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
Kudumbashree	16.7 %	**68.8 %**	28.1 %	**67.2 %**	25.0 %	41.0 %	**59.4 %**	44.0 %
Other	4.5%	1.6%	0.0%	0.0%	0.0%	1.2%	4.7%	1.8%
Total	66	64	64	64	64	322	64	386

Table 6.27 shows the participation of households in any community activity or self-help groups. It is revealed that a high percentage of households are members of Kudumbashree, it is highest for the Kurichias and Kurumas, followed by non-scheduled tribe households. On the other side, there are Paniya, Kattunayacka and Adiya households, majority of whom do not have any member involved in any self-help groups.

6.6 Standard of Living by Social Groups

Table 6.28 Standard of Living Index by Social Groups (% Households)

SLI	Social Group							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
Low	80.3	17.2	73.4	17.2	70.3	51.9	1.6	43.5
Med	19.7	40.6	26.6	45.3	29.7	32.3	32.8	32.4
Hig	0	42.2	0	37.5	0	15.8	65.6	24.1

[12] Tribes feel shy and ashamed to speak of their debts, even though, it is a few thousand rupees or even less. They take it mostly for daily running their household, or emergencies, which would be mostly, medical. They try to pay back their debts as soon as possible.
Whereas, the non-tribes seem proud to talk about their debts, which might run in lakhs, even if it is partially repayed, most of them do not seem worried. These debts are taken for housing, land, asset building, and *not for daily purposes*. Kurichia and Kuruma show similar behaviour.

Table 6.28 shows that majority of the Paniya, Kattunayacka and Adiya HHs have a low standard of living, there are no households among them that have a high standard of living. Whereas, majority of the non-tribal HHs fall in the high SLI category, followed by the Kurichias and Kuruma households. In terms of SLI then, Paniya are at the lowest position, whereas non-tribes are at the highest position.

6.7 Educational Level and Work Status of the People

Literacy and Educational Levels

The literacy rate for population above 7 years of age is highest for the non scheduled tribes (table 6.29) and lowest for the Kattunayackas. There is almost 30 percent gap in the literacy rates of these two population groups. Male literacy is highest among the Kurumas, while the female literacy is highest among non-tribes. The gap between male and female literacy is maximum among the Kuruma.

Table 6.29 Literacy Rate (7 Years and Above Population)

Literacy Rate	Name of Social Group							Tot
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
Male	75.5	84.8	**61.9**	**92.4**	69.5	76.5	91.8	79.1
Female	72.6	80.6	**62.6**	81.4	68.0	72.9	**90.5**	75.8
Total	73.9	82.8	**62.2**	86.8	68.7	74.7	**91.2**	77.4

Table 6.30 shows educational attainments of the population. It is seen that in the case of primary education, more than 80 percent of non-tribes above the age of 11 years have attained primary education, while this proportion is only about 40 percent in the case of Kattunayackas. Similarly, about 65 percentage of Kurumas above the age of 16 years have completed secondary education/ matriculation, while it is lowest for Paniyas (only 5 percentage of population above the age of 16 years). Same pattern is observed for higher secondary and graduation levels. In fact, no Paniya or Kattunayacka has attained a graduate degree. The difference between the groups is maximum for the level of secondary education – there is more than 60 percent difference between the highest (Kurumas) and lowest (Paniya) groups.

Table 6.30 Educational Levels Attained (% Population)

Educational Levels[13]		Name of Social Group							Tot
		Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
MALE	Primary	51.3	75.4	**39.1**	**85.5**	49.6	60.3	**86.2**	64.7
	Secondary	7.9	36.1	**6.4**	**61.3**	14.0	25.9	**59.3**	31.7
	HigherSec	**0.0**	10.0	2.2	16.0	2.8	6.5	**28.3**	10.4
	Grad.	**0.0**	3.4	**0.0**	6.6	1.0	2.4	14.5	4.6
FEMALE	Primary	53.3	71.2	**41.7**	73.7	48.9	57.6	79.5	61.3
	Secondary	2.6	**45.4**	**10.3**	**68.4**	**18.6**	**29.6**	56.5	34.5
	HigherSec	**0.0**	15.3	4.3	29.8	8.3	11.9	**30.9**	15.4
	Grad.	**0.0**	0.0	**0.0**	13.2	1.0	3.1	14.2	5.2
TOTAL	Primary	52.3	73.4	**40.4**	79.5	49.2	58.9	**82.8**	63.0
	Secondary	**5.0**	40.7	8.4	**65.0**	16.3	27.8	**57.8**	33.1
	HigherSec	**0.0**	12.6	3.3	23.2	5.6	9.3	**29.7**	13.0
	Grad.	**0.0**	1.7	**0.0**	**10.0**	1.0	2.7	**14.3**	4.9

In terms of male-female differences in levels of education, it is seen that education at secondary and higher secondary levels are higher among females in all tribal groups except the Paniya. There were no male graduates among Paniya, Kattunayacka; similarly, no female graduate among Paniya, Kurichia and Kattunayacka at the time of field survey. Most of the female graduates, even post-graduates belong to mainly Kuruman and non-tribal communities.[14]

[13]. **the base population for different educational levels is:**

for Primary: 11 years and above**; for Secondary:** 16 years and above**; for higher secondary:** 18 years and above**; for graduation:** 21 years and above

[14] But, the situation is not extremely hopeless. Recent information from the field has revealed that two Kattunayacka girls have finished their graduation and are currently enrolled in masters programme in Calicut. They are preparing for public service exams and aspire to become teachers. Such examples deserve to be highlighted as they run contrary to people's attitude about tribes and their aspirations.

Table 6.31 shows the educational attainments of population above 21 years for all the social groups. It can be seen that majority of the Kattunayacka, Adiya and Paniya adults are illiterate, and those who are literate among them – most have attained only primary education. While for the Kurichias, Kurumas and Non-scheduled tribes, majority of their population above 21 years of age has completed atleast secondary education or above. The proportion of graduates is very low in all the groups, the highest being that of non-tribes with 14 percent, followed by Kurumas with 10 percent.

Table 6.31 Educational Levels Attained (age 21 years and above) – TOTAL

Level	Name of Social Group, % Population							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
Illiterate	**39.9**	20.6	**56.0**	14.5	**44.0**	33.6	**10.4**	29.3
<Prim.	21.3	9.1	14.9	6.4	**18.0**	13.5	8.3	12.6
Primary	**23.3**	13.7	**14.9**	5.0	17.5	14.6	13.5	14.4
Middle	13.0	17.6	7.4	9.1	4.5	10.6	10.9	10.6
Sec.	2.6	**27.0**	4.0	**41.8**	10.0	18.3	**28.7**	20.2
HighSec	0.0	9.0	2.9	12.3	4.5	6.1	13.0	7.4
ITI	0.0	1.3	0.0	0.9	0.5	0.6	0.9	0.6
Grad.	0.0	1.7	0.0	**10.0**	1.0	2.7	**14.3**	4.9
Total	193	233	175	220	200	1021	230	1251

6.2 Current Enrolment

When we observe the current enrolment pattern in primary classes (standards 1 to 5 for children aged 6 to 10 years), it is seen that majority of children are enrolled, it is actually lowest among non-tribes. The enrolment of female children is quite low among Adiyas (table 6.32). For the stage of secondary or higher secondary enrolment (standards 6 to 12 for ages 11 – 17 years), the share of children is significantly lower than for primary levels. The enrolment is lowest for Kattunayackas (especially males) *even though Kattunayacka children are entitled to separate hostels* and for Paniya girls (table 6.33).

Table 6.32 Current Enrolment in Primary Classes (age 6 - 10 years)

% Children Enrolled	Name of Social Group							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
Male	100.0	93.3	94.1	100.0	100.0	97.0	88.9	95.8
Female	**91.3**	91.7	94.7	92.3	**87.5**	91.6	92.9	91.8
Total	95.7	92.6	94.3	96.2	93.5	94.6	90.6	94.0

Table 6.33 Current Enrolment in Secondary or Higher Secondary (age 11 - 17 years)

% Children Enrolled	Name of Social Group							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
Male	90.5	100.0	**47.4**	100.0	76.2	78.5	80.0	78.7
Female	**68.0**	85.7	77.3	100.0	82.6	76.6	100.0	77.8
Total	78.3	95.2	**63.4**	100.0	79.5	77.6	85.7	78.2

When we look at the overall enrolment of all 6 to 18 years irrespective of standards-for-ages, then we see that 30 percentage of Kattunayackas are not enrolled in any educational institution, followed closely by 26 percent Adiyas and 19 percent Paniyas (table 6.34). The main reasons stated for dropping out were – not interested in studies, school too far away/ no transport availability, laziness, supplementing household income and repeated failures (*Appendix-3*).

Table 6.34 Current Enrolment in School/College (6- 18 year olds) - TOTAL

% Children	Name of Social Group							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
Not attending	**19.1**	4.1	**30.5**	0.0	26.0	**20.0**	2.0	17.7
Currently Attending	80.9	**95.9**	69.5	100.0	74.0	80.0	**98.0**	82.3
Total	94	49	95	30	77	345	51	396

In the field, it was seen that drop outs were common among Kattunayakas, Adiyas and Paniyas. They themselves said they do not want to go because studies don't interest them and they would like to stay at home. Their parents, generally, don't force children to go to school, even if they do – the children go to some place to hide to escape their anger. The teachers (mostly non- tribes) are said to be strict in their attitude and behaviour towards students, moreover, the medium of instruction, the distance to schools – are all important issues. In one case, as mentioned earlier, Kattunayacka children were sent back from schools because they don't take regular baths. These children lived in a colony which didn't have any well or pipe, the water had to be brought from a very far away well, and early in the morning when they had to rush to school that was also far, they had no time for bathing. It resulted in their getting humiliated in school.

Most importantly, the children are very much influenced by their elder siblings, even friends who are drop outs. Since the schools are far, and children have to walk a lot, they find it difficult to go to schools alone. Children also accompany their parents to work in fields and pick coffee or arecanut during the peak seasons, so that they can get their own money. This is also said to be a major factor in increasing drop outs.

Due to increasing privatization, the facilities in the state schools are deteriorating owing to decreased funding, and the *adivasis* cannot afford to send their children to expensive private schools. Because of the state's reduced spending policy, not enough teachers are employed even in the special schools for *adivasi* children. Allowances for books, school uniforms, umbrellas, and food are not disbursed in time. Such delays in payments lead to increased school dropouts. This is a widespread phenomenon, particularly among the landless *adivasis* of Wayanad – *Paniyas*, *Kattunaickan*, *Adiyan* and *Urali* communities[15]. According to Wayanad Initiative 2006, despite the relatively easy access to schools, the drop out rate from schooling is very high, especially at primary and high school levels. A variety of reasons like- "financial problems" and 'health problems' crop up, alongwith some students feeling difficulties in the curriculum.

[15] Kjosavik Darley Jose and Nadarajah Shanmugaratnam (2006), "Between Decentralized Planning and Neo-liberalism: Challenges for the Survival of the Indigenous People of Kerala, India", *Social Policy and Administration,* 40 (6), pp. 632- 651.

The non-tribes and ASHA workers say the colony people themselves have lower aspirations, they also discourage their neighbours and relatives, deeply mistrust non tribes, and too much dependence on government assistance makes them lazy. The highest enrolment is again seen among Kuruma, non-tribes and Kurichia. They are well educated, take up most of the reserved jobs in the public sector, their level of awareness is also very high and therefore, make maximum utilization of amenities.

Current Work Status

Social Group	Current Work Status										
	Cutivator/ allied	Business	Agricultural labour	Other casual labour	MGNREGA	Gvt.Job	Private job	Domestic work	Student	Others	None
Pani	1.0	0.0	**61.0**	1.9	0.0	.5	0.0	31.0	.5	0.0	4.3
Kuri	**31.1**	3.4	7.6	2.1	5.9	3.8	1.3	37.8	1.7	0.0	5.5
Kattu	2.7	.5	**56.5**	0.0	1.1	.5	0.0	31.0	1.6	0.0	6.0
Kuru	**15.0**	2.3	9.1	**13.2**	6.8	**11.4**	5.0	31.4	0.0	0.0	5.9
Adiya	0.5	0.5	**60.2**	0.0	0.0	2.3	1.9	26.4	1.4	0.0	6.9
ST	**10.8**	1.4	**37.5**	3.6	2.9	3.8	1.7	31.6	1.0	0.0	5.7
Non- ST	**14.0**	**7.6**	**5.5**	**6.4**	**5.1**	**5.5**	**8.1**	**36.9**	1.7	.8	8.5
TOTAL	11.3	2.5	31.7	4.1	3.3	4.1	2.8	32.6	1.2	.2	6.2

The current work status of the population above 18 years of age (table 6.35) shows that majority of the Paniya, Adiya and Kattunayacka are working as agricultural labourers; self-employment in agriculture and allied activities and participation as MGNREGA labour is highest among Kurichias, Kurumas and non-scheduled tribes. The Kurumas and non-tribes are also engaged as other casual labourers and regular government employees.

Adiya, Paniya, Kattunayacka are mostly engaged as agricultural labourers, whose average wages per day are Rs. 300-350 for men, and Rs. 200-250 for women. However, the main point is, this occupation is highly seasonal in nature (some months, they work every day while in others, they may get to work only 10-12 days, or not even that during the heavy rains). This makes them dependent a lot on the PDS shops, and some forest products. Other labourers involved in construction/ plumbing/ welders/ carpenting – are

paid more, in the range of Rs. 400 to 700 per day, and not affected by seasonality to that extent.

Among the non-tribes, most of the self-employed are auto/ jeep drivers, some are shop owners (groceries, miscellaneous items, tea shops), welders, mills, milk societies, carpenters, barbers etc. And the proportion of salaried people working in private sector is high among them. Many of the male earning members are working in Gulf, especially in Thavinzhal. Even, non-tribal females work in private jobs, a few of them in gulf countries.

Table 6.36 Percentage Households with Any Graduate Member

% HH	Social Group							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
	0	4.7	0	28.1	3.1	7.1	39.1	12.4

Table 6.37 Percentage Households with Any Regular Salaried Member

% HH	Social Group							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
	1.5	18.8	3.1	42.2	7.8	14.6	35.9	18.1

Regarding the presence of at least one graduate member in a household, it is observed (table 6.36) that majority of the households covered in the survey do not have any graduate member, except some in Kurumas and non-tribes. In the same manner, it is mostly among the Kuruman, non-tribal and Kurichian households that we find any member who has a regular salaried employment (table 6.37), whether in public or private service.

If we cross-tab SLI with location (table 6.38), slightly more low SLI households fall in remote locations, but among non-tribes – remote areas also have More High SLI HHs. When it comes to education, it is seen that majority of the HHs that have at least one graduate member belong to the *high SLI category.* Similarly, majority of the HHs that have at least one regular salaried member belong to *high SLI category.*

Table 6.38 High SLI Households (%)

SLI	Social Group		Total
	ST	Non-tribes	
Location			
A	16.5	63.8	25.5
R	14.8	70.6	21.6
HH_Graduate			
Y	57.8	92	70.8
N	13.4	48.7	17.5
HH_Salaried			
Y	51.1	82.6	61.4
N	9.8	56.1	15.8

This shows that completion of education and attaining a regular employment are very much inter-related with higher standards of living. This makes it all the more difficult for those in lower SLI categories to complete their education or even get any kind of regular employment.

6.8 Child and Mother Health and Health Care by Socio-Economic Conditions

Table 6.39 Low Birth Weight, below 2.5 kg (% Children 0-5 Years Age) by HH Indicators

Indicator	Social Group							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	Non T	
HH_Location								
A	43.8	28	20	24.5	**50**	33.6	16.4	30.1
R	44.4	32.1	**34.2**	**48.1**	36.6	37.8	15.8	35.2
HH_SLI								
L	41.7	25	31.9	**45.5**	35.3	36.1	.	36.5
M	**55.6**	30	19	29.7	**56.7**	36.2	21.4	33.5
H	.	30.6	.	32.1	.	31.2	**11.1**	22.9

The background analysis of Low birth weight children (table 6.39) shows that although the proportion of low birth weight children decreases with increasing *SLI* overall, and for non-tribes and Kurumans, but in the case of other groups, it doesn't show much variation, infact its proportion increases with increasing SLI among Paniyans and Adiyans.

Table 6.40 Percentage of Underweight Children (3 months and above) by HH Indicators								
Indicator	Social Group							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
HH_Location								
A	58.6	17.3	33.4	6.4	39.6	33.1	**11.5**	29.4
R	**78.6**	**34.6**	29.6	**12**	36.8	33.8	0	30.1
HH_SLI								
L	**67.6**	25	26.2	.	33.3	**40.5**	.	**40.3**
M	37.5	16.7	**44**	11.4	**48.1**	29.3	.	25.3
H	.	27.8	.	.	.	17.7	11	15
HH_Any Salaried								
Y	.	.	.	.	.	8.2	12.5	9.4
N	61.4	27.9	31.8	10.3	41.1	**37.8**	6.4	34

Table 6.40 reveals the cross-tabulation of underweight children with their other background indicators. If the proportion of underweight children is analysed by location, then it is seen that in the case of Paniyas and Kurichias, higher percentage of children living in remote areas are underweight. It doesn't seem to differ much among others. Similarly, households with lower SLI and no member having a regular salaried employment have higher percentage of underweight children, especially so among the STs. But, in the case of Kurichians, Kattunayackans and Adiyans, underweight children increases with higher SLI.

Table 6.41 Percentage of Stunted Children (3 months and above) by HH Indicators								
Indicators	Social Group							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
HH_Location								
A	48.5	42.3	52.8	19.1	53.5	43.1	31.1	41.2
R	**85.7**	**65.4**	70.4	**32**	42.1	58	38.9	56
HH_SLI								
L	**60.6**	41.7	60	**54.5**	44.4	**54.8**	.	**54.5**
M	31.2	50	**72**	20	**55.6**	45.1	40.9	44.5
H	.	52.8	.	15.4	.	37.1	30	34.3
HH_Any Salaried								
Y	.	23.5	.	24.2	.	23	38.1	26.8
N	55.6	57.4	63.6	23.1	52.1	**53.5**	31	**51**

Location seems to matter more for stunted children than UW ones (table 6.41), as higher percentage of stunted children belong to households located in remote areas, except in the case of Adiyans. Overall, lesser proportion children are stunted in households which have atleast one regular salaried member, and those that have a higher SLI, except

among Kurichians, Kattunayackans and Adiyans – where more stunted children are observed in higher SLI categories.

Table 6.42 Percentage of Wasting among Children (3 months and above) by HH Indicators								
Indicators	Social Group							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
HH_Location								
A	**35.3**	11.5	16.7	2.1	16.3	**17.9**	11.1	16.8
R	7.1	7.7	7.4	8	13.2	8.9	11.1	9.1
HH_SLI								
L	33.3	16.7	12.3	.	11.1	**18.3**	.	18.2
M	18.8	10	8	.	22.2	11.3	13.6	11.6
H	.	8.3	.	7.7	.	8.1	10	8.8
HH_Any Salaried								
Y	.	.	.	.	.	8.2	19	11
N	29.6	11.5	11.4	.	15.1	**15.5**	7.1	14.6

When wasting is cross-tabulated with other indicators (table 6.42), it is seen that the proportion of wasting among children is less in remote households, HH with atleast one member having a regular salaried job, and HHs with a higher SLI. As was the case with stunting

Table 6.43 Underweight-cum-Stunted Children (3 months +) by HH Indicators (%)								
Indicators	Social Group							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
HH_Location								
A	32.9	13.5	22.2	2	**30.2**	20.9	5.7	18.2
R	**71.4**	**25.9**	27.8	**11**	18.4	**26.4**	0	23.6
HH_SLI								
L	**44.3**	25	20	9.1	24.1	**28.8**	0	**28.6**
M	17.6	10	**40**	8.1	25.9	19.1	.	16.8
H	.	21.6	25.6	0	.	12.3	4.3	9
HH_Any Salaried								
Y	.	.	.	.	.	.	.	3.4
N	39.5	22.6	26.1	7.5	26	26.6	.	23.9

Children who are underweight as well as stunted (UWCS) are found to be more in remote households (table 6.43), the difference being highest among Paniyas (but more Adiya UWCS children are seen in accessible locations). They are also found to be more in HHs that do not have any member engaged in a regular salaried job and HHs with a lower SLI.

