

## Factors Affecting the Nutritional Health of Tribal Children in Maharashtra

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**ABSTRACT:** The perception of health and health seeking behaviour among the tribal people world over is intertwined with lots of factors – their traditional beliefs, practices, nature of interaction with physical environment and changing social, cultural and economic domain. Tribal population world over has been exposed to a rapidly changing world around them, the depleted natural resources on which they are dependent and alien culture of monetary economy. Tribal people are mostly unable to cope with these new situations. Their social and cultural customs are in transition whereas in socio-economic front they are lagging far behind from others. Such incompatibility has made the tribal people more vulnerable to several other aspects. Health-care issue is one of such major areas that need to be addressed on war footing. Among several health problems faced by the tribal groups, the problem of malnutrition and under-nutrition is seen as the direct consequence of socio-economic disorganization of tribal societies. The study tries to find out the impact of socio-cultural, political and economic environment on nutritional status of tribal children in Maharashtra, India. The study is based on both primary and secondary data on health and nutritional status and also observation of several aspects of tribal people. The study reveals that shortage of land and forest resources, lack of suitable job opportunity at local level and exposure to non-tribal domain has made tribal people suffer from lots of health and nutritional problems.

### 1. INTRODUCTION

#### 1.1 Health Defined

Health is defined by the World Health Organisation as a "state of complete physical, mental and social well-being (WHO 1984). It is also asserted that health may be seen as a state of dynamic equilibrium between an organism and its environment. Good health corresponds to dynamic stability, normal function and homeostatic control. Ill-health corresponds to a state of instability, loss of function and failure of self-regulation.

The regional variations in human health depends upon the effect of environment, geographic variations such as mountains, plateaus, plains and desert areas, besides cultural differences in terms of customs, traditions, diet and food taboos. In view of the fact that man and environment are closely linked in complex relationships, the range of diseases in India is particularly wide. John Bryant (1988) sees the involvement of the individual and the local community in primary health care not as a social nicety; rather as a medical necessity.

#### 1.2. The Health of Indigenous Peoples

Available data indicate that the health of

indigenous people is significantly poorer than other groups, with, for example, infant mortality rates up to three times higher (Basu 1994). Communicable diseases and nutritional deficiencies overwhelmingly affect many communities. Indigenous communities often depend on ecosystems that are rapidly deteriorating through no fault of their own. These problems come in the wake of social disintegration caused by modernization and the destruction of traditional authority structures and autonomous decision-making.

#### 1.3. Tribal Health in India

Studies reveal that tribal health maintenance system is attached with a lot of complexity intertwined with socio-cultural beliefs and practices. It has been observed that the universal index of a threat to health is expressed through withdrawal from work. Mahapatra (1994), therefore, sees health among tribal groups as a functional and not clinical concept. Sachchida-nanda (1994) sees the field of tribal health aspects as a cultural concept as well as a part of social structure and organization which is continuously changing and adapting itself to changes in the wider society. Choudhury (1994) and Lewis (1958) believes that the study of tribal health should be with reference to their distinctive notions regarding different

aspects of diseases, health, food, human anatomy and faiths as well as in the process of interaction with modern world. Singh (1994) indicates nine factors to examine and assess the tribal health situation in India. He highlights the effect of changing physical environment on tribal health which is ultimately related to their economic pursuits, nutritional availability, medicines etc. Khera's (1994) study among the tribes settled in Maikal hills of Central India shows that ecology plays an important, indeed dominant, role in creating structures of health and prosperity. Referring to the works of Basu (1986, 1989, 1990), Bardhan (1989), Roy Burman (1986, 1990), Swain et al. (1990), Mukharjee (1990), Sen et al. (1986), Mahapatra et al. (1990), Rizvi (1986), Mukharjee (1986), Haq (1990) and Basu (1994) reveals that widespread poverty, illiteracy, malnutrition, absence of safe drinking water and sanitary living conditions, poor maternal and child health services, ineffective coverage of national health and nutritional services are the possible contributing factors for dismal health conditions prevailing among the tribal people.