Table 6.44 Children born in Hospitals (0-5 years) by HH Indicators (%)								
Indicators	Social Group							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
HH_Location								
A	**86.3**	100	72.2	98	89.1	89.9	100	**91.8**
R	66.7	100	70.9	96.3	90.7	84.6	95	85.7
HH_SLI								
L	81.7	100	72.7	100	84.2	81.5	.	81.2
M	88.2	100	68	94.7	100	91.6	100	93.1
H	.	100	.	100	89.9	**100**	100	100
HH_Any Graduate								
Y	.	100	.	96.2	**100**	**97.2**	100	**98.4**
N	82.9	100	71.4	98	89.5	87	97.9	88.2

From the table 6.44 it is seen that a higher percentage of children living in HHs located in accessible locations are born in hospitals, especially among Paniyas. Similarly, the proportion of hospital born children is higher for HHs with higher SLI, HHs that have a graduate member, and those that have a regular salaried member.

Table 6.45 Children who Received Treatment During Illness (0-5 years, %)								
Indicators	Social Group							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
HH_Location								
A	96.9	68.2	77.8	96.6	64	82.9	100	86.3
R	77.8	**84.6**	**92**	91.7	**100**	90.1	80	89.5
HH_SLI								
L	91.2	**16.7**	84	100	**68.2**	79.1	.	79.1
M	100	69.2	100	95.5	86.7	89.4	100	91.5
H	.	100	.	93.3	.	96.8	94.4	95.9
HH_Any Graduate								
Y	.	100	.	100	100	100	92.9	96.8
N	92.7	**72.7**	88.2	93.1	**73.5**	84.2	100	85.9

A higher percentage of children living in remote colonies were given treatment (table 6.45), except Paniya children. Similarly, a lesser percentage of children belonging to low SLI were given treatment (least for Kurichia children). Children belonging to HHs that had any graduate or regular salaried member – all got treatment for their illnesses.

Table 6.46 Children Receiving Immunizations Regularly (0-5 years, %)								
Indicators	Social Group							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
HH_Location								
A	97.3	100	100	100	100	99.2	96.5	98.7
R	**73.3**	100	**83.6**	100	100	92.3	**85**	91.5
HH_SLI								
L	91.5	100	90.9	100	100	94.5	100	94.5
M	100	100	88	100	100	97.9	89.3	96.5
H	.	100	.	100	.	100	95.8	98.2
HH_Any Graduate								
Y	.	100	.	100	100	100	100	100
N	93.2	100	90.1	100	100	96.2	**89.6**	95.5

The proportion of children receiving immunizations regularly (table 6.46) is low for the remote households (esp. Paniya and Kattunayacka children). Children living in HHs with atleast one graduate member or one salaried member – all are regularly immunized.

Table 6.47 Children Attending Anganwadi Regularly (36months/above, %)								
Indicators	Social Group							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
HH_Location								
A	63	77.3	44.4	86.4	23.5	62.9	76.5	64.9
R	.	**92.9**	**57.1**	83.3	**76.5**	**80.9**	**100**	83.9
HH_SLI								
L	69.6	60	50	84.2	56.5	60	.	60.6
M	57.1	81.2	.	88.9	36.4	69.1	75	70.1
H	.	93.3	.	.	.	**91.7**	**92.3**	91.9
HH_Any Graduate								
Y	.	100	.	88.9	.	**85.7**	88.9	**87**
N	66.7	81.8	50	84.2	50	66.9	82.4	68.7
HH_Any Salaried								
Y	.	**100**	.	**100**	.	**92.3**	77.8	88.6
N	65.5	76.9	53.3	73.3	51.5	63.6	**88.2**	66.7

More percentage of children living in remote colonies attend anganwadis regularly (table 6.47, in case one is available, especially so in the case of Adiyas). More percentage of children from HHs having a graduate member or a salaried member or higher SLI households attend anganwadis regularly. But, among Paniyas and Adiyas, higher the SLI, lower is the proportion of anganwadi-attending children.

Table 6.48 Children Exclusively Breastfed for 6/more months (6-60 months age, %)								
Indicators	Social Group							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
HH_Location								
A	**73.8**	31.2	75.8	39.6	71.4	58.1	.	47.6
R	50	**51.9**	81.2	34.6	64.9	61.2	.	54.4
HH_SLI								
L	69.4	33.3	83.9	81.9	61.1	69.7	.	69.4
M	70.6	50	68	36.1	**84**	58.8	.	49.4
H	.	31.4	.	**22.2**	.	**27.4**	.	15.9
HH_Any Salaried								
Y	.	.	.	**29.4**	71.4	**33.3**	.	23.8
N	69.2	44.1	79.7	45	68.1	64	.	56

The duration of exclusive breastfeeding (table 6.48) among children is higher among lower SLI households (the difference is highest among Kurumas) and those that do not have any regular salaried member, which reflects on the availability of food in the households.

Table 6.49 Children regularly having 3meals/ more a day (1year+)

Indicators	Social Group							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	NonT	
HH_Location								
A	**65.6**	85.7	60.6	88.9	73.7	74.9	**91.8**	78
R	33.3	80.8	56.5	86.4	84.8	70.5	76.5	71.2
HH_SLI								
L	58.9	72.7	57.4	**100**	76.6	66.3	.	66.5
M	64.7	81.5	60	84.8	83.3	76.2	83.3	77.3
H	.	**90**	.	87.5	.	**88.9**	90.2	**89.5**
HH_Any Salaried								
Y	.	100	.	83.9	83.3	**88.9**	**95.2**	**90.7**
N	59.7	79.6	57.1	**91.7**	78.5	70.4	84.4	72.2

The proportion of children (above 1 year of age, table 6.49) having 3 meals or more daily is high among HHs located in accessible areas (except for Adiyas), HHs that have atleast one regular salaried member, HHs with a higher SLI.

Since, the number of cases of children having 4 or more food groups (table 6.50) was very less, the calculations were done only for total tribes, non-tribes and combined. The percentage of children having 4 or more food groups regularly is high for those HHs that have atleast one regular salaried member, and HHs that have a high SLI, again throwing light on the fact that majority of the tribal households (because

they fall in lower SLI category, fewer salaried population) are not having access to sufficient nutrition for themselves as well as for their children.

Table 6.50 Children regularly consuming 4/more food groups (1 Yrs+)

Indicators	Social Group		Total
	All ST	Non-tribes	
HH_Location			
Accessible	4.6	22.4	**7.8**
Remote	0	**35.3**	3.8
HH_SLI			
Low	1.4	0	1.1
Medium	2.4	8.3	3.3
High	9.3	**36.6**	**21.1**
HH_Any Salaried			
Yes	**13**	**52.4**	**24**
No	1	13.3	2.6

Table 6.51 Underweight Mothers by Background Indicators (%)

Indicators	Social Group							Total
	Pani.	**Kuri.**	**Kattu**	**Kuru.**	**Adi.**	**ST**	**Non- T**	
HH_Location								
A	55.7	17.5	42.9	.	**55.6**	36.4	9.6	31
R	**70**	21.7	56.5	.	31.4	37.9	**16.7**	35.4
HH_SLI								
L	54.5	**45.5**	48.1	.	45.2	**47.1**	.	**47.1**
M	**68.8**	15.8	**60**	.	41.4	35.3	14.3	31.3
H	.	12.1	.	.	.	9.1	9.5	9.3

The share of underweight mothers is high among the lower SLI households (table 6.51), except in the case of Paniyas and Kattunayackas, where there are more underweight mothers in HHs falling in medium SLI category. This could be due to the fact that some of the Kattunayacka colonies consist of newly-constructed houses and have good housing conditions; since housing conditions are also taken into consideration in calculating SLI, a fair proportion of the Kattunayacka HHs fall in the medium SLI category. But, just falling in this category does not provide them the means or increase their capabilities in a manner that will positively impact their health status or food availability or health care in the household.

Table 6.52 Mothers who received Full ANC in Last Birth (%)								
Indicators	Social Group							Total
	Pani.	Kuri.	Kattu	Kuru.	Adi.	ST	Non- T	
HH_Location								
A	94.5	96.2	77.8	98	97.8	93.8	89.5	93
R	66.7	100	78.2	100	93	88.2	95	88.9
HH_SLI								
L	**91.5**	100	77.3	100	92.9	88.4	.	88
M	82.4	96.9	80	97.4	100	93.1	92.9	93
H	.	97.4	.	100	.	**98.5**	91.7	95.6
HH_Any Graduate								
Y	.	100	.	100	100	100	86.2	93.8
N	89.8	97.4	78	98	95.3	90.8	93.8	91.1

The percentage of mothers who availed full ANC (table 6.52) in their last birth is higher for HHs located in accessible areas, HHs that had a graduate member, and HHs with a higher SLI (only among Paniyas, lower SLI HHs had more percentage of full ANC mothers). The remoteness of colony is affecting the full utilization of ANC by mothers, especially in the cae of Paniyas.

Table 6.53 Mothers who had All Deliveries in Institutions (%)								
Indicators	Social Group							Total
	Pani.	Kuri.	Kattu	Kuru.	Adi.	ST	Non- T	
HH_Location								
A	**57.5**	92.5	50	**92**	68.9	72.4	**96.5**	76.8
R	46.7	96.6	47.3	85.2	69.8	67.5	80	68.8
HH_SLI								
L	**50.7**	91.7	**51.5**	90.9	**58.9**	**57.4**	.	57.1
M	76.5	93.8	**40**	81.6	87.5	77.8	89.3	79.7
H	.	94.7	.	100	.	97	95.8	96.5
HH_Any Graduate								
Y	.	100	.	85.2	100	**88.6**	96.6	92.2
N	55.7	93.5	48.4	92	**68.2**	68.8	89.6	71.1
HH_Any Salaried								
Y	.	100	.	88.9	100	**92.2**	96	93.3
N	55.2	92.3	48.3	90.2	66.2	66.6	90.4	69.6

The percentage of mothers who had all their deliveries in hospitals (table 6.53)is higher for HHs located in accessible areas, HHs with higher SLI, that have atleast one graduate member, and HHs that have at least one regular salaried member.

Table 6.54 Mothers who delivered All their Children at Home, %

Indicators	ST	Total
HH_Location		
A	3.9	3.2
R	8.9	7.9
HH_SLI		
L	8.3	8.3
M	4.9	4.1
H	0	0
HH_Any Graduate		
Y	0	0
N	6.4	5.7

The share of mother who had all their deliveries in home is high for HHs located in remote areas, HHs that do not have any graduate member, or any regular salaried member, and HHs that have a lower SLI.

II. STATE MACHINERY AND TRIBAL EXCLUSION IN KERALA

The present levels of health conditions of a population, their socio-economic conditions, the institutional setups operating in a place – are just surface manifestations and have developed and attained their present characteristics through the workings of deeper historical and political processes. This section is an attempt to understand and explain these processes through marking of different stages of *exclusion* experienced *gradually* (initially) and *rapidly* (later), through a process of demographic-socio-economic and political changes (from historical-medieval to modern times) at the local, regional, national and global levels, as "situations that precipitate unequal distribution of rights and entitlements, and historical dispossession and marginalization, are characterized by increasing conflicts of economic, social and political nature. Such a situation currently obtains in highland Kerala, where conflicts over natural resources occur among unequal contenders- the indigenous communities, the settler communities and the state. So, the historical processes that led to this phenomenon need to be studied, because their present situations and the different stages of their development are not simply a product of recent developments but have been *triggered by the historical*

determinants, mainly their initial relations to land and changes in the meaning and significance of property rights."[16]

6.9 Stages of Exclusion from Land and Forest Resources

In order to understand and comprehend how the Paniyas, Adiyas and Kattunayackas find themselves in such a severe state of exclusion, it is important to study their background socio-economic and political history with respect to their region and to people who immigrated into their region at different times with different intentions and ideologies.

Historical Settling (first millennium B.C. to 1400 A.D.): The historical colonization of Wayanad has been described by various scholars (Aiyappan, Mathur[17]). Wayanad was an inhospitable area, with malaria-ridden thick tropical forests in pre-historic times.[18] The Edakkal rock engravings of Wayanad, dating back to the first millennium, point out that the Kurumans were inhabiting the area from very early times.[19] The Kurichians and the Mullu Kurumbans were perhaps the first farming communities to settle in Wayanad alongwith hunting as their major occupations. Alongwith these *tribal* communities, the *non-tribal Wayanadan Chettis* are also considered to be the earliest inhabitants of this region.[20] The traditional initial endowments and entitlements of the communities like – Kurumans as *settled agriculturists,* Paniyans as *paddy labourers,* and Kattunayackans as *hunter-gatherers* – itself arouse us to prod further into their causes, but have no recorded or oral histories.[21] These earliest groups are said to have practiced their livelihoods, philosophies, nature worship, rituals, hunting, food-gathering and all other things by following the *Aivu,* which is an oral tradition

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[16] Kjosavik, Darley Jose and N. Shanmugaratnam (2007), "Property Rights Dynamics and Indigenous Communities in Highland Kerala, South India: An Institutional-Historical Perspective", *Modern Asian Studies,* 41 (6), 1183-1260.

[17] Mathur, (1977), "Tribal Situation in Kerala", Kerala Historical Society, Trivandrum.

[18] Sathyanarayanan, *op.cit.*

[19] Kjosavik et.al *op.cit.*

[20] Even today, there are no historical evidences for establishing the facts for *who settled first in the region.*

[21] As Kjosavik and Shanmugaratnam question "was it due to the differences in skills possessed by each community, or did each community develop specific skills to suit the resources accessible to them, or were forced to develop skills to produce the outputs demanded by the dominant community?" But, there is little evidence on the life and times of this period and all literature starts from the decline of the Vedas.

(traditional lores, recitations, testimonies – forms to hand down their history to succeeding generations) or "*political-economic and social-spiritual Code of Conduct,* among the Kurumans (claimed as the first inhabitants of Wayanad and the owners of its lands and forests), which represents the way in which the daily life of the Kuruma society was ordered ideologically and functionally within their members and as regards their relationship with members of other indigenous communities."[22] The *aivu* claims that Uralis (good at artisan work – provided Kurumans with bamboo bows and arrows, earthern utensils, iron implements in exchange for food and cereals), Kattunayackans (experts in handling wild animals, so allowed to control wildlife) and Paniyans (good at working wetlands, so were given control of paddy lands) came later, but **they were not to *own any land*.** The oral tradition of *Peneppattu* of Paniyans says that *the members of the community should not aspire for land ownership*[23]*. If viewed differently, the aivu can said to be the beginning of the subjugation of some communities* to others, by giving *slightly higher* social and political regards to particular people (Kurumans)[24] and establishing fixed laws for the behavior and ways of live for these communities which were passed onto succeeding generations, even if there wasn't any difference in their economic conditions and access to resources.

In the later times, the region was said to be ruled by the Kudumbiyas and Veda dynasties (kings of the Kurumans), who appear to have been popular because they seldom interfered in the life of the communities and welcomed anyone who wished to settle in their area. There is evidence of the region (even at the beginning of the Christian era) being known for its pepper, ginger and cardamom spices, trade being carried out with surrounding kingdoms, and also overseas. The region was slowly inhabited by other population groups from the surrounding hill and plain areas – the Chettis, the Gounders – who brought settled agriculture with them. But, these movements were slow and gradual, and spread over several centuries beginning at least from the 5th century A.D, strongly and steadily establishing the base for the present patterns of discrimination. The evidences relating to this period led us to presume that

[22] *Ibid.*

[23] *Ibid.* The *aivu* holds special regards and respect even in the present day memories of these communities.

[24] The earliest historical evidences of hierarchical structure in the region were found in the Edakkal caves of Wayanad. Mullu Kurumas are considered to be the descendants of the Vedas.

the social relations at the end of this period were hierarchical, but ensured economic security to all communities, as their ways of life were self-sustaining, being based on the ample availability of land and forest resources. Even from this initial period, the Adiyas, the Paniyas and Kattunayackas were landless, in the sense that they *were given* lands by the Kurmans/Kudumbiya/Veda rulers to cultivate/gather/hunt and establish settlements, but their rights to the available resources was never denied/ threatened. Even though gradually the resources which each community had access to reduced with the in-migration of others, nobody was denied access to land and forests. As Kjosavik states – the indigenous groups still followed the rules of *aivu* in relation to use of resources and restrictions, whereas the later settlers like- Gounders and Chettys had no such regulations.

The Later Medieval Stage (1400 – 1805 A.D.): In the medieval period, the Vedas are said to have been overthrown by the the rulers of the low-lying non-tribal Kottayam and Kurumbranad dynasties. The establishment of the temple-economy (where large areas were brought under temple control, three main temples during the period being those of – *Tirunelli, Valliyoorkavu, and Ganapathi Vattam*)[25] and feudal system of administration of the Rajas of Kottayam and Kurumbranad in Wayanad by settling 64 *Nair/Nambiar* (upper-caste) families with other caste groups by dividing Wayanad into 10 divisions (*desams/nadu)*[26] was the culmination of the process of colonization of Wayanad plateau by the people of the plains. With the establishment of the feudal order under the Rajas, the Nayar chieftains and their retainers parceled the available land among themselves, enslaving the Paniyans, Adiyans and other tribes to work on the lands. The Kurichians and Kurumans practiced shifting or settled cultivation, wherever they could find lands or as tenants, nearer the margins of forests. The Gounder and Chettys, by taking land on lease, also became settled agriculturists by employing Paniyans and Adiyans. Exclusive rights to land began in this stage. So, this period saw the emergence and strengthening of the *slave/bonded labour system (economic exclusion alongwith socio-cultural exclusion, the opposition of which resulted in severe punishments).*

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[25] Johnny O.K. (ed.) (2008), "Edakkal Caves and The History of Wayanad", Mathrubhoomi Books, Kozhikode.

[26] Kjosavik *op.cit.*

The land was owned by non-cultivating landlords, who in turn used to lend these lands to tenants for a period of 12 years without transferring the ownership rights. They could remove their tenants anytime, but the tribes' way of life continued under the next tenant. The tribal bonded/ slave agricultural labourers and their families were provided land to build shelters for their families and communities, even though exploited extremely, they were also looked after in such a system, even during lean seasons when they had no work because they were bonded for one year (food, clothing and shelter) and this was renewed or they were sold to other landlords every year during the temple festival of *Valliyoorkavu Amman (*built during the reign of the Kottayam dynasty)[27].

The analysis of this stage reveals that the landless tribes were increasingly subjugated and harshly exploited (Adiyas and Paniyas); those who did not want to be a part of these fled into the denser forests (Kattunayackans). The socio-economic and political hierarchies were well-established, and the survival and security of livelihood of the tribes, especially those who were landless, depended on their loyalty and silent acceptance of the situation. Even then their freedom to use the forest resources was not restricted, and their labour was in demand in a time of high land availability, and the systems of revenue collections were not in place. This period saw the Kurumans being reduced to the status of tenants in their own lands, with greater reduction in the land and forest area freely accessible to them.

The Mysore State (1766-1792) & the Colonial State (1805- 1947): The Wayanad rajas and chieftains were increasingly weakened and conquered by the Mysore Sultans, *whose main motive was to extract maximum revenue from the land*. For this purpose, they entered into agreements and established settlements of large sections of Muslim landlords, *moplahs* and other lower caste groups whom they considered as the real tillers. This phase saw large areas of lands and forests being given to Muslim contractors for timber trade as well. As a reaction to this rapid spread of Muslims and lower-castes, the upper-caste Hindu landlords established *janmam rights on their land, claiming the soil as their birth-right and as their family property.*[28] This was the beginning of state control of forests and lands, and complete derecognition of the rights of the tribal communities.

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[27] Johnny *op.cit.*

[28] Kjosavik *op cit.*

Malabar came under East India Company in 1792, but the British could not directly bring Wayanad under their control because of stiff resistance by the Pazhassi Raja of Kottayam dynasty, the next heir in the region, who was assisted in the war by the indigenous communities. It was only in 1805 when the raja was defeated that the area came under British control. The demand for timber, rubber, spices, tea, coffee led to the further destruction of forests for laying up such plantations, when each and every inch of the land was surveyed and measured to be put to some use to generate revenue. By 1855, they officially declared forests as state property and were closed for the locals. The British falsely interpreted *jenmies* as free holders, who had absolute property rights and legalized this ownership by 1893, derecognizing the prevalent customs of those times. The Kurichiar and Kurumar were reduced to tenants-at-will, with no security of tenure. The latter half of 19th century saw establishment of large plantations by the state. The earlier bonded tribal labourers now, not only lost their ancestral lands, but also their livelihoods as the new landlords found it burdensome to pay for their upkeep every year even during lean seasons, so increasingly, the lands were let out to small or large non-tribal farmers who did not expect anything else other than a share in harvest or profits and also shared similar socio-cultural aspirations.

The new settlers completely transformed the cultivation scene for bigger profits for their produce. This was in contrast to what the traditional settlers like- Kurumans, Chettis, Kurichians grew – ragi and other millets, ginger, paddy and pulses. Some, Kurichians and Kurumans also did share cropping with the Chettis, Christians or Muslims, where they grew – paddy and banana. This was done in order to cope with the increasing burden of revenue that they had to pay to the British government, and for the tenants, it was more double burden, because they had to pay rent to their landlord as well. So, the *peasants were forced to shift to cash-crops*. Failure to pay revenue, which was the case among the indigenous groups, resulted in eviction of the tenant or the landlord. Under such a system, only the non-tribes, who were already familiar with the ideas of the market and cash economy, could hold onto their holdings. During the early 20th century, there was a growing influx of immigrant non-tribes who acquired lands from the jenmies and also indigenous tribes (part of communal lands from the *moopan)* for a meager sum to convert the forests and wastelands into agricultural fields and plantations.

The destruction of forests for wood, for construction and for laying of agricultural fields and plantations continued at a fast rate in this period. From 1930

onwards, a large number of Muslims from Malabar moved into Wayanad for trade and business, and bought a lot of tribal lands, for timber trade, at throwaway prices. During 1940s onwards, there was also immigration of Christians from Travancore into this region because of situations of hunger and famine in the south, which made them sell their belongings in Travancore and buy land in Wayanad, where it was very cheap. The landlords now were the wealthy Syrian Christians, each of whom owned hundreds of acres of land here, and further let these lands to small or big cultivators, who were also mainly Christians. Infact, these landlords assigned the task of bringing in labourers, small and big farmers from Travancore to some middlemen, who later went to south and lured the people to Wayanad. They came in big groups, settled in and near forests, converted the jungles into farms and plantations, growing mainly tapioca, rubber, pepper and later, tea and coffee. They not only strived to pay taxes on time but also maintained the papers regarding their ownership or tenantship of land meticulously, which the tribes seldom did, being ignorant of the relevance of these *papers.*

The immigrants to Wayanad from South Kerala, atleast had exposure to some level of education or atleast awareness about the happenings outside, the importance of cash and private property. This information was clearly lagging among the tribes, who even though were engaged in trading commodities and forest products with the landlords, Muslim traders and British – did not do it for acquiring property or money. Their services were mainly paid in kind – paddy, tobacco, salt and other items, alcohol. This *information exclusion* clearly proved costly for them later, who never imagined to be *thrown out of their lands and hutments* just because someone else happened to own it.

So, the colonial period saw the extreme forms of exclusion of the tribes, even lots of Kuruma and Kurichia tribes, who held lands earlier from their lands and livelihoods. The socio-economic and political hierarchies of the earlier stages were strengthened with the British rule, who felt it easier to negotiate with big landlords, than the people. They also encouraged immigrants, new settlers, Christian landlords, plantations and state ownership of resources who slowly replaced the earlier jenmies. None of the outsiders had any respect or restrictions with regards to the use of forest and land resources, all of them simply exploited them for profits.

All this completely sidelined the ways of life and livelihood systems of the tribes, who now also had to face administrative, legal and information-economic exclusion (like that of private property and market economy). This was mainly because the British

failed (did not want) to understand and comprehend the existing systems of property rights relationships between landless tribes, the landed tribes and the non-tribal landlords and the economic attachments between them. Paniyans and Adiyans were reduced to wage workers, some Kurumans and Kurichians went for shifting cultivation in remote pockets. This stage made the *hitherto* ideologically/ritualistically landless communities into *really absolutely landless communities in a literal sense, physically and legally.* Infact, they also reduced many among the landed tribes like – Kurichias and Kurumas to landless labourers.

The mass immigration into the region also led to the reversal of the land-labour availability – labour supply was higher than land availability. The very survival of these communities (no rights, no citizenship, no resources) was at stake with increasing restrictions on forest use as well, the limited resources could no more satisfy their needs, which forced all of them to sell their labour in advance and go for wage (plantations)/bonded (private landlords) labour[29]. This was the beginning of the *debt* trap which the communities constantly found themselves in. The Kattunayackans who had moved into denser jungles in the last stage, further moved into the densest interiors in the colonial period, where the administrators hesitated to venture.

The Post-Independent State: The in-migrations into Wayanad continued during this period, encouraged by the Wayanad Colonization Scheme by the government reserved for ex-servicemen who had served in the Second world war in 1948, and in 1956 by the formation of the Kerala State by combining Travancore, Cochin and Malabar. This stage saw more immigrants in the form of non-tribal marginal farmers and landless labourers from Travancore, Cochin and other parts of Malabar. The settlers, forming a pressure group, bargained with the state to provide them titles to the land. The availing of land titles involved a lot of bureaucratic paper work and bribery, which the tribes could not afford, but the non-tribes availed a lot of land in this period by hook or crook. Lots of tribes were not given land deeds simply because they were staying in reserve forests, which were state property. The state failed to ask why they were forced into those forests in the first place! Later on, in order to abolish the system of landlordism, the tenants were made owners with the coming of the Kerala Land Reforms act of 1960, which benefitted lots of Christians, non-tribal settlers, and only a few Kurichians and

[29] Kjosavik *op cit.*

Kurumans, who had proof of their property. Many of the non-tribes got tribal lands by claiming that the tribes were actually their landlords, for whom they were working as tenants or labourers. This act, smartly, excluded the plantations, and majority of the Adiyas and Paniyas were actually plantation workers. Even though the act made provisions for hutments, but the landowners threatened the indigenous hutment occupiers to vacate.

However, the tribes in Travancore had earlier been given land by the rulers, so they differed from the tribes in Wayanad, in that they had a firm mind to own land, prevent encroachment, adjust to market situations and own resources for further advancement and they also made all their dealings in cash which the tribes in Wayanad seldom did, whose payments were mainly in goods and services.[30] And as Kunhaman observed, *the more the proportion of landless agricultural labourers in a district, the lower were the wages and the literacy, because of labour suplus-land deficit situation* - "*w*hile in the labour-scarce (land surplus) economy of the past, it was in the employer's interest to keep the tribal labourers in a state of bondage, in the labour-surplus economies of today, it is in the labourer's interest not to leave the employer."

Whereas Kozhikode and Kannur, (of which Wayanad was a part), had the highest numbers of agricultural labourers during the 1970s-80s. So, the Bonded Labour Abolition Act benefitted the non-tribal employer by enabling him to obtain all the benefits emanating from the bonded labour system at reduced costs, who was *no more obliged to provide sustenance* to the tribal labourers through the lean months. The tribal labourers, now, *willingly attached themselves to their employers*, reducing their wages further. With increased globalization and decreasing of market value of agricultural products in world economy, the non-tribal landowners strategically employ the methods of cuts in wages and work days to ensure their own survival. This further is resulting in producing deep cleavages between the labourers and landed in the region.[31] Thus, the intra-regional and intra-tribal differences have been aggravated with regards to literacy, land ownership, degree of market participation, wage rates etc.[32]

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[30] Kunhaman, M. (1985), "The Tribal Economy of Kerala: An Intra-Regional Analysis", *Economic and Political Weekly,* 20(11), 466-474.

[31] Tharakan, Michael P.K. (2008), "When the Kerala Model of Development is Historicised: A Chronological Perspective", *Working Paper No. 19,* Centre for Socio-Economic and Environmental Studies (CSES), Kochi.

[32] Kunhaman, *op.cit.*

The post-independent state actually continued with the policies of the colonial state with regards to tribes, differing only in giving them certain welfare provisions. So, their situation as attached/wage labourer continued. The Kattunayackans were settled on the forest edges, as the forests remained under state, infact agriculture extension also led to loss of forest land during this time. Lots of schemes and projects for the rehabilitation of tribes were undertaken, like the Chingeri Extension scheme, the Sugandhagiri Cardomom project, Pookot Lake Dairy Project and Priyadarshini Tea Estate – where a minimum of 2 hectares of land were to be given to each family – so that tribes could sustain themselves. But, in reality, the projects were not managed by tribes – they had no decision-making powers, neither they could mortgage or sell land, and were again working as wage earners; plus the work and wages were neither regular nor good[33]. This resulted in people moving out in search of work outside. Even though the state governments promised to redistribute land to the landless tribes from 1970s onwards, till today, there has been no action on it, despite protests and marches by the tribal organizations.

The non-implementation of land redistribution policies, encroachment of settlers everywhere, private properties and the restrictions on indigenous people to graze cattle, collect fuelwood, fodder, roots and tubers from forests and absence of any village commons – have completed the processes of exclusion of the tribes. Kjosovik and Shangmugaratnam term this as the twin processes of *privatization and statisation.*[34]

*The above descriptions show that **Adiyans and Paniyans** were historically treated as **slave/ bonded labourers.** They perhaps never showed or never allowed to show any inclination towards occupying and cultivating lands, whether through owning or sharing. They still form the largest share of **agricultural labourers** in the region. The Paniyans are criticized even by Adiyans because some of them eat beef, provided by the Christian and Muslim landlords, infact they like working for this reason alone, they also sometimes get arrack/alcohol in return for cheap labour. Alcoholism is highest in these communities. The **Kurichians and Kurumans,** even though never considered equal to non-tribes, were never treated as slave/bonded labourers, their*

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[33] Kjosavik *op.cit.*

[34] Raghavan, V.P. "Degrading the Commons: The Ecological Consequences of Migration- The Case of Kerala, India in a Historical Perspective", Kannur Institute of Management and Technology

occupation of lands or even the Kurumans who worked as labourers retained their unique culture of: warrior skills in ***archery*** *and fighting (in the case of Kurichians) and* ***hunting*** *(Kurumans) which earned them lot of respect, and both Kurumans and Kurichians showed inclination in occupying and buying whatever lands were left and worked hard to* ***cultivate*** *crops like – pepper, coffee, areacanut in the slopes and paddy, tapioca, ragi, pulses, plaintain, ginger in the plains either through family ownership or sharing with non-tribes or Chettis/ Gownders. So, they attained a higher economic status too, which enabled them to attain higher levels of education and the jobs in the Panchayat and other levels of government. Kurichians consider themselves much superior to the rest of the tribal communities. These two groups enjoy a higher prestige among the communities here. The* **Kattunayackans,** *till recently, kept themselves isolated from the rest of the communities, even the tribes and dependent completely on the forests for their survival. So, they are one of the primitive groups here, with extremely low socio-economic and political attainments. Even though they reside in some of the remotest places, the younger generation among them is showing high aspirations, with special help from the state.*

In the first stage, the exclusion was very subtle, with the introduction of the rules of *aivu,* which actually makes us question the usual popular understanding about the tribal communities that they had no social hierarchy. The second stage saw a more visible form of socio-economic exclusion with the coming in of the rulers from lowlands, and their *Nayar jenmies,* who practiced the strictest forms of ritualistic and socio-economic and political exclusion with their Adiya, Paniya *slaves.* These two stages can still be called *gradual* with regards to the time taken for exclusion. It was most *rapid* during the Colonial and the post-independent stages, when the state mechanisms of resource ownership and exploitation through economic, administrative, political and ideological processes set in. The last two stages saw the complete physical-socio-economic-political exclusions of the tribes, both stages being strongly directed by global economics and national-regional politics, which attacked their very existence. The ecological destruction in the region began with the entry of the East India Company as early as 1807, when they proclaimed royalty rights in teak, banning the felling and selling of teak by private individuals. They converted vast tracts of forests, leased from *jenmies,* into teak, tea and coffee plantations, thus, depleting a large stock of natural vegetation (tress, roots, tubers) systematically reducing the accessibility of forests and their products (very vital for the tribes – food, fuel and fodder) to the indigenous people

and officially closing the forest for locals by 1855. Raghavan, who studied the environmental impact of the historical migration of peasant farmers from Travancore to Malabar region during the early 20th century, writes – the migration of peasantry from Travancore to Malabar resulted in socio-economic transformation of Malabar in many ways, but it also had permanent ecological consequences. The peasant settlers transformed this landscape of thick forests into agricultural fields, mainly growing cash crops like rubber, which dried up the land and the depleted the natural water logging systems and drying up the perennial streams in summers, resulting in severe soil erosion. This was also accentuated by the increasing construction activities. The mass migration also impacted the life and livelihood of the Adivasis, who were uprooted from their ancestral lands, and thus, their traditional livelihoods, settlements and cultures.[35] As Sathyanarayana and Chandra mention, "from 1973 to 1995, in Nilgiris, dense forest was reduced by 19.5 percent and open forest by 32.2 percent", and Wayanad forests experienced the maximum rate of loss of 4.4 percent per annum, mainly due to increase in plantations and agricultural areas as a result of population growth. [36]

Haseena, talking about the eco values of tribes, states, "they have have an ethic of enough. Nothing is taken from nature, other than what is essential. *Earth is mother God and God is not to be bought or sold*. They are the originators and contributors of unique system of nature and indigenous medicine. The entire hybrid in food crops, medicinal plants are those developed from the rich variety of life species preserved from ancient times by tribesfolk. It is an irony that our modern society perceives them as uncivilized and uncultured. For centuries, forests were owned by them. They never privatized them, nor destroyed them in the name of development."[37]

6.10 Exclusion with Regards to Education and Health

The Wayanad district, at that time, was a part of the Malabar region which was under the direct control of British. Even though the British, in the later 19th and early

[35] Raghavan, *op.cit.*

[36] Sathyanarayanan, C.R. and Nirmal Chandra (2012-13), "Traditional Life, Livelihood and Plantations: A Study among the Mullu Kurumba", *Journal of Anthropological Survey of India,* 61(2) & 62(1), p. 595-615.

[37] Haseena, V.A. (2014), "Folk Lore Culture Among Tribes in Kerala- A Study on Attappady", *Historical Research Letter, ISSN 2224, 2225-0964,* 12, p.6-12.

20th centuries, threatened the princely states of Travancore and Cochin with annexation if they did not take steps for public welfare, health and education of the masses, the British state itself did not take any such 'public welfare' measures in the Malabar region (which came under the Madras Presidency at that time; this also later served as a major factor for the separation of Malabar from the Tamil Nadu state at the time of reorganization of states).

Malabar, thus remained 'socio-economically backward' from the neighbouring state of Tamil Nadu (Madras Presidency), also when compared with the southern regions of Kerala, namely erstwhile princely states of Travancore and Cochin, who were forced to take several steps for improving public infrastructure, roads, schools, hospitals and awareness – with increasing threat of annexation (which forced them to increasingly commercialize their agriculture systems, free land and labour from the system of landlordism, increase revenue) and later, due to pressure from the subaltern groups who demanded reforms and rights to education because of the anti-caste movements, like- ending slavery, entry to temples and roads (that emerged in the context of increasing economic status of - Muslims, Christians, Ezhavas, who now could voice against the extremely suppressive caste system and by the increasing ideas of equality adopted from Christian missionaries and the services they rendered to the lower castes in terms of health and education), and threat of increasing conversions to Christianity, which could have led to political instability. But these movements were not exactly anti-colonial. In Wayanad, the Christian missionaries and the traditional healers did play a minor role in establishing hospitals, but it was mainly accessed by the state officials, non-tribes and only minutely by the tribes, who were anyways living in remote forests.

However, the complete dependence of the economy on exports and the '30s depression resulted in large scale unemployment, leaving the labourers and peasants extremely vulnerable economically, along with continuing discrimination against lower castes and converts. These inequalities that were inherent in the market system of free labour and land came to light only when the situation reached a state of famine. This was the time when workers could link their poverty to colonialism and class-exploitation and then, their movements began to be firmly anti-colonial.[38] This

[38] Desai *op.cit.*

established the base for the popularity of the Communists in the region, which also triggered a process of *sub-nationalism* or shared identity of the *Malayalees and a United Kerala*[39]*,*which the *elite leaders (*EMS Namboodiripad) frequently drawed upon to emphasize on shared language, culture and history among the masses, where well-being of all was held to be a collective responsibility, leading to free primary education and vaccination programmes for all castes and classes. The leaders also had different political goals for different population groups, for e.g. – caste oppression was to be ended for all, but land was to be given only to the peasants, not the landless labourers to avoid internal political weaknesses. This ideology was different from the earlier ideologies of social reformers like- Sree Narayana Guru and Ayyan Kali, who stressed on caste equality through accumulation of both education and wealth. Devika accuses the Left leaders of cleverly preventing any real transfer to resources to a large section of lower castes, thereby bringing in new power relations between the upper/middle castes and the lower castes. So, the caste division of labour continued, endogamy continued along with other cultural practices. Left politics even prevented the formation of any low caste political organizations even though all the dominant upper/middle caste-class groups had their own organizations.[40] The positive psychological effect of these reforms and the gaining of new self-respect among the masses was a big achievement, which however, bypassed the habitats of the tribes.

The post-independent governments' ideas of reforms and policies were, then, only a continuation of the prior legacy of reforms in Travancore and Cochin, who were forced to extend the earlier provisions alongwith supporting lower caste emancipation (abolishing landlordism was a major form of changing caste relations since the landlords were mainly upper-castes – this was also started by the Travancore rulers in 1931, when they supported tenants as free holders, which the post-independent government extended to Malabar later), working classes, anti-colonial and tenant movements (land redistribution), and provision of social security schemes (education – schools and libraries, housing, medical care, public distribution system. minimum

[39] Singh, Prerna (2010) , "We-Ness and Welfare: A Longitudinal Analysis of Social Development in Kerala, India", *World Development,* 39(2)*,* 282-293.