Prevalence of traditional health-care practices and nature and extent of acceptance of modern health-care practices among the tribal people in India has been mentioned by various scholars in recent years. Guite and Acharya (2006) have shown that the acceptance of a particular health care system among the tribal people mostly depends on its availability and accessibility. It is interesting to note that while the tribal groups following traditional religion use traditional medicines putting religious or supernatural value on it, the converted Christian tribes use the same medicine excluding its religious tune. The study reveals that education has been able to heal the traditional inhibition of tribal people to attend PHCs without ignoring the importance of traditional healing practices. Pramukh and Palkumar's (2006) study shows that the tribal groups namely, the Savaras, Bogatha, Konda Dora, Valmiki, Koya, Kond Reddi etc. believe in the power of prayers and rituals that enables some herbs to act as medicines to heal diseases among them. They attribute diseases to certain deviant acts of self and others towards elders, nature, and divine rules. Thus, their first priority is to get spiritual cure in a traditional way. Jain and Agrawal's (2005) study shows that the Bhills in Udaipur, Rajasthan, attribute disease to the act of deities and spirits of various kind and by appeasing them, they

believe, disease may be healed. They depend on *Bhopa* (traditional healers), herbalist and *Dais* for cure of disease. The same study shows that people are, to a great extent, inclined towards modern health-care system too, without ignoring the traditional system. Bhasin's (2004) study among the Ladakhis shows a blend of health-care involvement. She finds that in case of serious illness people tend to attend modern health-care facilities. But in many cases accessibility of such facilities do not confirm people's acceptance of modern health-care system. People invariably believe in spirit and other supernatural beings as causes of disease and priority of treatment inclined mostly towards traditional healers. Nagda (2004) shows that among the tribal people of Rajasthan, illness and consequent treatment is not always an individual or familial affair. At times the whole village or the community may be perceived as affected by such diseases and healing must be done at community level. Such perception shows the integrity and responsibility of entire community towards an individual or family and vis-à-vis which is defined by existing culture. In such cases modern system has nothing to do in treatment. Sunita Devi's (2003) study among the Meitis of Manipur reveals that though the people are educated enough, the concept of deities and their effect on human health are widely prevalent among them. The author, in details, describes the ill-effect of the deity *Hing-chabi* and the treatment offered by traditional healer *Maiba*. She shows how effective is the use of medicinal herbs along with beliefs to heal an ill person influenced by the deity. Bhasin's (2004) another study deals with the causes of underutilization of Biomedicines among the tribal women of Rajasthan in treating sexually transmitted infection (STI) diseases, locally called *Sujak*. They attribute *Sujak* to the evil effect of *matron*, a spirit that evolves when a pregnant woman dies. The author finds that when the women see a modern health-care provider in case of other diseases, STI diseases are closely guarded and treated with the traditional healers. This certainly shows their cultural attributes attached to the concept of health and diseases. Jagga and others (1996) have found that belief in spirits and deities are prevalent among the most of the tribal population in west Godavari district of Andhra Pradesh. This leads for seeking curative measures from traditional healers. The authors also show that the people are in transition

and realize the changing situation in their environment, culture and food habit etc., for which, they believe, the traditional treatment system is losing its credentials.

**1.4. Concept of Healthy Children:**

The nutritional status of children under five is commonly assessed using three indices: weight-for-height (wasting) which reflects acute growth disturbances, height-for-age (stunting) which reflects long-term growth faltering and weight-for-age (underweight) which is a composite indicator of both long and short term effects. Weights and heights of children are compared with the reference standards (NCHS/CDC/WHO) and the prevalence of anthropometric deficits is usually expressed as the percentage of children below a specific cut-off point such as minus 2 standard deviations (2SD) from the

median value of the international reference data. Thus, children who are below the referred indices are termed as unhealthy children.