[40] Devika J.(2010), "Egalitarian Developmentalism, Communist Mobilization and the Question of Caste in Kerala State, India", *The Journal of Asian Studies,* 69(3), 799-820.

wages, pension) to the poorest section[41] in the context of *a high collective political consciousness that had emerged because of earlier developments*[42].

If the processes of sub-nationalism and its resultant high levels of collective consciousness of people as a coherent political group is taken to be a major force in the rising political, socio-economic voices and aspirations of the people, then it would be very relevant here to point out that this process of political consciousness or generation of a feeling of sub-nationalism was missing from the tribal belt of Wayanad, since the processes of sub-nationalism began in Travancore and later, Cochin but only very late in Malabar, even then the tribal regions remained out of their influence perhaps due to physical isolation. This is exactly what is missing when we see the clear differences in the tribe-non tribe interaction in daily life. The non-tribes know and feel that the tribes are different, and the tribes also don't call themselves "malayalis".[43]

So, the sections who benefitted from the land reforms (that completely excluded the marine fisherfolk, and the landless labourers, most of whom belong to SC/ST groups), that provided the assets of cultivable land to some who could then "convert it to further social and economic advancement through education and other means, that not only helped in enquiring organized sector jobs but also ensured social uplift"[44] and welfare provisions were the tenants, peasants, middle and upper castes and those who could bargain with their votes. These were the sections who also triggered the processes of Gulf migrations and remittances, which they could avail due to their earlier achievements on the education and health fronts (when the state thrust on anti-poverty and social welfare was highest).

The landless Scheduled tribes neither benefitted from the land reforms earlier, and being late entrants (late 1980s and 1990s) into the arena of socio-political consciousness, they had no such gains from the state's earlier welfare provisions of education and health, most of which started stagnating (but, never reversed) by late 1980s due to economic crises and neo-liberalism, because of which the state could not

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[41] Desai, Manali (2005), "Indirect British Rule, State Formation, and Welfarism in Kerala, India, 1860-1957", *Social Science History,* 29(3), 457-88.

[42] Singh Prerna *op.cit.*

[43] This could be clearly observed during the field surveys in the attitudes of the non-tribes towards the tribes and the conversations and responses of the tribes themselves.

[44] Tharakan *op.cit.*

expand social sector spending (which was heavily dependent on central government funds). So, in the areas in socio-economic development, the scheduled tribes remained outliers, both in increasing their access to resources, or diversifying their livelihoods and in increasing their human capabilities and skills. So, the very factors that led to Kerala's development, themselves have been responsible for tribal exclusion. As Shyjan and Sunitha say 'the tribes have been excluded from the *two phases of* Kerala's development experience – *the first phase of social development without economic growth* with land (the Kerala STs Act – *Restriction on Transfer of Lands and Restoration of Alienated Lands* of 1975 still not implemented because of the lobby of non-tribal settlers) and socio-economic reforms; and also from *the second phase of economic growth* fuelled by gulf-migration of semi-skilled workers (mainly non-tribe) and resulting remittances, who benefitted from their initial endowments that helped them find employment outside.[45]

With increasing vulnerabilities and competitions in a global export-based economy and increasing privatisation, the social cleavages are further widened, as Tharakan points out, when "the poorest are *doomed* to send their children to certain type of schools, and get education in a way which will not guarantee a ready and well paid job subsequently. Meanwhile, even their slightly better-off neighbours are able to send their children to another type of schools to get the type of education…..which has better chance of getting better-paid jobs. In almost all other areas of public services such differences are strengthening over time."[46] This was a result of the lop-sided redistribution of assets to different groups. The increasing remittances resulted in booming construction and real estate businesses and an ever-increasing consumerist society. This has created a very much open and glaring inequalities between the haves and the have-nots. The present socio-economic environment increasingly encourages the growth of communal forces and community politics[47], and prevents any 'mass mobilizations' inspired by *common social goals* for equitable policies when such relative differences affect the daily life and aspirations of people concerned, resulting

[45] Shyjan, D. and A.S. Sunitha (2009), "Changing Phases of Kerala's Development Experience and the Exclusion of Scheduled Tribes: Towards an Explanation", *Artha Vijnana,* LI(4), 340-359.

[46] Tharakan *op.cit.*

[47] Tharakan, *op.cit.*

in deepening frustrations and *keep the poor trapped in a cycle of lesser assets and achievements*[48].

So, even after 60 years after the formation of the state and the promise of a model state, the governments have been unable to contain "enduring inequities of caste, class, gender, and ethnic exclusions in health and social development. Rather, there are newer forms of marginalization like- increasing informal employment, immigrant labour and ecological devastation"[49] that increasingly complicate any solutions. Thresia points out to the promotion of private health care by the state (failing to regulate, standardize and control it), undermining health as a state goal, in the form of sums and subsidies to private high-tech diagnostic labs, multi-speciality hospitals, insurance schemes (*Karunya)* rather than improving the quality of public sector health institutions and services. Even the small or mid-level private institutions that catered to the middle-class and lower-middle class in rural areas are declining. The local self-governments also fail to properly mobilize their resources, having no interaction with the medical professionals in their area. Such changes lead to increasing inequalities in accessibility of health care among the lower castes and tribes, who are now more vulnerable to out-of-pocket medical care and resultant medical poverty.[50]

Even the processes of decentralization (disaggregation and delegation of political, economic and administrative powers and responsibilities to a wide range of local and regional institutions and actors)[51] and the implementation of the tribal sub-plans in the

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[48] Jan, Breman (2010), "Outcast Labour in Asia: Circulation and Informalization of the Workforce at the Bottom of the Economy", Oxford University Press. "The global crisis is being tackled by a massive transfer of wealth from poor to rich. The logic suggests a return to 19th century beliefs in the principle and practice of natural inequality. According to this view, it is not poverty that needs to be eradicated. The problem if the poor people themselves, who lack the ability to pull themselves up out of their misery." Those who do not possess the means of production are also denied access to means of consumption.

[49] Thresia *op.cit.*

[50] Health care utilization is not equal, because of the location of the various colonies. This also results in those needing care, putting off their visits till a time when the illness becomes severe. Even the asha workers, are not able to detect early pregnancy cases because of fewer visits to some of the remote colonies. They are not able to attend to emergency cases, delivery time, etc in such places, esp during night time. Because such places are scattered widely, the prediction of illnesses and home deliveries is also very difficult. These places are not just physically isolated, but also socio-politically isolated. So, all areas and all places are not equal. And this is also attributed to health–seekers' characteristics, their education and employment and awareness, which is inturn dependent on other influences.

[51] Kjosavik D.J. and N. Shanmugaratnam (2006), "Between Decentralized Planning and Neo-Liberalism: Challenges for the Survival of the Indigenous People Of Kerala, India", *Social Policy and Administration,* 40(6), 632-651.

region have not brought any positive changes in the situation. Kjosavik and Shanmugaratnam state that "a situation of conflict and tension was created in 2001 when newly elected Congress government in Kerala (supported by the bureaucrats and the central government) adopted the neo-liberal prescription where there was little role for state bureaucratic and political actors in mobilizing people for planning and implementing projects at the local level, whereas, the outgoing CPI (M) government had rejected the neo-liberal approach and followed a decentralization programme since 1996 (*People's Planning Campaign*), a way of re-engaging with the civil society, to address the development issues posed by the new policy regime."[52] At this time, the adivasis had just begun to participate in their socio-economic and political development, with the ensuring of 10 percent seats in local bodies for them. They had separate funds under the tribal sub plan – for drinking water, housing, sanitation, self-employment, vegetable cultivation and animal husbandry projects were carried – individual beneficiaries were identified rather than large-scale infrastructural projects.

But, before the *adivasis* could sufficiently benefit from these developments and improve their asset base materially or capability-wise, these projects were suddenly stopped in 2001 when the new state government adopted neo-liberal policies and increasingly, the central government reduced fund transfers to social sector development and PDS, which drastically affected the tribes who had to incur more expense for food and fuel, which forced them to take small loans. The tribal sub plan was also delinked from the panchayats, and transferred to the line department due to pressure from the bureaucracy who felt their say was decreasing with increasing power of local bodies. As one Kuruman Panchayat President remarked, "our budget is very tight. We have a lot of fixed areas, all of which need to be given a minimum proportion of available funds, like – housing, water, roads, old age schemes, schools etc. in such a situation, lots of beneficiaries get identified, but because of fixed budgets, we can satisfy only some among them. 10 to 30 percent of our budgets are devoted for health and education programmes. Each and every sector has fixed shares in the budget, we have reservations for everyone – physically handicapped or old aged, so we cannot allocate more or less than this share. Financial crises/delays/crunch all over stops the

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[52] *Ibid.*

schemes from being implemented regularly and smoothly everywhere. We are not in a position to address each and every issue. Panchayat plans are listed and given to *oorukootams*, who then decide the beneficiaries. These *oorukootams* are held once in 3 months. We also participate. Medical infrastructure is a big issue here, the major hospitals are all far away, either in Bathery or Mananthavady, more than 35–40 kms from the remote colonies, means more than 2 hours, and they also overburdened. Now, we have decided to give ration cards to everyone, irrespective of whether they had cards before or not."

For the scheduled tribes here, any decision regarding housing, amenities, (who will be provided what) is taken by holding *oorukoottams* (like - gram sabha), that are organized regularly (every 6 months) in different wards of the panchayats, in which members of all the colonies in the wards are asked to participate (the dates of oorukootams are advertised 2 -3 days or even a week before in all the colonies – so that maximum people participate), even ward and panchayat representatives are supposed to take part. The decisions taken in this meeting are then forwarded to panchayats, which take the final action. But, their relevance and efficiency differs from place to place, for example, some Paniyans, Kattunayackans and Adiyans have stopped participating in them, since, they see these meetings as mere *signature* collection camps than a process for any kind of self-development or mechanisms for well-being. They feel that their concerns and problems are not heard properly, even if heard – nothing is done to address them. And the role of moopan or the traditional tribal headman is at present only for namesake, the real manipulators are again the local land owners, NGOs, contractors and other corrupted political people.

The tribal promoters have a major role to play here, but throughout the field observations, it was found that most of the tribal promoters are very young (since the basic qualification is a 10th pass, and most of the elder tribes do not have that level of schooling), with very weak understanding of the real issues and processes of deprivation experienced by the people. Some of them are in these posts only to gain some other posts in the panchayat office or someplace else (they are mostly running for their own recommendations). Only very few among them and some ex-promoters were found to have a good grasping of their real situation and needs. Therefore, raising the age of tribal promoters would be a real help in such situations, *since most of the requests and permissions, mapping and reports – all go through the hands of these ST promoters*.

Even now, after a lot of protests, the panchayats have access to only half of the funds in TSP. The cuts in education and health sectors lead to deterioration in infrastructure, staffing, quality of teaching and equipments. The high-priced private health and education sectors are simply out of their reach. So, the newer generation of these landless tribes is in reality more vulnerable and more *trapped* than the earlier ones, who have to bear the burden of historical injustices but also are increasingly caught between differing local, regional, national and international politics.[53] Regarding this exclusion, Devika states that it "was not an accident in the history of left politics and developmentalism in Kerala, but was connected to political strategy advantageous to the largely upper- or middle-caste elite."[54]

6.11 Tribal Reaction to Exclusion

In the context of above views of various scholars, it is equally important to remember that the tribes were neither passive nor ignorant of their exclusion and shrinking of their habitats, livelihoods, freedom and resources. Time and again, they revolted against their *Nair* landlords when there was too much exploitation, and later, tried to thwart the British by fighting along with *Pazhassi Raja* of Kottayam dynasty. As early as 1812, there was an uprising by the indigenous cultivating communities against the burdens of tax and rent, which took a few months for the state to quell. But, they kept losing, both times because of non-stop resource alienation and severe state suppression and violence which followed during and after these revolts. After Independence, the Kerala State based on *Malayalee identity (*which surprisingly never included *dalit/tribes)* and subsequent failure to gain equal socio-cultural recognition for their rights, they also supported the *Naxalite movements* during the 1970s (to achieve freedom from bonded labour and wage increases), their disillusionment with the land reforms, stagnation of wage increase and welfare gains from late 1980s onwards (worn out houses collapsing, running water privatized, community land given to private developers, and the *paternalistic* attitude of non-tribe upper/middle class/caste party workers towards the *need to uplift tribes)*[55]– have all led them to support movements based on *indigenism and autonomy.*

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[53] *Ibid.*

[54] Devika *op.cit.*

[55] Steur, Luisa (2011), "Adivasis, Communists, and the rise of indigenism in Kerala", *Dialectical Anthropology,* 35(1), 59-76.

More recently, the *Muthanga* land occupation by the adivasis (under the leadership of C.K. Janu and Adivasi Gothra Maha Sabha) demanding their ownership of ancestral land and its violent suppression by the state in 2003, is an example of their increasing anger and assertion of rights. But, such assertions could actually divert the attention from the class inequalities that are equally prevalent *within the indigenous tribes.* The landless tribes know very well that the other groups feel no compassion about their misery, infact they are themselves blamed for their plight pointing to their *indolence, lumpen behavior, carelessness, and deceit.* Even though there are few exceptional households in those communities who have managed to overcome their situations, but they are going to remain exceptions.

As one middle aged lady ex-tribal promoter, belonging to Paniya community, stated – "*when the non-tribes got their welfare provisions met by the state earlier in terms of free education, health and food security, they claimed it as their right. But, today, when we receive the same, the same non-tribes call us lazy parasites and beggars who are completely dependent on the state. Even the few among us who are primary or secondary educated, have not been able to get any salaried jobs anywhere. I know education is important, but after that, what?.....we still remain as wage labourers*[56]*. How do you expect us to have any aspirations when our frequent thought is how not to remain hungry? The governments know that if we are well-fed and well-read we will claim our equal rights as human beings and as citizens, so they are cutting back all our opportunities to feed and read.*"

So, a)the failure of the independent governments to redress the historical processes of exclusion (especially land, forests and rivers) with regards to tribes, b)increasingly encouraging state ownership and exploitation of resources (a legacy of Colonial period) and displacement by dams and other projects and neglect of local opinion in the name of greater good (*or greater votes?)*, c)the ever-decreasing possibilities of increasing their *human capabilities and skills* with the increasingly stagnating state-sponsored social welfare provisions for employment(no recruitment, not even in *tourism* whose potential is maximum here), health and education (access) and reduction of number of working days (primary sector) and *non-recognition of any*

[56] The recruitment to state services is minimal, whereas in the private sector has no such affirmative policies, where they face competition from better networked, educated and skilled non-tribes

new BPL households/ non-immunized children in a neo-liberal and free-market setup, d)derecognition of identities (they don't consider themselves *Malayalees*), disrespect, increasing social ills (alcoholism, unwed mothers) and socio-cultural exclusion and e)most importantly, in today's context, political marginalization and the politics of targeting/*stigmatizing the tribes* for receiving welfare[57]– have all resulted in their *increasing skepticism* of any programme or reform brought to them by the state and *strong assertion* of a separate tribal/indigenous identity[58] and struggles for autonomy. This is increasingly due to their awareness of the futility of the *welfare crumbs* offered by the state by way of – education or PDS, which only prevent their *absolute starvation and wretchedness* and not enable them to attain any material, socio-economic or political ends.

The recent failures of decentralized development programmes and the politics associated with it, the increasing role of NGOs and private contractors – where again upper class/caste values dominated both in political as well as civil society, marginalizing the voices of *adivasi* workers, that they are increasingly taking up ideas of indigenism, which is just an alternative way to make themselves heard in a neo-liberal setup where *inequalities are accepted as a natural result of market forces,* even though the Paniyas or Adiyas know more than anyone that the Kurichias and Kurumas belong to a different class.[59] As Steur remarks, "the desire for land is a reaction to the pressure of being dispossessed of the promise of emancipation as worker-citizens. It is also a more autonomous vision of empowerment: rather being able to integrate in society through stable employment and secure rights to education, the ideal of owning a piece of land is that of no longer being dependent on such social institutions for one's emancipation and goes hand in hand with the many (state-sponsored) *self-help* initiatives amongst subaltern populations. Indigenous rights are attractive since they form the *only international framework that is potentially legally binding*."[60]

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[57] Devika *op.cit.* Devika maintains the postmillenium subaltern struggles in Kerala to be a result of the intolerance of the dominant left to the subaltern assertions of group interests, and their insistence on treating the latter as passive welfare-receiving governmental categories.

[58] The first settlers of a region. Their idea of indigenism interestingly excludes the non-tribal *Wayanadan Chettis,* but includes the *Kurichians and Kurumans.*

[59] Steur, Luisa (2009), "Adivasi Mobilisation: Identity versus Class after the Kerala Model of Development", *Journal of South Asian Development,* 4(1), 25-44.

[60] Steur 2011, *op.cit.*

6.12 Conclusions

The analysis on the residences of the children reveals that the state of housing conditions of Paniyas, Adiyas, and the older colonies of Kattunayackas is very poor – with no proper ventilation, inadequate living space, no outlet for drainage and sewage, no clean source of drinking water etc., thereby, increasing the risk of children catching infections and falling ill frequently. The housing conditions in the Kattunayacka, Paniya and Adiya colonies are almost same for all the families within a colony. If one house doesn't have electricity or water pipe or toilet (they are dependent on the Panchayat for all these amenities), it is highly probable that the other houses also are in the same condition. This is because the government-built houses all have same designs, were built at the same time, so the house being in good/ dilapidated condition also depends on the year in which the houses were built. They all would be taking water from the same well, so in case of water-borne diseases, it would not be a surprise if lots of people in the same colony fall sick within a short period of time. These houses are small, lack proper ventilation; and houses are very close by, the colonies are not that spacious. The cleanliness varies from colony to colony, and house to house, but mostly the sense of keeping their surroundings clean is not as keen as in other groups (they feel it is for the Panchayat to do). Children are mostly seen outside playing, without proper clothing, and Wayanad is a cool and damp place throughout the year, and the rainy season is definitely cold (diseases of the respiratory system – cold, cough, acute chest congestion, fevers – are common among children). Its actually impossible to move out of the house during the rainy season.

As compared to this, the Kurumas, the Kurichia, and non-tribals do not live in colonies. They live in neatly organized settlements, with every household differing in amenities, as they are mostly built by their owners. Most of them have their own water supply – mostly well water. Most of the houses are relatively more spacious inside, even outside they have a open yard in the front or green foliage (trees, pepper, kitchen gardens), area for livestock, surrounding the built area. They are well-demarcated from the next house or plot. So, the risk of spread of any infectious diseases among the community, except within the family, is very less in such groups. The Kurichia settlements are the most spacious. The community sense of cleanliness of surrounding is extremely high among them, which is why they consider the other groups as 'less clean'. So, the mothers and children belonging to different groups are exposed to very

different kinds of settings and circumstances in which they live, eat, work and play. During times of sickness, delivery, post-delivery – when the individual requires peace and rest and privacy – the former seldom have the means to do so while the latter can and do practice strict rules at such times. The first experience that the children have is within their homes and immediate surroundings. This is so, atleast, for the first 3-4 years of life, and this has a major impact on their well-being. “Early life socio-economic circumstances, in childhood and even at the foetal stage, have been shown to have links with health outcomes experienced later in life”. [61]

So, living in these ‘colonies’ is in itself quite unhealthy, as one Kattunayacka mother explained, whose husband was a government servant. Theirs was the only Kattunayacka family which I saw was living on its own built house, exactly like a non-tribal house, with all the modern facilities. This family was living quite far from any colony, among the non-tribal houses. And they were proud of this fact. Actually, when we say ‘colony’ in Wayanad, everyone knows we are here to study tribes. It automatically refers to places where the scheduled tribes live, crowded, small, houses, - easier to locate and achieve targets, like- immunization. If they were living scattered, it would be difficult to cover them all quickly. The government always keeps an eye on these colonies. No non-tribe is allowed to enter, even for researchers, it is not allowed to go alone, we took ASHA workers to all colonies.[62] But, what it means to tribes themselves is unclear, yes, they feel a sense of belonging to that place because they know all the neighbors, some of them are their own relatives and that gives them a sense of social support and networking, but beyond that it was difficult to capture their thoughts, feelings, opinions and experiences of life in the colonies. This might even be one of the major drawbacks of this thesis. Because from the viewpoint of geography, “shared residence within particular boundaries (in this case “colonies”) has some kind of meaning” and society often makes judgements (or forms stereotypes) about people, grouping them together according to their area of residence”.[63]

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[61] Shaw et. al, *op.cit.* p. 49

[62] The police are always watching the entry and exit of people here, because of the maoist issue. The government, in the pretext of protecting the tribes, has actually built these ‘colonies’ so that the tribes do not move out, as if they have the options. All of them go out of their colonies and work for the non-tribes daily.

[63] Shaw et.al, *op.cit.* p.55

When it comes to assets or wealth, it is generally seen that people take time to accumulate assets or wealth, so it would be unfair to tick off the assets among different groups because assets are not only dependent on the income or employment but also on the nature of family and the main earner of family. The field observations revealed that in majority of Kattunayacka, Adiya, Paniya families, nuclear/joint in nature, the main earner is relatively of a younger age, so expecting such families to have assets is in itself not fair. Moreover, these groups do not have the culture of saving for future. This is one of the major complaints by the non-tribal people who blame the tribes themselves for their poor living conditions because of their inability or unwillingness to save. Whereas, majority of the Kuruma, Kurichia and non-tribal households are joint families where the household might be possessing assets which might belong to the grandmother or grandfather of their children rather than to their parents (whose flow of income might be less than their tribal counterparts during the peak agricultural seasons). But, since, the household is a unit and has all these assets (stock of wealth) – gives them a sense of security even if it might be false. Moreover, these groups have cultivated the habit of saving for future, whether it would in terms of money in banks or gold, or assets like – land. The needs of the future is always running in their minds. So, this sense of security is what is completely absent from the former group, especially, in families where the main earner falls chronically sick, becomes handicapped or paralysed, as was seen in the fieldwork – there is no financial support from anywhere – because all your relatives live in similar economic condition – then the mother goes for work, leaving her young children in care of her old parents or neighbors or elder children – which has health effects on herself and also on children. And it is very rare for such families to come up again economically, because the children's access and utilization of educational services usually gets abruptly stopped and they are also forced to do the same kind of work as their parents did, but for extremely lower wages. But this is usually not the case in the latter group, where the wealth (caste) of whole family acts as a buffer during times of crises, even though it does severely impact the flow of income. Moreover, there is a higher chance of these families getting help from their relatives during such times, because of again similar economic conditions, and recovering their earlier status when the children grow up and become employed (because their access to health and education was not stopped).

The Standard of living is low for most of the Paniya, Kattunayacka and Adiya households. It is only by chance that some proportion of them fall in the medium SLI

category, because some of the houses have been constructed recently, so the housing conditions are better in such colonies. Falling in the medium SLI category does not refer to any change in lifestyle or employment or educational attainments or building of assets. The SLI is related with the members attaining graduation or gaining any regular employment and vice versa. And all these three, in turn, influence the food availability, nutritional and health status, health care accessibility of the mothers and children. So, being placed in the lower SLI categories automatically starts generating a vicious cycle of ill-health, low educational/ employment gains, drain of existing resouces in the household. And, if a tragedy strucks such households – where the main earning member dies/ falls ill, they are not in a position to escape the state of absolute destitution, in fact, they fall into traps of debts which they can seldom pay back.

Even in '70s, the inadequacy of the education system to meet the needs of tribal children was highlighted when an article in a popular daily very clearly stated - "one major factor in the failure to effectively extend education to the tribals is the kind of education which is sought to be given. The curriculum, for the most part, is scarcely different from that for children in schools throughout the country. That is to say, it is theoretical, unrelated to local environment, and with a strong academic bias." It goes on to say that this type of education might be of some (even here doubtful) use to the urban kids, but has no use for the few rural (esp. tribal) ones who 'manage to stay on throughout the course' (again very few), end up getting 'educated out of their culture', migrate to cities to find a suitable employment and unable to come back to their villages, or even if they do, find themselves as 'misfits'. It calls for a 'work-oriented' education system in sync with tribal work and culture, and requests the tribal education departments and NCERT to work on a new kind of syllabus specifically-designed to meet such requirements.[64] This statement holds correct even today – as clearly shown by increasing rate of drop-outs with increasing levels of education. Menon[65] while writing about the high level of drop outs and out-of-school tribal children in Kerala, mentioned factors like – *language problems* (which makes it difficult for the tribal children to understand Malayalam, who know only their tribal dialect (Malayalam is

[64] "**The Lost Tribes**", *The Times of India* (1861- current); August 23, 1976; ProQuest Historical Newspapers: The Times of India, pg. 8

[65] Menon, Indu *op.cit.*

not their mother tongue), leading to their isolation within the class – they take more interest if their initial instruction is done in their own dialect, like in the single teacher schools and pick up the concepts quickly), *curriculum and content (*the general syllabus, the terms, the topics, the stories and messages, the methods of the education system which were designed for the dominant groups are usually alien to tribal kids, thus there is a need to completely remodify the structural theme, content of the syllabus, which are more locally and eco-culturally relevant alongwith the ways of teaching them), *teaching attitudes* (teachers usually feel they are not given enough incentives to work in such areas, so it results in apathy and absenteeism, humiliation of tribal kids within the schools and classrooms). This can only change when first the teachers are sensitized to the values, existing problems and differential needs of the tribal society and children, resulting in an attitudinal shift, incentives to students and teachers, community awareness programmes, contact with the parents, working towards a positive attitude towards education.

As Isac, while talking about the experiences of Paniya and Kurichia children in the schools, explains how "*social differentiation is reproduced through the present schooling system"* where *labeling, peer segregation and teacher apathy* plays major role, "peer interactions in the classroom as well as playground not only reflect the social hierarchies but are sites that actively reproduce these inequalities, when a non-tribal boy hesitates to hold the hand of a Paniya boy, or when the Paniya children experience violence not only form their non-tribal peers but also from their teachers",[66] further quoting Gopal Guru, "that essentialising a particular identity as inferior has to be changed first, as essentialisation leads to exclusion of some and hegemony of the others". She attributes this kind of behavior to the better socio-economic and historical status and identity that Kurichia community has as compared to Paniyas who have a 'labour class and slave caste identity'. But then, the Kurichias enjoy their status only in their own region, the moment they come out to cities, they are seen only as *tribes.* It is amusing to see: *on the one hand,* non-tribal parents (in Kerala, Wayanad) trying to admit their kids in English medium schools that will increase their child's prospects of 'employability', because they feel that Malayalam is good for understanding but is of no use when it comes to jobs/work, where good English (so that they fit with the rest

[66] Isac, Susamma, (2011), "Education and Socio-Cultural Reprodution: Development of Tribal People In Wayanad, Kerala", *Rajagiri Journal of Social Development, 3(1-2),* p. 1-30.

of the world as they see it) is needed. *On the other hand,* but with similar attitudes are the tribes (Paniyas, Adiyas), who send their children to school, not to learn their 'tribal dialects' but to learn 'good language like Malayalam' (so that they can fit with the dominant society as they see it), so that they can have a better livelihood. So, the state as Isac stresses, "supports hegemonic social and cultural constructions of knowledge negating the specific culture of tribal communities. Instead of pluralizing the learning spaces, it tries to consolidate the inequitable mono culture by legitimizing and reproducing the inequalities and dominant cultural practices, by delegitimizing tribal knowledge that might carry elements that contest the dominant mono cultural trends of the society".

There is also increasing focus on the problems of alcoholism among tribes, even school-going children, as they have increasing access to money earned through wage labour. When people complain of alcoholism among tribes, they point only to the 'behavioural' aspect, seldom questioning why a certain group has become addicted to it in a certain way, where the main fault lies not in the individual/ lifestyle choice but rather in the socio-economic-political circumstances of life and society. This behavior became a social problem only with the coming of non-tribes, who encouraged it among the tribes, in order to get their work done in a favourable way.[67] During fieldwork, there were many instances of young or middle aged men, who were reported to be paralysed or becoming physically unfit to work after an injury, brief fever or illness – they were reported to be unable to recover because of an earlier history of alcoholism. Can the increasing prevalence of this ill-behaviour among them be understood as their *psychological way of coping* with the increasing insecurities they face with regards to their everyday circumstances of living, with regards to – amenities, jobs, education, socio-cultural and political exclusion?

AND Health might be seen as a part and parcel of this process of 'accumulation of socio-economic advantages or disadvantages'[68]. In our area, this would be especially

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[67] It is a common thing in Kerala to lure labourers with alcohol (this was mostly encouraged by those men who worked in the Indian military and those who went to Gulf countries, as there were no secure jobs available within the state – and who paid the labourers in their villages with some money and some alcohol for some odd jobs in their houses and farms – this gradually became a trend everywhere – now it has reached to such a level that labourers are not interested in or delay working for someone who doesn't offer alcohol along with wage), and Wayanad is no exception. Today, alcoholism is a major issue in Kerala society as a whole. But, when it happens among tribes, it is further leading to deterioration of their living conditions, status and health.

[68] *Ibid.*

with regards to household assets, availing the PDS goods regularly and fully (which is seldom the case), the condition of house, drinking water, sanitation and power supply, education and seasonal nature of work and income - at the level of the individual but more so at the levels of communities. It is a paradox that even though the general perception about the modern world is that it is increasingly easier to come out of a position of disadvantage, provided one makes good use of all the proper channels of opportunities – health, education and employment; it is also becoming increasingly difficult to again gain access to these same opportunities – simply because of their 'accumulated disadvantages'- real and perceived – not just confined to one society at one time – but actually experienced by individuals and groups since time immemorial. The achievements of Kerala in the light of historical events, factors and policies and political consciousness are infact truly commendable, when compared with the other parts of the country, but then it also has to be accepted that the achievements excluded the scheduled tribes, particularly the historically landless ones of Kattunayackans, Adiyans and Paniyans. So, it is important to recognize that the "state's development pathways with histories of anti-caste and anti-feudal struggles, social-reform moverments, radical politics and matrilineal traditions, missionary activities, indigenous systems of medicine and favourable environment with abundant resources" – have also been persistently "riddled with a variety of historical structural inequities and disparities of class, caste, gender and ethnicity as well as issues of poverty and unemployment".[69] The post-independence political movements were not able to completely erase these historical inequities, either they could not or they did not.

As Thorat and Sabharwal state- "the inclusion of excluded groups, therefore, becomes a somewhat more complex goal in comparison with the objective to ensure the social inclusion of materially deprived people. Group exclusion is *horizontal* and in its outcome, may affect even relatively the better-off members within the excluded groups. Developing policies in such a context requires informed efforts to deal with the forms, nature and mechanisms of exclusion in the social, political and economic spheres, and their consequences on human development of those marginalized."[70]

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[69] Thresia *op.cit.*

[70] Thorat, et.al, *op.cit.*

Chapter 7

A SUMMARY OF CONCLUSIONS

This chapter briefly summarizes the findings of the previous chapters and attempts at some policy prescriptions to improve the accessibility of the health care to children and their mothers.

The *first objective* was to find out the differences in the health status and health care utilization among under-five children among the tribes and non-tribes. The study has revealed that there exist significant differences in the birth weights, anthropometric measurements, nutritional status, health care and immunization practices and the utilization of anganwadis among the children belonging to different communities. There is very high incidence of underweight, stunting and wasting among Paniyas. Similarly, the Kattunayacka children have the least levels of utilization of health services with regards to place of birth, attendance in anganwadis and regular immunizations. The health status and health care utilization levels were highest for the Kuruma and the non-ST children.

There is a lot of difference in the variety of food products consumed in the households, especially when the children have been weaned from breast milk. Among the characteristics of children affecting their current health status – low birth weight, breastfeeding for 6 months or more, consumption of less than 4 food groups and non-attendance of anganwadi seem to lead to higher wasting, stunting and underweight children. But, factors like- birth interval and birth order have been observed to be working differently for the different social groups. For instance, in the case of non-STs and Kurumas, higher birth interval was observed to register decline in the proportion of low birth weight children, but it is reverse in the case of the Paniyas. Among the Paniyas, wasting is higher among those children who had higher birth weights! This shows that even though at the time of birth the children may be healthy, but this ‘healthy’ state is not maintained as they grow up, mainly because of the absence of a healthy and balanced diet after they are weaned.

In the case of hospital births, higher birth order children tend to have less chance of being born in hospitals, especially if they belong to Kattunayacka, Paniya or Adiya communities; whereas, Adiya and Paniya children born within interval of 24 months have higher chance of being born in hospitals as compared to those born later than 24 months of interval. This is actually reverse in the case of non-tribal children. Even the

utilization of anganwadis is very low among Kattunayacka, Adiya and Paniya children because of the absence of anganwadis some of the surveyed colonies, the timings of the anganwadis which do not match with those of the work timing of their parents and also due to reported callous attitude of teachers in some of the colonies.

Interesting are the findings on birth intervals and birth orders, that are playing important roles in birth weight, nutritional status, place of birth, treatment sought during illnesses and to a lesser extent - immunization. In communities where breastfeeding duration is higher, the quality and quantity of food that a child receives is less (Kattunayacka, Paniya). Infact, it implies that the food availability in the household is so insufficient that mothers are forced to continue breastfeeding for longer periods. The quality of food seems and attendance in anganwadi are seen to important in the nutritional status of the children. Similarly, the attendance in anganwadi differs substantially for the male and female children and also varies among children according to their nutritional status, or it could be a two-way process: children regularly attending anganwadi could have better nutritional status and children with better nutritional status are the one who attend anganwadis regularly! However, the most important finding was the fact that at the time of birth, the average weights and heights of the Paniya, Kattunayacka children are at par or even better than the other groups; it is only after the age of 8 months that their growth curves seem to dip and it peaks at the age of 2 years. This shows that till the time of exclusive breastfeeding the children have similar measurements, but as soon as they start depending on external feeding, the Paniya, Kattunayacka and Adiya children lag behind.

The *second objective* was to study the health status of mothers, their health care utilization and the differences in their socio-economic situation. The analysis of mother's characteristics has revealed that Paniya mothers have the lowest BMIs and anthropometric measurements, followed by a high proportion of Kattunayacka and Adiya mothers The most interesting finding is the share of home deliveries among the Kattunayacka mothers, more than 13 percent of whom had all their children delivered at home. This is nonexistent among the Kurumas, Kurichias and the non-ST mothers. It is instructive to note that the Kurichia, Paniya, Adiya and Kattunayacka mothers had near-complete dependence on the public health institutions for deliveries. This is not the case among the non-tribal mothers.

Regarding the socio-economic status, it is observed that a significant share of the Kattunayacka, Paniya and Adiya mothers are illiterate, and those who are literate

among them, a majority have only completed education till primary level. In the case of Kurumas, Kurichias and Non-tribes, majority of the mothers have completed secondary or higher levels of education. Similarly, among mothers who are working, majority of them are agricultural labourers among the Adiyas, Paniyas and Kattunayackas. The nature of work determines the amount of physical strain that these working women undergo, and over an extended period leads to chronic energy malnutrition, which in turn has adverse effects on their reproductive health. Whereas, majority of the Kuruma or non-tribal working mothers are engaged in the national rural employment guarantee scheme or are employed in regular salaried government/private jobs. The nature of work also influences the quality and quantity of time that the mothers are able to spend on self-care and care of their children, the money that they can spend on food and the accessibility and availing of health care at the right time. Education and work status are very important for hospital deliveries, because it is observed that institutional deliveries is low among wage labourers and illiterate mothers or those with few years of schooling. Overall, in terms of health status, the Paniya, Kattunayacka and Adiya mothers fare the lowest; and in terms of health care utilization, it is the Kattunayacka mothers who avail health care least. Adiya mothers seem to be better off in aspects of immunization, ANC and institutional deliveries. They seem to be interested in seeking and availing health care where it is needed most.

The average heights, BMI, institutional deliveries are lower among the Paniya, Kattunayacka and Adiya mothers. In case they do go for deliveries or treatments, they are almost completely dependent on the public health centres and hospitals. The health of the children and their health care utilization if very much related with the mother's socio-economic and health conditions. As it is seen that the proportion of LBW and malnourished children is higher among mothers who are themselves underweight, who have two meals or less a day, who are not married currently, and who are working as daily wage labourers. Similarly, the child health care utilization as regards to immunization and treatment during illnesses is higher for mother who are young, who have 2 children or less, and who have a regular salaried job. For Adiyas, children attending anganwadi reduces with increasing levels of mother'education. Overall, the percentage of children breastfed exclusively for 6 months or more reduces with increasing levels of education; only among Adiyans it is increasing with increasing level of education. The number of meals and consumption of 4 or more food groups is higher among children whose mothers are working, especially those who have a regular

salaried job. Thus, mother's reproductive health, health care and child's health, health care and feeding haibits are all dependent on mother's socio-economic characteristics.

The third objective was to analyze the reach and functioning of the health care systems in the settlements. Discussions with the traditional healers have revealed that even though their medicines are effective, they do not make medicines regularly because of increasing difficulties in going to the forests and increasing acceptance of modern medicine by the younger generation, who go to local healers only when they do not have any other option or only when they are sure that the ailment of the child is not that serious and will get cured by local remedies. Paniyas and Adiya are completely dependent on the public health institutions; the Kurumas and Kattunayackas seem to have a strong belief in their local/ home-made green medicines which they regularly give their children. They resort to modern medicine only when it is required. Similarly, cultural practices with regards to pregnancy, delivery, child birth, care and feeding are more prevalent among the non-tribes than among Paniyas or Adiyas. The cases of the home deliveries, child deaths, incomplete immunizations, and non-attendance in anganwadis reveal that somewhere the health care institutions are lagging behind in providing their services. Discussions with health personnel have revealed that location of remote colonies and their inapproachability by vehicles, especially those of Kattunayackas, Adiyas and Paniyas – are the major issues in providing services, especially during times of emergency. Second issue was that of inadequacy of specialized doctors and proper infrastructure facilities, which results in the PHCs and CHCs being unable to handle emergencies or even slightly complicated cases. Moreover, the medical staff feels burdened with administrative work, and the paramedical staff feels burdened with report-writing and survey work that they feel eat into the hours that they have for attending to patients and field duties. None of them live near the tribal colonies. The ASHA workers and the anganwadi workers, even though most of them live near the colonies they work, also feel unable to attend to their duties regularly (teaching the pre-school children and doing house visits), especially those settlements that are very far/ remote from them.

The tribes are not averse to using modern medicine but the facilities need to reach them better and closer to their settlements or colonies. The systems of traditional medicines are still strong only among those whose colonies are near forest boundaries, from where they can pick their herbs. For most of the illnesses, the tribes, especially Paniyas and Adiyas readily go to government health centres or camps, or even private

doctors if their purse permits because they also increasingly want quick relief from their illnesses. But, the observations on public health centres and their conditions have also brought out the facts that the infrastructure is not enough to deal with emergencies or any complicated illnesses. There is only one major district hospital at Mananthavady, which has the specialized doctors. The PHCs and CHCs, as the medical officers themselves report, have shortage of permanent specialized doctors like- pediatricians, obstetricians or gynaecologists or even surgeons.