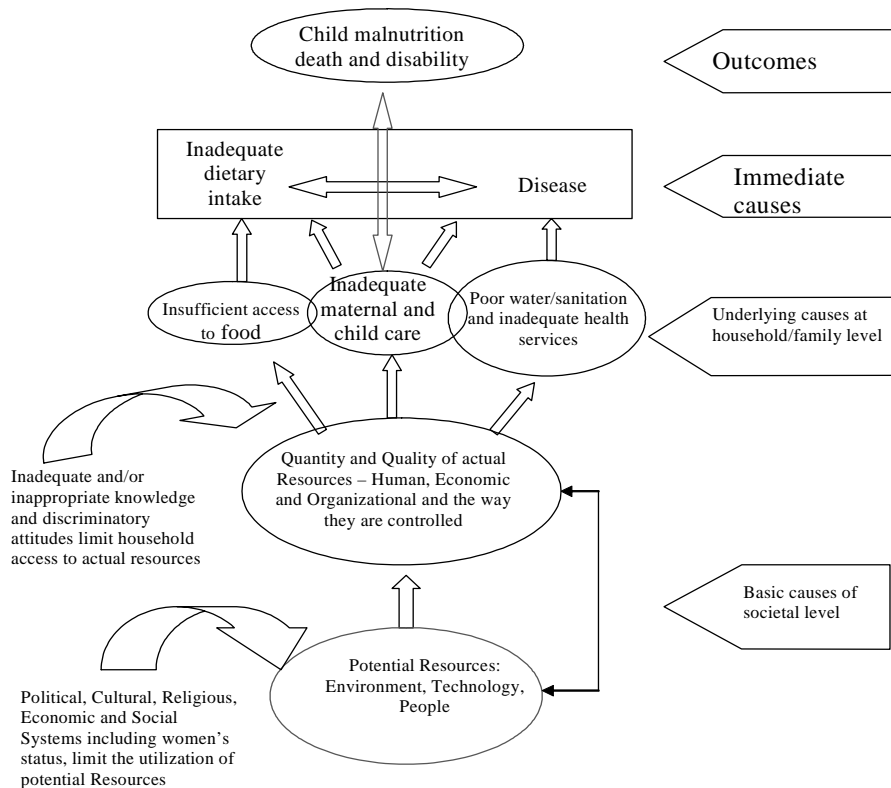
**1.5. Malnutrition and Child Health**

*1.5.1 Causes of Malnutrition*

Malnutrition is a manifestation of multiple and interrelated determinants. The causes of malnutrition can be divided in to some categories as follows:

*i) Immediate Causes:* Inadequate dietary intake and illness are the two most significant immediate causes of malnutrition.

*ii) Underlying Causes:* Inadequate access to food in a household; insufficient health services and an unhealthful environment and inadequate care for children and women are identified as the three clusters of underlying causes lead to inadequate dietary intake and infectious disease.



**Fig. 1. Insufficient access to food**  
 Source: UNICEF 1997

### 1.6 Malnutrition and Child Health

Malnutrition is demarcated as a responsible factor in more than half of all child deaths worldwide. Millions of children survived from malnutrition are left crippled, chronically vulnerable to illness and it is believed to make children intellectually disabled. Despite these huge problems the worldwide crisis of malnutrition has created little public alarm. Malnutrition is a multifaceted phenomenon. It appears in various forms and many a time in combination contributing to each other. To mention a few: protein-energy malnutrition, iodine deficiency disorders and deficiencies of iron and vitamin A etc. It has been revealed that each type of malnutrition is the result of a complex interplay of factors as has been depicted in figure 1. And each wreaks its own particular kind of havoc on the human body.

The depth of problems due to malnutrition can be assessed from the following facts (WHO 1995a).