The doctors and the JPHNs complain the remoteness of location of the tribal colonies to be a big issue, and blame this remoteness to be the reason why they themselves do not prefer to visit the colonies. Then, how can they blame a sick mother or child or any ill person for that matter (for whom the distance to the health centre might be difficult to cover) for not seeking immediate medical advice for illnesses or deliveries or any acute episodes?

The *fourth objective* was to explore the variations in the socio-economic conditions of the households and population of the different social groups. The primary data reveals that huge gaps exist between the various groups with respect to ownership of assets like – house, land, durable goods; housing amenities and conditions; and the educational and work status of the population. The first visible differences are seen in the settlements themselves. The *colonies* of Paniyas, Adiyas and Kattunayackas are visibly more congested, are dependent on government-provided houses that are very small, sources of drinking water (Panchayat wells); whereas, the *settlements of* Kurumas, Kurichias and the non-tribes are more spacious, well-maintained, houses are semi-pucca/pucca, mostly having own sources of drinking water (well), even when remotely located – they have big unmetalled roads that make it easier for vehicles to reach them. These two kinds of *spaces* where the children are born, live and grow up – have a big say in the health care and accessibility to other amenities. Similarly, the standard of living is lowest among the Paniya, Kattunayacka and Adiya households – none of them figure in the category of high SLI. A good proportion of non-tribal and Kuruma households have atleast one member who has completed graduation or who is employed in some regular salaried job; both of which inturn are influenced by the SLI and also result in influencing the SLI. Whereas, majority of the Adiya, Paniya and Kattunayacka workers are agricultural labourers, which is seasonal in nature, which makes them more dependent on the PDS shops and forest products. The public educational system is ineffective in attracting the Kattunayacka, Adiya and Paniya

children, where the drop-outs are quite high. This is definitely going to affect their future livelihoods, where again they will be forced to rely on wage labour work - that will again have a cumulative impact on their other attainments, particularly their health and health care access. This looks vicious, with no immediate routes of escape.

The Standard of living is low for most of the Paniya, Kattunayacka and Adiya households. It is only by chance that some proportion of them fall in the medium SLI category, because some of the houses have been constructed recently, so the housing conditions are better in such colonies. Falling in the medium SLI category does not refer to any change in lifestyle or employment or educational attainments or building of assets. The SLI is related with the members attaining graduation or gaining any regular employment and vice versa. And all these three, in turn, influence the food availability, nutritional and health status, health care accessibility of the mothers and children. So, being placed in the lower SLI categories automatically starts generating a vicious cycle of ill-health, low educational/ employment gains, drain of existing resouces in the household. And, if a tragedy strucks such households – where the main earning member dies/ falls ill, they are not in a position to escape the state of absolute destitution, in fact, they fall into traps of debts which they can seldom pay back.

The above-mentioned setup of colonies and socio-economic situations of the population are a result of a long-drawn politico-historical processes that have rendered the Kattunayackas, Paniyas and Adiyas landless, resourceless and space-less, despite the progressive and radical policies of the successive governments in Kerala. The policies that helped the non-tribes, the small or marginal farmers like – Kurumas and Kurichias seem to have excluded and marginalized the landless tribes. So, not only were they deprived of land but also their use of forest resources is severely restricted. With little or no formal education, they are forced to live off their physical labour in agriculture, that leaves them with no scope for any kind of asset-building.

So, the above findings of the study lead us to prescribe some remedies regarding some of the mentioned issues in the area.

Firstly, it is very important to place the health centres near the colonies, so that even if a child is sick or needs urgent attention, the mother is able to carry it and walk to the health center immediately, that has emergency medicines and whose staff also live nearby. This is because the people are very much dependent on the public health care services in the study area and have to suffer a lot when it is not available. This is

very much required in remote colonies and it will be helpful in attending to home deliveries as well. It would be more effective if some of the paramedical staff are selected from the communities themselves that will increase the trust of the tribal mothers on the health care system.

Secondly, there should be anganwadis in each and every colony, so that all children have equal access to the facility, irrespective of where their houses are located. The anganwadi staff should also be selected from within the community or colony so that even working tribal mother are able to send their children to anganwadis, for whom the timings can be increased. Since the staff will also be living within the colony, they also would not be delayed in getting back to their homes. It has been seen that wherever the anganwadis are functioning regularly and the attitude of teachers is encouraging, the tribal mothers are also regular in sending their children. The children who are below 3 years, belonging to BPL families, also need to be given proper nutrition by the anganwadis in order to ensure that they also get a healthy nutrition.

Thirdly, the issue of landlessness among tribes needs to be urgently dealt with by bringing in and implementing another phase of land reforms. The living conditions in the colonies need to be regularly monitored and hygiene and drainage systems maintained in order to prevent communicable and water-borne diseases. Schools should also be located near colonies and their syllabus and attitude of school staff should be easy on the tribal children, should equip them to take control of their livelihoods, land, other attainments on their own in future.

The Paniyas, Adiyas and Kattunayackas neither have the requisite levels of awareness and education, nor the socio-economic situation for availing proper nutrition, good housing, sanitation and timely medical care or even the inclination to trust the non-tribal forms of governance, health care and education – all of which are again related to their past and present experiences with regards to access to land and forest resources and recently to political representations either at the local or state levels. There is a lot of difference in the way the non-tribal population in Kerala got its present levels of awareness and education, wherein the spark was created by the missionaries, social reform movements, the establishment of schools, dispensaries and hospitals, health awareness campaigns, and later communist regimes of the newly independent times with the implementation of land reforms, who strove hard to bring social change in the state, which they found could only be brought about through increasing levels of education, health, nutrition and political awareness.

However, the tribal population was never a part of these happenings, not only because of their relative isolation but also because of the British systems of governance that *never interfered in their ways of life*, which was continued by the latter governments after independence. Even the tribes never felt the need to be a part of these developments; it was only when they found it increasingly difficult to practice their livelihoods because of restricted entry into forests and rivers with nationalization of resources, which hitherto were easily accessible to them, their settlements were evacuated from many areas because suddenly they had become someone's *private property* due to the famous land reforms, that they started to protest and demand their lands back which they are yet to be given. In order to divert attention from these real issues, the governments inturn tried to pacify them by *providing education, food and health care to the most backward and the poorest sections*, i.e. the tribes, which they never wanted in the first place. So, the education and health provisions were provided to them as a compensation to mask the state's failure in giving them access to their resources and also to achieve the *targets of the latest social sector and national health policies,* and defend Kerala's fame as the leader in the *social development* indicators rather than striving towards any lasting social, political or economic change. Even these provisions started stagnating with the late 1980s, leading to stagnation in social infrastructure provisions, accessibility and utilization. Since their work days are also drastically reduced, they cannot even think of attaining the *human capabilities and* skills by accessing private health and education like – the non-tribes or some landowning Kurichias or Kurumas. When the basic intention itself is faulty, then it should not be surprising when the government doesn't attain its targets. Neo-liberalization and globalization is proving deadly for the tribes, living in a society riddled with *ingrained social bias and* no industrial development.

It is not that the tribes today are not aware of their marginalization. It is just that they don't have the means to counter this process. So, they simply accept "welfare", because their pathways are not as smooth as others had earlier. Their life philosophies were completely in-sync with their livelihoods and socio-cultural practices, but the modern economies have played differently. This is true for all Indian societies, but more so for the tribes who are most attached to their ecological habitats that form the basis of their *philosophies, thoughts, and actions.* Their life systems and their constant distance from *mainstream* populations, again raises the question on the ethics and long-term practicality of *market economies, societies, polities*. How can such *impermanent*

and fickle structures (that keep collapsing every few years) expect the tribal communities to embrace their policies and ideas when at the other end they are hacking the very means of survival of these communities – lands and forests – the very spaces of their freedom and socio-economic-ecological and cultural values – that have *stood the tests of time over millenniums*? The state, national and international economic-political and legal systems seem intentionally blind to the changes that the resource-less tribes are experiencing materially, socially, economically, politically, and psychologically in their daily lives vis-à-vis the other resource-full tribes and non-tribes – who are *their neighbours, their employers and their fellow citizens*. How are they expected to overcome their historical and political exploitation and suppression through resource alienation and *envision a positive future for their young ones in such an oppressive and suffocating environment?*

In such a situation, it is no surprise when scholars like- Apoorv Kurup, advocates for an *autonomous tribal governance systems in India.* For him, "autonomy is an equity-facilitating step where the State accepts that its definition and vision of what a community can achieve does not necessarily reflect the aspirations of the target community. Hence, it would encourage the target community to develop indigenous political, administrative and fiscal structures, with the conventional bureaucracy playing a support function, according to tribal culture and tradition."[1] Because in the present decentralized setup, according to him, the tribal governments are not *substantially outside the direct control of central government,* whose overbearing presence and direction in the simplest of the projects creates a mismatch between local and national needs; and the issue of redistribution of *assets and entitlements* remains pending. In autonomy, since the tribes would be deciding their own path of development, there would be greater participation, as needless to say, "the national level authors of statutes have goals that diverge from those of the implementers of policy at the subnational level."[2] This he states, should be achieved by declaring "*property as a fundamental rights of the tribes.* This would make them future negotiators in case where tribal property (autonomy of the tribal government) would be *imperative for national*

[1] Kurup, Apoorv (2008), "Tribal Law in India: How Decentralized Administration is Extinguishing Tribal Rights and Why Autonomous Tribal Governments are Better", *Indigenous Law Journal,* 7(1), 87-126.

[2] *Ibid.*

development, thereby also remedying their *collective inferiority and to create a sense of entitlement among them"*. So, as Fraser says – "there is an increasing need to integrate the best of the social politics of redistribution with the best of the cultural politics of recognition."[3]

Thus, it is becomes the duty of the state institutions to take health care and other essential services to the doors of its citizens, rather than distancing themselves from those they are bound to serve.

[3] Fraser, Nancy (2008), "Social Justice in the Age of Identity Politics: Redistribution, Recognition and Participation", Critical Quest, New Delhi.

PHOTOGRAPHS FROM THE FIELD

1. Kitchen in a Paniya home

3. Toilet used for other purposes

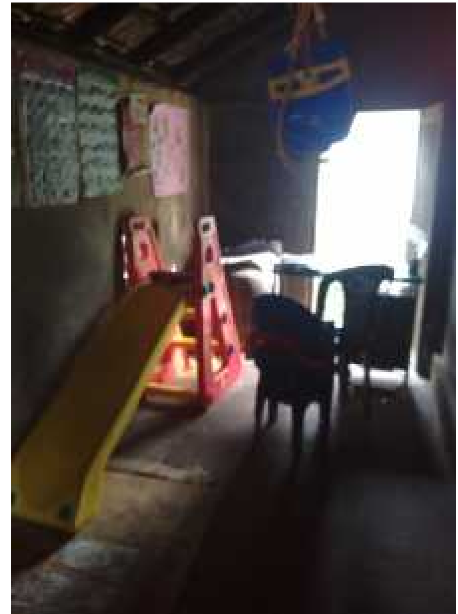
1. Bathing & washing area in a Paniya home

4. A non-tribal household

5. Newly-built house for Kattunayackas 1

6. A Typical Paniya house

7. Anganwadi waiting for a new building



8. Space-crunch in a mini-anganwadi

9. Children having ragi drink

10. Working Adiya mothers leave babies with elder children during daytime

11. Setup of a typical tribal colony

12. Paniyan women waiting for their turn to use panchayat well

13. A typical non-tribal house

14. Skin ailments in Kattunayacka children

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Appendix- 1 Demographic Details

Total Population Surveyed

	Name of Social Group							Total
	Paniyans	**Kurichia**	**Kattunayacka**	**Kuruman**	**Adiyan**	**ST**	**Non- ST**	
M	192	198	192	171	195	948	185	1133
F	205	176	182	164	189	916	185	1101
Tot	397	374	374	335	384	1864	370	2234
Sex Ratio	1067	889	948	959	969	966	1000	971

Mean/ Median ages of the Population

	Name of Social Group							Total
	Paniyas	**Kurichias**	**Kattunayacka**	**Kurumas**	**Adiyas**	**ST**	**Non ST**	
Mean	**21.42**	**26.22**	**20.03**	**26.98**	**22.73**	**23.37**	**28.39**	**24.20**
N	397	374	374	335	384	1864	370	2234
Std. Dev.	17.567	20.008	16.863	20.105	18.299	18.73	22.311	19.45
Median	**20.00**	**27.00**	**16.00**	**29.00**	**22.00**	**24.00**	**28.00**	**25.00**

Type of family

Type of family	Name of Social Group							Total
	Paniyan	Kurichia	Kattunayackan	Kuruman	Adiyan	ST	Non-ST	
Nuclear	31	26	39	28	22	146	15	161
%	47.0%	40.6%	**60.9%**	43.8%	34.4%	45.3%	23.4%	41.7%
Joint	25	35	24	35	41	160	49	209
%	37.9%	54.7%	37.5%	54.7%	**64.1%**	49.7%	**76.6%**	54.1%
Extended	10	3	1	1	1	16	0	16
	15.2%	4.7%	1.6%	1.6%	1.6%	5.0%	0.0%	4.1%
Total	66	64	64	64	64	322	64	386

Sex of the Head of Household

Sex	Name of Social Group							Total
	Paniyans	Kurichians	Kattunayackans	Kurumans	Adiyans	ST	Non-ST	
Male	53	57	59	50	46	265	46	311
	80.3%	89.1%	92.2%	78.1%	71.9%	82.3%	71.9%	80.6%
Female	13	7	5	14	18	57	18	75
%	19.7%	10.9%	7.8%	21.9%	**28.1%**	17.7%	**28.1%**	19.4%

List of Colonies/Settlements Surveyed:

Panchayat	*Pulpally*	*Pulpally*	*Noolpuzha*
Social Group	***Paniyans***	***Kattunayackans***	***Kurumans***
No. of Colonies surveyed	15	11	10
Name of Colonies/ Settlements	Kaapikunnu Marakavu Manalambam Mangakandi Thanzhengady Paikkemoola Meenankolli Madaparambu Thazhekapu Melekaapu Kottamuruttu Karimam Madalpadi Palakolli Mundankutty	Gunduvady Chandroth Pollana Villangadi Kareri Vattavayal Udayakkara Karakandi Basavanmoola Irupoodu bomman padi Edamala michaboomi	Velluthondi Manimunda Pilakavu Karadimad Manmadamoola Athikunnu Kottanodu Maarodu Kallumucku Chiramoola
Panchayat	***Thirunelly***	***Thavinzhal***	
Social Group	***Adiyans***	***Kurichians***	
No. of Colonies surveyed	15	14	
Name of Colonies/ Settlements	Appapara Nitra-Erivakki Aravanazhi Pothumoola Panankutti Kunniyoor Aramangalam Nagamana Manthanakunnu Kottamoola Chakkani Karamadu Karimam Anjuputhi Cherumathoor	Edathana Kollichaal Vellamunda Edalakunni Tholpetty Palot Illathumoola Kaavilpadam Neeliot-Choimoola Chullikunnu Edamana Valad Karikkatil Prasanthagiri	

Health Institutions Surveyed		
Institutions	**Panchayat**	**Respondents**
1. CHC Pulpally	Pulpally	CMO, Health inspector, JPHN
2. CHC Periya	Thavinzhal	CMO, Male health worker
3. PHC Pakkom	Pulpally	MO, Health inspector, JPHN
4. PHC Nirapath	Noolpuzha	JPHN
5. PHC Appapara	Thirunelly	JPHN
6. SC Aloorkunnu	Pulpally	ASHA worker
7. SC Moozhimala	Pulpally	ASHA worker
8. SC Karassery	Noolpuzha	JPHN

Anganwadis Surveyed		
Name	**Panchayat**	**Respondents**
1. Nitra	Thirunelly	Teacher (non-ST)
2. Madaparambu	Pulpally	Teacher (non-ST)
3. Velluthondi	Noolpuzha	Teacher (non-ST) ,Helper (Kuruman)
4. Kolichaal	Thavinzhal	Teacher and helper (Kurichias)
5. Chekadi	Pulpally	Teacher and helper (non-ST)
6. Maarodu	Noolpuzha	Teacher (non-ST), helper (Kuruman)
7. Kunniyoor	Thirunelly	Teacher (non-ST)

Appendix-2 (SLI)

The following scores (given in brackets) were added up to calculate SLI:

1. *Own House*: yes, own built (3); yes, government built (2); no, rented/other (1)
2. *Land Area*: 500 cents/more (4); 200-500 cents (3); <200 cents (2); No land (0)
3. *Any Livestock*: yes (2); no (1)
4. *Any Vehicle*: Three/four-wheeler (4); two-wheeler (2); No (0)
5. *Mobile/phone:* yes (2); no (0)
6. *Television set:* yes (2); no (0)
7. *Type of house:* pucca (4); semi-pucca (2); kaccha (1)
8. *Condition of house:* good (4); liveable (2); dilapidated (1)
9. *No. of rooms:* one (1); two (2), three (3); four/above (4)
10. *Source of drinking water:* piped/fetch water from own well/neighbor well (4); public tap/piped water from a forest stream (2); common well/small pond/other (1)
11. *Location of drinking water:* within premises (4); within 50 metres (2); more than 50 metres (1)
12. *Toilet facility:* own toilet (4); shared with other houses (2), none (0)
13. *Kitchen:* separate covered kitchen (2); none (0)
14. *LPG connection:* yes (2), no (1)
15. *Electricity:* yes (2), no (0)
16. *BPL card:* yes (0), no (2)

Households were classified into:
Low SLI (if the score was 25 or below),
Medium SLI (if the score was 26 to 37), and
High SLI (if the score was 38 or above)

Appendix-3 (Reasons for Dropping out of School)

Reasons for Dropping Out (6 -18 year olds) - MALE

Current Enrolment	Name of Social Group							Total
	Paniy	Kuric	Kattu	Kuru	Adiya	ST	Non ST	
To supplement HH income	1				1	2		2
Lazy	3		4		3	10		10
Not interested	3	1	1		5	10		10
Due to failure			1			1		1
School too far away/			5		2	7		7
Did not get admission			1			1		1
Frequent/Chronic Illness			2			2		2
Other			1			1		1
Total	**7**	1	**15**	0	**11**	34	0	34

Reasons for Dropping Out (6 -18 year olds) - FEMALE

Current Enrolment	Name of Social Group							Total
	Paniy	Kuric	Kattu	Kuru	Adiya	ST	Non ST	
To supplement HH income	1		1		2	4		4
Lazy					1	1		1
To attend domestic chores	4				1	5		5
Not interested	3		5		2	10	1	11
Due to failure	3				1	4		4
School too far away/ transport notavailable			5		1	6		6
Required for care of siblings			2			2		2
Did not get admission								
Frequent/Chronic Illness			1			1		1
Other		1			1	2		2
Total	**11**	1	**14**		**9**	35	1	36

Reasons for Dropping Out (6 -18 year olds) - TOTAL

Current Enrolment	Name of Social Group							Total
	Pani	Kuri	Kattu	Kur	Adi	ST	Non ST	
To supplement HH income	2		1		3	6		6
%	11.1%		3.4%		15.0%	8.7%		8.6%
Lazy	3		4		4	11		11
%	16.7%		13.8%		20.0%	15.9%		15.7%
To attend domestic chores	4				1	5		5
%	22.2%				5.0%	7.2%	1	7.1%
Not interested	6	1	6		7	20	100.0%	21
%	**33.3%**	50.0%	20.7%		**35.0%**	29.0%		30.0%
Due to failure	3		1		1	5		5
%	16.7%		3.4%		5.0%	7.2%		7.1%
School too far away/ transport not available	0		10		3	13		13
%	0.0%		**34.5%**		15.0%	18.8%		18.6%
Required for care of siblings	0		2			2		2
%	0.0%		6.9%			2.9%		2.9%
Did not get admission	0		1			1		1
%	0.0%		3.4%			1.4%		1.4%
Frequent/Chronic Illness	0		3			3		3
%	0.0%		10.3%			4.3%		4.3%
Other	0	1	1		1	3		3
%	0.0%	50.0%	3.4%		5.0%	4.3%		4.3%
Total %	**18**	2	**29**		**20**	**69**	1	70

Appendix-4 (Child Details)

Table 1 Sex-wise classification of Children

Sex of the Child		Name of Social Group							Total
		Paniyas	Kurichias	Kattunayacka	Kurumas	Adiyas	Scheduled tribes	Non-Scheduled Tribes	
Male		44	44	46	44	47	225	36	261
		50.0%	**53.0%**	50.5%	**57.1%**	52.8%	52.6%	**46.8%**	51.7%
Female		44	39	45	33	42	203	41	244
		50.0%	47.0%	49.5%	42.9%	47.2%	47.4%	53.2%	48.3%
Total		88	83	91	77	89	428	77	505
		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Sex Ratio		**1000**	886.36	978.26	**750**	893.62	**902.22**	**1138.89**	934.87

Table 2 Age-wise classification

Age	Name of Social Group							Total
	Paniyas	Kurichias	Kattunayacka	Kuruma	Adiyas	ST	Non- ST	
0 to 11 months	15	14	12	10	**18**	69	11	80
	17.0%	16.9%	13.2%	13.0%	**20.2%**	16.1%	14.3%	15.8%
12 to 23 months	**21**	15	17	14	15	82	**19**	101
	23.9%	18.1%	18.7%	18.2%	16.9%	19.2%	**24.7%**	20.0%
24 to 35 months	16	16	**21**	17	13	83	10	93
	18.2%	19.3%	**23.1%**	22.1%	14.6%	19.4%	13.0%	18.4%
36 to 47 months	15	17	20	**19**	14	85	**21**	106
	17.0%	20.5%	22.0%	**24.7%**	15.7%	19.9%	**27.3%**	21.0%
48 months and above	**21**	**21**	**21**	17	**29**	**109**	**16**	125
	23.9%	**25.3%**	**23.1%**	22.1%	**32.6%**	**25.5%**	**20.8%**	24.8%
Total	88	83	91	77	89	428	77	505
	100.0%	100.0%	100.0%	100.0%	100.0 %	100.0%	100.0%	100.0%

Table 3 Average Age of Children

Average Age	Name of Social Group							Total
	Paniya	Kurichia	Kattunayacka	Kurumas	Adiyas	ST	Non- ST	
Mean	29.10	29.99	30.92	**31.58**	31.12	30.53	30.05	30.46
N	88	83	91	77	89	428	77	505
Std. Dev.	16.552	16.796	16.141	15.693	18.679	16.776	16.705	16.749
Median	**26.00**	30.00	32.00	31.00	**34.00**	31.00	30.00	31.00

Table 4 Birth Order of Children

Birth Order	Paniya	Kurichia	Kattunayacka	Kuruma	Adiya	ST	Non- ST	Total
	Name of Social Group							
First	31	**36**	24	33	**36**	160	25	185
	35.2%	**43.4%**	26.4%	42.9%	**40.4%**	37.4%	32.5%	36.6%
Second	21	26	21	**40**	26	134	**37**	171
	23.9%	31.3%	23.1%	**51.9%**	29.2%	31.3%	**48.1%**	33.9%
Third/ above	**36**	21	**46**	4	27	134	15	149
	40.9%	25.3%	**50.5%**	5.2%	30.3%	31.3%	19.5%	29.5%
Total	88	83	91	77	89	428	77	505
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 5 Birth Interval

Birth Interval	Paniya	Kurichia	Kattunayacka	Kuruma	Adiya	ST	Non- ST	Total
	Name of Social Group							
<12 months	**3**	0	**2**	1	1	7	1	8
	5.3%	0.0%	**3.0%**	2.3%	1.9%	2.6%	2.0%	2.5%
12 to 23 months	4	**7**	**8**	3	**11**	33	4	37
	7.0%	**14.9%**	**11.9%**	6.8%	**20.8%**	12.3%	7.8%	11.6%
24 to 35 months	15	8	18	8	11	60	11	71
	26.3%	17.0%	26.9%	18.2%	20.8%	22.4%	21.6%	22.3%
36 months+	35	**32**	39	**32**	30	168	**35**	203
	61.4%	**68.1%**	58.2%	**72.7%**	56.6%	62.7%	**68.6%**	63.6%
Total	57	47	67	44	53	268	51	319
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 6 Birth Weight according to Birth Order

BW (kg.) BY BO		Name of Social Group							Total
		Paniyas	Kurichias	Kattun	Kurumas	Adiyas	ST	Non- ST	
First Birth	<2.5	**9**	10	6	9	19	53	4	57
		39.1%	27.8%	30.0%	27.3%	**57.6%**	36.6%	17.4%	33.9%
	2.5 - 3	12	20	9	18	10	69	9	78
		52.2%	55.6%	45.0%	54.5%	30.3%	47.6%	39.1%	46.4%
	> 3	2	6	**5**	6	4	23	10	33
		8.7%	16.7%	**25.0%**	18.2%	12.1%	**15.9%**	**43.5%**	19.6%
	Tot.	23	36	20	33	33	145	23	168
		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Second Birth	<2.5	**7**	8	5	16	8	44	5	49
		53.8%	32.0%	26.3%	40.0%	**33.3%**	36.4%	13.9%	31.2%
	2.5 - 3	4	13	7	17	8	49	18	67
		30.8%	52.0%	36.8%	42.5%	33.3%	40.5%	50.0%	42.7%
	> 3	2	4	7	7	8	28	13	41
		15.4%	16.0%	**36.8%**	17.5%	33.3%	**23.1%**	**36.1%**	26.1%
	Tot.	13	25	19	40	24	121	36	157
		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Third Birth and above	<2.5	**9**	5	8	0	8	30	3	33
		42.9%	27.8%	27.6%	0.0%	**33.3%**	31.6%	20.0%	30.0%
	2.5 - 3	7	10	11	2	10	40	7	47
		33.3%	55.6%	37.9%	66.7%	41.7%	42.1%	46.7%	42.7%
	> 3	5	3	10	1	6	25	5	30
		23.8%	16.6%	**34.4%**	33.3%	25.0%	**26.3%**	**33.3%**	27.2%
	Tot.	21	18	29	3	24	95	15	110
		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total	<2.5	**25**	23	19	25	**35**	127	12	139
		43.8%	29.1%	27.9%	32.8%	**43.2%**	**35.1%**	**16.2%**	31.9%
	2.5 - 3	23	**43**	**27**	**37**	28	**158**	**34**	192
		40.3%	**54.4%**	**39.7%**	**48.6%**	34.5%	**43.7%**	**45.9%**	44.1%
	> 3	9	13	22	14	18	76	**28**	104
		15.8%	16.5%	32.4%	18.4%	22.2%	21.1%	**37.8%**	23.9%
	Tot.	57	79	68	76	81	361	74	435
		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 7 Birth Weight according to Birth Interval

BW (kg.) By BI		Paniyas	Kurichia	Kattunayacka	Kuruma	Adiya	ST	Non- ST	Total
		Name of Social Group							
<12 months	< 2.5	**2**		1	0	0	**3**	1	4
		100%		50%	0%	0%	**50%**	100%	57%
	2.5 to 3	0		1	1	1	3	0	3
		0.0%		50.0%	100.0%	100.0%	50.0%	0.0%	42.9%
	Total	2		2	1	1	6	1	7
		100.0%		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
12 to 24 months	< 2.5	1	2	2	0	**6**	11	**2**	13
		33.3%	28.6%	25.0%	0.0%	**54.5%**	34.4%	**66.7%**	37.1%
	2.5 to 3	**2**	**5**	2	2	3	14	1	15
		66.7%	**71.4%**	25.0%	66.7%	27.3%	43.8%	33.3%	42.9%
	> 3 kg	0	0	4	1	2	7	0	7
		0.0%	0.0%	50.0%	33.3%	18.2%	21.9%	0.0%	20.0%
	Total	3	7	8	3	11	32	3	35
		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
24 to 36 months	< 2.5	**5**	3	3	2	3	16	2	18
		62.5%	37.5%	21.4%	25.0%	27.3%	32.7%	18.2%	30.0%
	2.5 to 3	1	**4**	3	**5**	3	16	**7**	23
		12.5%	**50.0%**	21.4%	**62.5%**	27.3%	32.7%	**63.6%**	38.3%
	> 3	2	1	**8**	1	**5**	**17**	2	19
		25.0%	12.5%	**57.1%**	12.5%	**45.5%**	**34.7%**	18.2%	31.7%
	Total	8	8	14	8	11	49	11	60
		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
>36 months	< 2.5	8	8	7	14	7	44	3	47
		38.1%	28.6%	29.2%	45.2%	28.0%	34.1%	8.6%	28.7%
	2.5 to 3	8	14	12	11	11	**56**	**16**	72
		38.1%	50.0%	50.0%	35.5%	44.0%	**43.4%**	**45.7%**	43.9%
	>3	5	6	5	6	7	29	**16**	45
		23.8%	21.4%	20.8%	19.4%	28.0%	22.5%	**45.7%**	27.4%
	Total	21	28	24	31	25	129	35	164
		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total	< 2.5	**16**	13	13	16	16	74	8	82
		47.1%	30.2%	27.1%	37.2%	33.3%	34.3%	16.0%	30.8%
	2.5 to 3	11	**23**	18	19	18	89	24	113
		32.4%	**53.5%**	37.5%	44.2%	37.5%	41.2%	48.0%	42.5%
	> 3	7	7	**17**	8	14	53	**18**	71
		20.6%	16.3%	**35.4%**	18.6%	29.2%	24.5%	**36.0%**	26.7%
	Total	34	43	48	43	48	216	50	266
		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Appendix-5
Details of Mothers

Age group classification of Mothers

Age group	Name of Social Group							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	Non- ST	
19 and below	2	1	0	0	1	4	0	4
	2.9%	1.4%	0.0%	0.0%	1.5%	1.2%	0.0%	1.0%
20 to 24 years	23	9	23	4	26	85	8	93
	33.3%	13.0%	**34.8%**	6.2%	**38.8%**	**25.3%**	12.3%	23.2%
25 to 29 years	29	37	21	35	26	148	30	178
	42.0%	**53.6%**	**31.8%**	**53.8%**	**38.8%**	**44.0%**	**46.2%**	44.4%
30 to 34 years	7	16	13	22	8	66	20	86
	10.1%	**23.2%**	19.7%	**33.8%**	11.9%	19.6%	**30.8%**	21.4%
35 to 39 years	4	6	9	3	6	28	6	34
	5.8%	8.7%	13.6%	4.6%	9.0%	8.3%	9.2%	8.5%
40 to 44 years	4	0	0	0	0	4	1	5
	5.8%	0.0%	0.0%	0.0%	0.0%	1.2%	1.5%	1.2%
45 years and above	0	0	0	1	0	1	0	1
	0.0%	0.0%	0.0%	1.5%	0.0%	.3%	0.0%	.2%
Total	69	69	66	65	67	336	65	401
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Mean Age of the mother

Mean age	Name of Social Group							Total
	Pani	Kuri	Kattu	Kuru	Adi	ST	Non-ST	
Mean	**26.52**	28.26	27.42	**29.20**	**26.49**	**27.57**	**29.22**	27.84

Mean/ Median Ages at marriage and first birth

Mean/ Median ages		Name of Social Group							Total
		Pani	Kuri	Kattu	Kuru	Adi	ST	Non-ST	
Age at marriage	Mean	18.4	21.3	17.8	22.8	19.6	20.0	22.1	20.3
	Med	18.0	21.0	17.0	23.0	20.0	20.0	22.0	20.0
Age at first birth	Mean	19.4	22.4	18.6	24.1	20.3	20.9	23.2	21.3
	Med	20.0	22.0	18.0	24.0	20.0	21.0	22.0	21.0

Married before 18 years of age

	Name of Social Group							
	Pani	Kuri	Kattu	Kuru	Adi	ST	Non-ST	
Yes	22 32.8%	8 11.8%	34 51.5%	1 1.6%	20 29.9%	85 25.6%	1 1.5%	86 21.7%
Total	67	68	66	64	67	332	65	397

First birth before attaining 18 years

	Name of Social Group							
	Pani	Kuri	Kattu	Kuru	Adi	ST	Non-ST	
Yes	18 26.1%	3 4.3%	25 37.9%	1 1.5%	15 22.4%	62 18.5%	1 1.5%	63 15.7%
Total	69	69	66	65	67	336	65	401

Marital Status of the Mothers

Marital Status	Name of Social Group							Tot
	Pani	Kuri	Kattu	Kuru	Adi	ST	Non-ST	
Never Married	2 *2.9%*	1 *1.4%*	0 *0.0%*	1 *1.5%*	0 *0.0%*	4 *1.2%*	0 *0.0%*	4 *1.0%*
Currently Married	62 *89.9%*	67 *97.1%*	65 *98.5%*	63 *96.9%*	64 *95.5%*	321 *95.5%*	65 *100.0%*	386 *96.3%*
Widowed	1 *1.4%*	0 *0.0%*	0 *0.0%*	0 *0.0%*	0 *0.0%*	1 *.3%*	0 *0.0%*	1 *.2%*
Divorced/ Separated	4 *5.8%*	1 *1.4%*	1 *1.5%*	1 *1.5%*	3 *4.5%*	10 *3.0%*	0 *0.0%*	10 *2.5%*
Total	69	69	66	65	67	336	65	401

CHILD HEALTH CARE UTILIZATION AMONG TRIBES AND NON-TRIBES IN WAYANAD, KERALA

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HOUSEHOLD QUESTIONNAIRE

HH Identification

Name of Panchayat	
Panchayat ward no.	
Colony/ village name	
Colony/ village code	
HH No.	

Name of Head of the Household	
Name of respondent	
Name of Social group/tribe	
Total Members in the household	
Type of family	

Name of Social group/tribe: 1. Paniyas, 2. Kurichias, 3. Kattunayackas, 4. Kurumans, 5. Adiyans, 6. Non-tribes

Type of family: 1. Nuclear, 2. Joint, 3. Extended, 4. Others

Household Member Details

S.No.	Name	Relationship with head	Sex	Age	Marital Staus	Educational level attained	Current work status	Any subsidiary work	Method of payment	Income
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										

Relationship: 1. Self, 2. Spouse, 3. Married child, 4. Unmarried child, 5. Grandchild, 6. Parents/ parents-in-law, 7. Brother/sister/in-laws/other relatives, 9. servants/employees/ other non-relatives

Sex: 1. Male, 2. Female

Age: 00 - Less than one year, 95. 95 years and above

Marital Status: 1. Never married, 2. Currently married, 3. Widowed, 4. Divorced/ separated/ deserted

Educational level Attained: 1. Illiterate, 2. Literate, without formal schooling; 3. Literate, below primary; 4.Primary, 5. Middle, 6. Secondary, 7. Higher secondary, 8. Diploma/ ITI holder, 9. Graduate and above

Current work status (Last 15/30 days)#: 1. Self employed in agriculture/ allied sector; 2. Self employed in other, 3. Agricultural labour, 4. Other casual labour, 5. Regular/ salaried government employment, 6. Regular/salaried private employment, 7. Other work, 8. Domestic work, 9. Student, 10. Rentiers/Pensioners/ Remittance recipients, 11. others

Main subsidiary work: 1. Own cultivation (kitchen garden), 2. Livestock/ poultry rearing, 4. Collection of Forest products, 5. Weaving baskets/mats/cane/other, 6. Other work, 0. none

Method of payment: 1. Regular monthly salary, 2. Regular weekly payment, 3. Daily payment, 4. Piece-rate payment, 5. other

Current Attendance in School/ College (5 to 18 years)

S.No.	Name	Relationship with head	Sex	Age	Educational level attained	Current Enrolment	Level at which dropped	Reasons for dropping out

Current Enrolment: 0 - not attending, 1. Continuing

Level at which dropped out: 1. Never attended

Reasons: 1. School too far away/ transport not available, 2. To supplement household income, 3. Further education not considered necessary, 4. To attend domestic chores, 5. Cost too much, 6. No proper facilities for girls, 7. Required for care of siblings, 8. Not interested in studies, 9. Repeated failures, 10. Got married, 11. Did not get admission, 12. Not safe to send girls, 13. other

Assets

HOUSE				LAND				OTHER ASSETS				
Own house	No. Of years since stay	How did you acquire house	Any other property	Do you own any land	Type of land	Area (cents)	Current use of land	Any livestock/ poultry	Car/ tractor	Scooter/ motorbike	Mobile/ phone	TV

Own house: 1. Yes, 2. No, rented, 3. Provided by employer, 4. other

How was it acquired: 1. Government assistance, 2. Privately purchased, 3. other

Any other property: 1. Yes, 2. No

Own land: 1. Yes, 2. No

Type of land: 1. Agricultural land, 2. Forest land, 3. Residential plot, 4. other

Area: 1. Less than 50 cents, 2. 50 to 100 cents, 3. 100 to 500 cents, 4. 500 cents and above

Other assets: 1. Yes, 2. No

Housing Conditions

Type of house	Condition of house	No. Of rooms	source of drinking water	Location of water source	Water purification technique	Toilet within premises	Separate Kitchen	Main type of cooking fuel	Power supply

Type of house: 1. Pucca, 2. Semi-Pucca, 3. Kachha

Condition of house (built, surroundings, ventilation, drainage): 1. Good, 2. Liveable, 3. Dilapidated

Main source of drinking water: 1. Piped water into dwelling, 2. Piped to yard/plot, 3. Public tap/ standpipe, 4. Tubewell/borehole, 5. Protected well, 6. Unprotected well, 7. Springwater/rainwater/canal/stream/pond, 8. other

Location of water source: 1. In own dwelling, 2. In own yard/plot, 3. Own street/ less than 50metres, 4. elsewhere/more than 50m

Water purification technique: 1. Boil, 2. Strain through a cloth, 3. Electronic purifier, 4. Other

Toilet within premises: 1. Yes, within house, 2. Yes, shared with other households, 3. No facility/open field/space

Separate kitchen: 1. Yes, 2. No

Type of cooking fuel: 1. LPG, 2. Biogas, 3. Electricity, 4. Kerosene/coal, 5. Firewood/straw/cowdung cake, 6. other

Power supply: 1. Yes, 2. No

Availing Services

Possess BPL card	Anyone having bank account	Accessing Public Distribution Sytem								Anyone having health insurance	Type of insurance	Usual place of treatment	Reasons for not availing govt facility
		Do you have ration card	Do you avail goods	Rice/other cereals	Pulses/beans	Sugar	Kerosene	oil	Other				