- Ø *Nearly 12 million children under the age of 5 die each year in developing countries and 55 percent death are either directly or indirectly attributed to malnutrition.*
- Ø *Persistent diarrhea leading to dehydration which is further aggravated by malnutrition is the cause of 2.2 million children death worldwide.*
- Ø *Malnourished children have lifetime disabilities and weakened immune systems as well as lack the capacity for learning that their well-nourished peers have.*
- Ø *Malnutrition in an expectant mother, especially iodine deficiency, can produce varying degrees of mental retardation in her infant.*

### 1.7. Malnutrition and Child Health Issue in India

In recent years there have been reports of death of tribal children in the country due to nutrition deficiency. The immediate cause of such extensive death is attributed to severe malnutrition though the social and physical environment of people play important role in health aspect. The physiological synergism between malnutrition and infection has been recognized for some quite time but it did not find a place in health care strategy of several developing countries worldwide. A recent analysis of 28 epidemiological

studies of the malnutrition-mortality relationship concluded that the relationship is consistent across diverse world populations; a significant effect exists of mild to moderate malnutrition (MMM), as well as of severe malnutrition; and the effect is not simply due to confounding by socioeconomic factors or inter-current illness. In addition, evidence supports the hypothesis that malnutrition and infection have multiplicative effects on child mortality, not the additive effects implicitly assumed. An empirically based model suggests that by potentiating infection, malnutrition accounts for 56% of child deaths, 83% of which are due to MMM. These estimates are far higher than conventional figures that do not take account of potentiation and MMM (FAO 1998). The major nutritional problem in India is found to be that of PCM or *protein calorie malnutrition*, especially among most vulnerable groups like children, pregnant women, lower income groups and population living in tribal tracts.

For children 1-5 years of age, the prevalence of underweight ranged from 13% in the State Meghalaya to 77% in Gujarat. The prevalence of stunting ranged from 20% in Goa to 83% in Gujarat. According to the WHO, a prevalence of underweight above 30% is considered a serious public health problem (WHO 1995a). The most badly affected States, with a prevalence of underweight above 60%, were Gujarat, Orissa, Karnataka, Maharashtra, Madhya Pradesh and Andhra Pradesh. As for underweight and stunting, wasting is a serious public health problem in most States. The distribution of wasting does not coincide with that of stunting and underweight except for the States of Madhya Pradesh and Arunachal Pradesh which show the worst nutritional situation of all States in India. (EIU 1997 *India Country Profile 1996-97*)

Children under five years are most susceptible to vitamin A deficiency (VAD). The consequences of VAD are tragic and include night blindness, irreversible blindness, growth retardation and increased susceptibility to infections. The National Nutrition Monitoring Bureau have shown the 9 states and UTs as most affected states, with a prevalence of vitamin A deficiency above 6%, namely - Assam, Bihar, Gujarat, Madhya Pradesh, Rajasthan, Tripura, Uttar Pradesh, West Bengal and the Andaman and Nicobar Islands. As a consequence of Iron Deficiency the prevalence of anaemia in pre-school children (haemoglobin level below 11g/dl) was very high ranging from

30% in Tamil Nadu to 95% in West Bengal. Out of the six cities studied between 1981 and 1996, the prevalence of anaemia in school age children 6-14 years old (hemoglobin level below 12g/dl), was highest in Calcutta at 96% (MHRD 1996a-d).

### **1.8 Anthropometric Data on Nutritional Status of Children in India**

The nutritional status of children 1-5 years of age showed significant inter-state differences. The prevalence of underweight ranged from 13% in the Meghalaya to 77% in Gujarat. Only the States of Nagaland, Meghalaya, Manipur and Mizoram had a prevalence of underweight under 30%. According to the WHO, a prevalence of underweight above 30% is considered a serious public health problem (WHO 1995a). The most badly affected States, with a prevalence of underweight above 60%, were Gujarat, Orissa, Karnataka, Maharashtra, Madhya Pradesh and Andhra Pradesh. In most states, the prevalence rate of stunting is >40%, which according to the WHO represents a serious public health problem except in Meghalaya, Manipur, Mizoram and Goa (WHO 1995a). The prevalence of stunting ranged from 20% in Goa to 83% in Gujarat. The situation was particularly critical in the States of Gujarat, Maharashtra, Orissa, Madhya Pradesh, Arunachal Pradesh and Karnataka, in which the prevalence of stunting was above 60% and the proportion of children below minus 3 standard deviations ranged from 46% to 54%.

In most states, the prevalence of wasting is above 15% which according to the WHO represents a serious public health problem (WHO 1995a) as for underweight and stunting. The highest prevalence rates of wasting ranged from 28 to 32% and were found in the States of Manipur, Goa and Arunachal Pradesh. Generally, the prevalence of underweight and stunting were slightly lower in females than in males while the rates of wasting were fairly similar in both sexes.

### **1.9 Tribals in Maharashtra**

The tribal population in the state of Maharashtra constitutes nearly 10 percent of the total population. Largely, the tribal groups remain relatively isolated, living in remote forest and hilly areas. There are three mountain ranges in the State known as Sahyadri, Satpuda and Gondwan ranges. In total, there are 47 scheduled tribal popu-

lation groups in the State and majority of them are inhabitants of these geographically difficult terrains. Out of these 47 groups, 17 are major tribal groups. Thane district has the highest tribal population in the state amounting nearly 14 percent of the total tribal population of the state followed by Nashik, Nandurbar, Yavatmal, Nagpur and Dhule district. These six districts have housed more than half of the tribal population of that state. A total of 47 groups of population have been notified as Scheduled Tribe in the state of Maharashtra. Some of these groups have further subgroups.

### **1.10 Health Situation of Tribal Children in Maharashtra**

Over last few years report of death of tribal children due to malnutrition has been pouring in the state. This has become a recurring phenomenon despite the governmental and NGOs effort to eradicate the problem. For instance, death of tribal children in Melghat, Dharni block of Amravati district, the tribal areas of Chandrapur, Yavatmal, Thane, Amravati, Nashik and Gadchiroli in recent years have created a cause of concern.

## **2. OBJECTIVE AND METHODOLOGY**

### **2.1 Objective of the Study**

In the context of the problem defined in the foregoing paragraphs it was proposed to find out the crucial links between people's life ways and the manifested health situation and thereby point out the possible areas of long term and effective intervention to correct the situation as a whole.

### **2.2 Methodology**

#### **2.2.1 Selection of the Areas and Respondents**

On the basis of information on occurrence of malnutrition cases among the tribal children three districts were selected for the study. This selection was also based on location of the places in different regions of the state – Thane to the west, Nandurbar to the north and Godchiroli to the extreme east.

The number of villages selected for the study from each district was driven by the information on the extent of occurrence of malnutrition cases in recent times, proximity and distance from urban

**Table 1: List of Districts and number of villages selected from these district for the study**

<i>Districts</i>	<i>Name of Talukas</i>	<i>No. of villages</i>
Godchiroli	Ahare	5
	Armoni	5
	Brahmagarh	5
	Dhanora	5
	Godchiroli	5
Nandurbar	Akkalkunwa	6
	Akrani	9
Thane	Goraha	3
	Vada	3
	Parle	3
	Kudus	3
	Abhitgarh	3
Total	12	55

locality and accessibility to health care centre and other criteria. The details of number of villages and talukas selected for the study is given in table 1.

From each of these selected villages, some families were selected for in-depth studies. The criteria for selecting such families was based on the presence of less than 6 years old children and expectant mothers and also presence of malnourished children as revealed by the local Anganwadi workers' records. This is worth mentioning that the level of malnourishment was based on Anganwadi workers' data. Some of those data were cross examined and was found similar to our assessment. Therefore, extensive measurements were not carried out. The prevalence of malnourishment was universally accepted. Consequently, the influencing factors were studied in details to get a conclusion on the issue.