BPL/Banking/PDS/Health insurance: 1. Yes, 2. No, 3. Do not know

Type of health insurance: 1. ESIS (Employees State Insurance Scheme), 2. CGHS (Central Government Health Scheme), 3. Community Health Insurance Programme, 4. Other health insurance through employer, 5. Medical reimburement from employer, 6. Privately purchased scheme, 7. Other

Usual place of treatment: 1. Government facility, 2. Private facility, 3. Traditional healer, 4. AYUSH facility, 5. Shop, 6. Home treatment, 7. other

Reasons for not availing government facility: 1. No nearby facility, 2. Timing not convenient, 3. Health personnel often absent, 4. Long waiting time, 5. Poor quality of care, 6. other

Debts

Any debts in last 5 years	Purpose of debt	Amount of debt	Source	Debt repayed	How	Overall position in last 5 years

Any debts: 1. Yes, 2. No

Purpose of debt: 1. Agriculture, 2. House construction, 3. Health, 4. Education, 5. Marriage, 6. Debt repayment, 7. Other

Amount of debt: 1. Less than Rs. 10,000, 2. Rs. 10,000 to Rs. 50,000, 3. Rs. 50,000 to Rs. 1 Lakh, 4. Rs. 1 Lakh and above

Source: 1. Bank, 2. Employer/local moneylender, 4. Self-help groups, 5. Other

Repayed: 1. Yes, 2. No

How: 1. Selling/mortagaging property, 2. Another loan, 3. From savings, 4. Other

Overall household position(conditions, assets, skills, food) : 1. Improved, 2. Declined, 3. No change

Local Participation

Local club/ group			Gram sabha	
Member of any local club/ group	What are the activities of the group	Do they attend the meetings*	Aware of gram sabha meetings*	Attended any gram sabha/ colony meetings*

Member: 1. Self-help organisation, 2. Political group, 3. Any other, 4. No

*1. yes, 2. no

Household-level Perception

Perception regarding their colony - isolation	Perception regarding their tribe compared to others	Relations with other communitie s (tribes/ nt)	Individual aspirations - skill developmen t	How is the social support system	Relations with health dept/ panchayat

CHILD HEALTH CARE UTILIZATION AMONG TRIBES AND NON-TRIBES IN WAYANAD, KERALA

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MOTHER'S HEALTH QUESTIONNAIRE

Mother's Identification

HH No.	S.No.	Name	Relationship with head	Sex	Age	Caste	Marital Staus	Educational level attained	Current work status	Any subsidiary work

Reproductive Details

Age at marriage	Age at first birth	Total Pregnancies

Pregnancy Episode	Outcome of pregnancy	Place of birth	Birth weight	Post-pregnancy care	Is the Child living
1					
2					
3					
4					

Outcome of pregnancy: 1. Live birth, 2. Still birth, 3. Spontaneous abortion, 4. Induced abortion

Place of birth: 1. Government facility, 2. Private facility, 3. AYUSH facility, 4. NGO, 5. Home, 6. other

Post-pregnancy health care: 1. Special care at home for more than 3 months, 2. Special care for few days,

3. No extra care, resumed regular work immediately

Total miscarriages/ abortion	Total still births	Total live births	Any child death	Age of dead child	Sex of dead child	Cause of death	Total children surviving	Are you pregnant now	Are you receiving ANC	Receiving supplementary nutrtion

Any child death: 1. Yes, 2. No; Age of dead child: 1. Less than a month, 2. Less than 1 year, 3. 1 to 2 years, 3. 2 to 5 years, 4. above 5 years

Cause of death: 1. Neonatal illness, 2. Respiratory illness, 3. Stomach related/Diarrhoeal illness, 4. Sudden infant death, 5. other

Maternal Health Care (last birth)

Ever received ANC*	No. Of ANC visits	Place of ANC	Satisfied with health care	2 Tetanus received*	100 Ifa tablets taken*	Institutional delivery*	Place of delivery	shared bed/ asked to vacate*	How many days spent in hospital	Received JSY*	borrowed money/ sell jewellery for delivery*	Reasons for not going for institutional delivery	First check up after delivery

No. Of ANC visits: 1. Less than 3, 2. More than 3

Place of ANC: 1. Govt, 2. Private, 3. AYUSH, 4. Home, 5. Other

Health care: 1. Good, 2. Satisfactory, 3. Not satisfied

Place of Delivery: 1. Govt, 2. Private, 3. AYUSH, 4. Home, 5. Other

Days spent in hospital: 1. Less than 2, 2. More than 2

Reasons (no institutional delivery): 1. Cost too much, 2. Facility not open, 3. Too far/no transport, 4. Dont trust services,
5. No female provider, 6. Husband/family did not allow, 7. Not customary, 8. Not necessary, 9. other

First check up: 1.Within 2 days, 2. Within 10 days, 3. Not done at all

Awareness and Autonomy

Do read newspaper	Do you listen to radio	Do you watch TV	importance to own health	importance to child health	Can decide on own health care	Can decide for child's health	Can decide how money is spent	When did u resume work	Who takes care of child	Motivation for health care

Newspaper/radio/TV: 1. Almost every day, 2. Atleast once a week, 3. Less than once a week, 4. Not at all

Aware about importance of own health/ child health: 1. Yes, 2. No

Can decide: 1. Yes, on own; 2. Yes, with husband, 3. No, others decide

By what age of child you resumed work; 1. less than 6 months, 2. 6 months to 2 years, 3. above 2 years

Who takes care of child: 1. Take my child along, creche at workplace; 2. Take my child along, no creche; 3. Mother/ mother-in-law; 4. My elder children, 5. Other

Main source of motivation for seeking proper care: 1. Self, 2. relatives, 3. Doctors/ Health workers, 4. Media, 5. other

General Health and Nutrition

Weight (kg)	Height (metres)	No. Of meals in a day	Current health status	Personal habits	Any illness in last 15 days	Treatment sought	If not, why	No. Of days you could not work

No. Of meals: 1. 3 full meals and snacks, 2. 2 full meals and snack, 3. 1 full meal and snack

Reasons for not seeking: 1. No money, 2. Distance/ no transport, 3. Needed someone, 4. No provider, 5. No permission, 6. other

Current status of health: 1. Good, 2. Not bad, 3. Poor

Any illness: 1. Chronic condition, 2. Acute episode - respiratory/seasonal fever, 3. Acute episode- digestive disorders, 4. Acute - other

Personal habits: 1. Chew tobacco and drink alcohol regularly, 2. only tobacco or smoke, 3. only drink, 4. other

Treatment sought: 1. Yes, 2. No

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CHILD'S HEALTH QUESTIONNAIRE

Child's Identification

HH No.	S.No.	Name	Relationship with head	Sex	Age	Caste

Birth details

Birth registered	Place of birth	Check up	Weight at birth	Birth order

Birth registered: 1. Certificate, 2. Registered in anganwadi/health facility, 3. No, 4. dont know

Place of birth: 1. Government facility, 2. Private facility, 3. AYUSH facility, 4. Home, 5. Other

Check up after birth: 1. Within 24 hours, 2. Within 2 days, 3. Within 10 days, 4. Later, 5. Not done

Birth weight: 1. <2.5 kg, 2. >2.5 kg

Birth order: 1. First, 2. Second, 3. 3rd and above

Nutrition and Feeding Practices

Breastfeeding initiation	Age upto which exclusively breastfed	Still Continuing BF*	Age at which semi-solid/ solid food started	No. Of times had semi/solid food last 1	How often the child consumes					
					Milk/curd	Fish	Pulses/ beans	Dark Green leafy veg	Fruits	Chicken/ meat

BF initiation: 1. within 1hour, 2. <1 day, 3. >1day, 4. Never BF

No. Of times: 1. Three meals and above, 2. 2 full meals, 3. One meal and snacks

Age exclusively BF/ food: 1. <3 months, 2. 3- 6 months, 3.> 6months

Consumption of milk/fish/etc. : 1. Daily, 2. Weekly, 3. Occassionally, 4. Never

General Health

General Health of the child	Weight (kg)	Height (cms.)	First Preference for health care	Reasons for this preference

General health of child: 1. Fit, active, 2. Somewhat active, 3. Dull, 4. Very bad

First preference: 1. Traditional tribal healer, 2. Public facility, 3. Private facility, 4. AYUSH facility, 5. Other

Reasons: 1. Affordable, 2. Efficacy and Satisfaction, 3. Near, 4. Culturally Appropriate and acceptable, 5. Quick service, 6. other

Illnesses in last two weeks

Any illness in the last two weeks	Duration of illness (days)	Cause of illness	Sought treatment	Time of treatment initiation	Place of treatment	Waiting time (in minutes)	Recovered?	Did you switch over to another provider?	Place of second treatment	Reasons for switch over	Recovered?	Diarrhoea, gave ORS?

Any illness: 1. Respiratory illness/ fever/cough, 2. Stomach disorders/ diarrhoea, 3. Other

Sought treatment: 1. Yes, 2. No

Time of treatment initiation: 1. Within 24 hours, 2. 24 to 48 hours, 3. after 2 days

Place of treatment: 1. Traditional tribal healer, 2. Public facility, 3. Private facility, 4. AYUSH facility, 5. Other

Waiting time: 1. <30minutes, 2. 30 min to 1 hour, 3. >1hour

Recovered: 1. Yes, 2. No

Did you switch over: 1. Yes, 2. No

Reasons for switch over: 1. Cost, 2. Earlier treatment not effective, 3. other

ORS: 1. Yes, 2. No

Immunization (12-23months)

Immunization (12-23months)					Place of vaccination	Have Vaccination card	Reasons for never giving vaccination	Reasons for not completing vaccination
BCG	3 doses polio	3 doses DPT	Measles	Vit. A				

Immunization: 1. Yes, 2. No

Reasons: 1. Scared of side-effects, 2. Not necessary, 3. Family did not allow, 4. Not aware, 5. Too far/no transport, 6. No time, 7. Personnel absent, 8.Other

Place of vaccination:1. Government facility, 2. Private facility, 3. Both government and private, 4. NGO, trust; 5.Other

Availing services of Anganwadi

Is the child registered in AW	How often does he/she attend	Child Receives food	Take home food	Regular health checkup	Received any vaccination through AW	Weight measured regularly	Height measured regularly	Child receives education	Mother Received: Supplementary feed during pregnancy	Mother Received: Supplementary feed during breastfeedin	Mother Received: Counselling on child care

Child registered: 1. Yes, 2. No

Attending anganwadi: 1. Regularly, 2. Occassionally, 3. No, 4. Dont know

Child receives food:1. Yes, 2. No

Take home food: 1. No, 2. Daily, 3. Weekly, 4. Occassionally, 5. Dont know

Regular health checkup/height/weight: 1. No, 2. Once a month, 3. Less often, 4. dont know

Vaccination/ health education: 1. Yes, 2. No, 3. Dont know

Mother Received: 1. Yes, regularly 2.Yes, occassionally,3. No.,4. Dont know

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INSTITUTIONAL QUESTIONNAIRE

ANGANWADIS

Anganwadi no.	
Anganwadi name	
Colony/Village name	
Colony/village code	

Date of interview	
Respondent	

Condition of anganwadi						
Cleanliness	Toilet	Piped water	Windows/ Ventilation	Kitchen	Electricity	Building

Cleanliness- 1. Good, 2. Medium, 3.Poor

Toilet- 1. Yes, 2. No

Piped Water- 1. Yes, 2. No

Windows/Ventilation- 1. Good, 2. Medium, 3. Poor

Kitchen- 1. Yes, 2. No

Electricity - 1. Yes, 2. No

Building- 1. Pucca, 2. Semi-Pucca, 3. Kachha

Do you maintain any register	No. Of women registered	No. Of children registered	Services given by anganwadi			Working throughout the year	No. Of workers	No. Of children	Regular Inspection	Maintain vital statistics
			Supplementary nutrition		Pre-school education					
			Children	Pregnant and lactating women						

Maintain register: 1. yes, 2. no

Supplementary nutrition- 1. Daily, 2. Weekly, 3. Occassionally, 4. No

Pre-school education- 1. Regularly, 2. weekly, 3. Less often, 4. No

Working throughout the year- 1. Yes, 2. No

Regular Inspection- 1. Yes, 2. No

Maintain vital statistics (births/deaths/vaccination)- 1. Yes, 2. No

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INSTITUTIONAL QUESTIONNAIRE

SUB-CENTRE

Sub centre No.	
Sub centre Name	
Name of village/colony	
Code of village/colony	
Date of interview	
Respondent (1. ANM/ Female health worker, 2. Male health worker, 3. other)	

(Ask for Schedules)

Location	No. Of villages catered	Farthest village (dis.)	Nearest PHC (dis.)	Details of Villages Catered by the Sub-centre					
				Name	Distance	Connected with pucca road	Bus/ other vehicle available	Accessible throughout the year	Have VHSC

Availability of Human Resources*				Training received* (last 5 years)			Availability of ANM*			
ANM/FHW	MHW	Additionl ANM	Other (Specify)	Immunization	IMNCI	Skilled birth attendant	ANM quarter attached to	ANM residing in quarter	Reasons for not staying	Distance of ANM residence

* 1. Yes, 2. No ANM/FHW: Auxiliary Nurse Midwife/ Female Health Worker: MHW: Male Health Worker IMNCI: Integrated Management of Neonatal and Childhood Illnesses

Reasons for not staying: 1. Poor condition, 2. No water, 3. No electricity, 4. Other

Infrastructure													
Government building*	If no, where located	Year in which started	Type of building	Present condition	Cleanliness inside	Cleanliness around	24 hours water supply*	Source of water supply	Electricity available	Toilet available*	Govt provided phone*	Labour room in use	Furniture available

* 1. yes, 2. no

Location: 1. Rented building, 2. Rent free building, 3. School building, 4. ANM House, 5. Other

Type of building: 1. Kachha, 2. Semi-Pucca, 3. Pucca

Present Condition: 1. Good/satisfactory, 2. Needs repair

Cleanliness: 1. Good, 2. Fair, 3. Poor

Source of water supply :1. Piped water, 2. Tubewell/ borewell, 3. Handpump, 4. Well, 5. Other

Electricity: 1. Regular Power supply, 2. Occassional Power supply, 3. Regualr power cut, 4. No electricity

Furniture available (examination table, labour table, footstep, bed screen): 1. All available, 2. Some, 3. None

Drugs and Equipments				
Drug availability at present	Drugs out of stock	Equipments	Equipment condition	Inspection by medical officer*

Drug availability (Kit A, B, Ifa, ORS, Vit. A, Other tablets): 1. Yes, all drugs available; 2. Yes, most of the drugs available; 3. Few drugs available, 4. Drugs not available

Whether drugs are out of stock for more than 10 days in a month: 1. Yes, 2. no

Equipment availability (Weighing machine, BP machine, Stethoscope, Foetoscope, Disposable syringes etc.): 1. Yes, all equipments available, 2. Yes, mostly available, 3. Only few available, 4. Not available

Equipments in working condition: 1. Yes, all; 2. Yes, some; 3. Only few are working, 4. Not working

Activities or events in last one year									Treatment
Any annual plan*	Record vital events*	Any maternal deaths*	Any infant/ child death*	disease outbreak/ epidemic*	Brought under control*	Health education camps^	Health checkup camps^	JSY beneficiaries	Childhood diarrhoea/ ARI*

*: 1. yes, 2. no

^No. Of camps

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INSTITUTIONAL QUESTIONNAIRE

Primary Health Centre

PHC no.	
PHC name	
Name of village/colony	
Code of village/colony	
Date of interview	
Respondent	

Respondent: 1. Medical officer, 2. Pharmacist, 3. Health Assistant(M/F), 4. Health worker (M/F), 5. Class IV, 6. other

(ASK FOR SCHEDULES)

No. Of Sub-centres catered	Functions 24*7*365	Nearest CHC	Nearest District Hospital

Details of Sub-centres under the PHC				
Name	Distance	Connected with pucca road	Bus/ other vehicle available	Accessible throughout the year

Availability of Human Resources*									
Medical Officer	Lady Medical Officer	AYUSH medical officer	Staff nurse	Pharmacist	Lady Health Assistant	Male Health Assistant	Lab technician	ANM/ Female Health	Other

* 1.Yes, 2. No

Infrastructure

Location	Year in which started	Type of building	Present condition	Cleanliness inside	Cleanliness around	24 hours water supply*	Source of water supply	Electricity available	Toilet available*	Govt provided phone*	Personal computer	Internet connection	Emergency transport for patients

* 1. yes, 2. no

Cleanliness: 1. Good, 2. Fair, 3. Poor

Location: 1.Government building, 2. Rented, 3. Rent free building, 4. School building, 5. ANM House, 6. Other

Source of water supply :1. Piped water, 2. Tubewell/ borewell, 3. Handpump, 4. Well, 5. Other

Type of building: 1. Kachha, 2. Semi-Pucca, 3. Pucca

Electricity: 1. Regular Power supply, 2. Occassional Power supply, 3. Regualr power cut, 4. No electricity

Present Condition: 1. Good/satisfactory, 2. Needs repair

Inspection by medical officer*	Labour room in use	OT in use	No. Of beds	Store room for drugs	Furniture	Incubator	Laboratory	Deep freezer	All drugs in stock	Oxygen cylinder

Furniture (Examination table, delivery table, OT table, bedside screen, footstep, stool, stretcher, trolleys etc.)

Activities in last one year

Any mobile health camps	Fixed Immunization days	Registered vital events	Health awareness campaigns

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HEALTH PERSONNEL QUESTIONNAIRE

ANGANWADI WORKER

S.NO.		Age	
Name of Respondent		Sex	
Name/code of Anganwadi		Caste	
Location of anganwadi		Education	
Date		Years of work	

1. What are your regular duties?

2. Is the staff regular?

3. How are the goods procured? Are the supplies regular?

4. Who supervises you?

5. How is your relation with your supervisor? Comment on the organisational structure

6. How is the relation with the tribal and non-tribal households?

7. How is the response from the community?

8. What are the regular programs for children?

9. Do children attend regularly?

10. Who prepares the meal?

11. Can you give details about the daily menu ?

12. How do you enrol women and children in your colony? Who informs you about a women's pregnancy or child birth?
Or, they themselves come to you? At what stage do you enrol them?

13. If not, why?

14. What about the children who attend anganwadi regularly? What are their reasons - Do they come because their mother works, or only for nutrition?

15. Any Health education camps, immunizaiton camps? Frequency of doctor visits?

16. In case a child falls sick (or some emergency) in anganwadi, what do you do?

17. What are the problems you face in running it?

18. Any suggestions to improve?

19. Are you satisfied with your work position?

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HEALTH PERSONNEL QUESTIONNAIRE

Auxiliary Nurse Midwife/Female Health Worker

S.NO.	
Name of Respondent	
Name/code of Sub centre	
Location of Sub-centre	
Age	
Sex	
Caste	
Education	
Years of work	

Date

1. What are your regular duties?

2. Is the staff regular?

3. How do you arrange for infrastructure, staff, equipments, drugs? Are the supplies regular?

4. Who do you report to? Who is your head?

5. How is your relation with your supervisor? Comment on the organisational structure

6. What do you think are the general health problems of tribes?

7. What do you think are the reasons?

8. How is the health awareness among the tribal patients? What is your contribution is spreading this awareness?

9. Do you think your services are reaching all communities and all age groups? How is your relation with the different communities?

10. If not, why?

11. What are the issues in providing services? Have you complained about this? Any steps taken?

12. Do you have an annual plan? Budget?

13. Who prepares reports? Regular?

14. Any case in last one month (tribal woman or child), whom you could not treat? Where did you refer them?