The selected households were surveyed using standard anthropological household survey schedules. The schedules included space for demographic data like age, sex, education, occupation, seasonal migration, age at marriage, land holding pattern etc. Anthropometric indices like weight for age and weight for heights etc. were considered for determination of stages and

status of malnutrition among the children. Based on preliminary data collected with the help of household survey schedules some families were selected for intensive case studies and interviews. Observation based on certain criteria were carried out to have insight into the problem defined for the study.

### 3. THE FINDINGS

#### 3.1 Demographic Feature of the People Under Study

The tribal communities like the Gonds, the Bhills and the Gavits form a major part of the respondents in the study. Using household survey schedule, data on the demographic features of the tribal people were collected. Some of the information relevant to the present paper has been depicted as follows:

##### 3.1.1 Female Literacy

To assess the literacy status of the females a brief investigation was carried out with the help of the data available with the Anganwadi workers and the village heads. Table 2 shows the details of female literacy in the selected villages.

Table 2 shows the level of education received by females in the selected villages in three districts. It has been seen that 21% women in Godchiroli district are literate and majority of them read upto 5<sup>th</sup> standard. There is 10% increase in literacy rate in Nandurbar and Thane district gets 14% increase compared to Godchiroli district. The overall literacy rate among the females is 30 percent. The highest percentage of illiterate females is in Godchiroli followed by Nandurbar and Thane district. The table indicates that the level of literacy is very low in all these districts. Only 2 percent of the females in all these districts could study above SSC level.

**Table 2: Levels of literacy among the tribal females in three districts**

<i>Level of Education</i>	<i>Number of females in each level</i>			<i>Total</i>
	<i>Godchiroli</i>	<i>Nandurbar</i>	<i>Thane</i>	
<i>Illiterate</i>	1629 (79%)	3017 (69%)	2616 (66%)	7262 (70%)
Up to 5 <sup>th</sup> year	251 (12%)	519 (12%)	447 (11%)	1217 (12%)
Up to 7 <sup>th</sup> year	89 (4%)	492 (11%)	555 (14%)	1136 (11%)
Below 10 <sup>th</sup> year	55 (3%)	213 (5%)	257 (7%)	525 (5%)
Above 10 <sup>th</sup> year	31 (2%)	107 (2%)	94 (2%)	232 (2%)
Total Literate	426 (21%)	1331 (31%)	1353 (34%)	3110 (30%)
Total population	2055	4348	3969	10372

### 3.1.2 Economic Activities of Tribal Population

The tribal people in the state have been found engaged in various economic activities. A major part of the tribal people is found attached with agricultural activities. But the land-holding situation is not very promising among the tribal people. Forest produces have also been a part of their food supplement as well as income source at certain part of the year. Due to lack of adequate amount of land for cultivation, the tribal people are seen grossly engaged in daily wage labour in various spheres. They are seen working as agricultural labourers in the fields of big and wealthy farmers. A good part of the tribal labour force is seen migrating to other parts of the state as well as to neighbouring states in search of seasonal jobs under contractors. It was also revealed that marginal land owner tribal people work only for two to three months a year in their field and the rest of the time they move out in search of job. When they are not under contract, they usually work as casual labourers in nearby areas. The table shows the occupation pattern of the families surveyed for the study. The table indicates that 30 percent of the households are engaged in cultivation as their primary occupation and wage labour as secondary occupation. Along with cultivation 13.7 percent household have business of some sort as secondary occupation. Nearly 42 percent of the household's primary occupation is wage labour while they partly

engage in cultivation. Service of some kind as primary earning source is accounted for 14 percent of the household while 9 percent of them have cultivable land to earn partial living. Table 3 shows the details of occupational pattern in the villages.

### 3.1.3 Land Holding Pattern Among the Tribal People

The land-holding pattern among the tribal people falls in different ranges. Many of the tribal groups have their community land for some common purposes. In hilly areas, it was learnt that the land holding of tribal people is not defined properly and they vary at different point of time on the basis of access for utilization. The recorded land holding pattern of the tribal people in different studied villages is presented in table 4.

The table reveals that the tribal people are either land less or marginal landholders. They are lack of suitable and adequate amount of cultivable land. It has been estimated that a family of 5-6 members needs agro-product cultivated in nearly 5 acres of land to sustain the whole year. But in all the cases more than the half of the households are less than that amount of land. Thus, cash flow from agro-product is limited to a very few tribal households in these districts. This condition has lots of impact on tribal people's involvement in different economic activities including working as migrant seasonal labour in neighboring districts and states etc.

**Table 3: Occupation pattern of tribal people in three districts**

Name of selected districts	Types of occupation (primary Vs secondary) Percentages thru district total						
	Number of selected villages	Number of household	Cultivation - wage labour	Cultivation - business	Wage labour - cultivation	Service - cultivation	Service
Godchiroli	25	931	382(41%)	130(14%)	335(36%)	63 (7%)	21(2%)
Nandurbar	15	1400	448(32%)	154(11%)	658(47%)	112 (8%)	28(2%)
Thane	15	1628	374(23%)	260(16%)	667(41%)	179(11%)	148(9%)
Total	55	3959	1204	544	1660	354	197
Percentages thru occupation	100		30.4	13.7	41.9	9.0	5.0

**Table 4: Land holding pattern among the tribal people**

S. No.	Range of land holding	% Out of total households (300 each)			
		Godchiroli	Nandurbar	Thane	Average %
1	Less than 1 acre	13.0	11.0	9.0	11.0
2	1-2 Acres	47.0	54.0	63.0	55.0
3	3-5 Acres	22.0	23.0	21.0	22.0
4	6-8 acres	13.0	9.0	6.0	9.0
5	9 acres and above	5.0	3.0	1.0	3.0
	Total	100.0	100.0	100.0	100.0

### 3.1.4 Seasonal Migration Pattern of Tribal People

Table 5 shows that Nandurbar district has the highest number of migrant tribal labourers. This is because the district is near to industrial state like Gujarat where they migrate to. In Gadchiroli the migration seems least being the area very rural and inaccessible and tribal people follow a more traditional life ways. Thane, being itself an industrial area, the people here need not to migrate at large. Most of them can come back after a days work.

**Table 5: Migration pattern of tribal people**

Districts	Villages	Households	Migrant families
Gadchiroli	25	931	270 (29%)
Nandurbar	15	1400	540 (39%)
Thane	15	1628	520 (32%)

### 3.1.5 Age at Marriage, Pregnancy and Child Health among the Tribal Women

Table 6 shows the age at marriage among the tribal women in the selected villages. A total of 300 households from each district were selected for this purpose.

Table 6 shows that as many as 31 percent of women got married before the age of 15 years and as many as 49 percent got married by the age of 17 years. Thus 80 percent of women got married before the recommended age of 18 years. Among

the three localities a large number of women in Gadchiroli got married before the age of 15 years.

The next important indicator of reproductive health and child health, the age at first pregnancy, was investigated and was found that the tribal women get pregnant soon after their marriage. Thus earlier the marriage earlier is the pregnancy. This implies that the age at marriage indicates the onset of pregnancy at a very early age for the tribal women in the selected villages. The next part of the table reveals that out of reported 163 underweight children born, 48 percent goes to the mothers who got married at the age of 15 or below; 40 percent goes for second category. Percentage distribution of malnourished children within the age groups of mothers also shows that maximum numbers of mothers in the first age group have malnourished children. As age increases the percentage of malnourished children also decreases. This reveals a relation between age at marriage and child health.

### 3.2 Influence of Other Factors on Birth Weight of Children

It has also been revealed in the study that there are other underlying factors that likely to influence health status of a baby. One of the prime factors is the diet of an expectant mother. It has been revealed that the tribal people have lots of taboos and restrictions during pregnancy, especially in terms of diet. It has been found that

**Table 6: Age at marriage, first pregnancy and child health among the tribal women in three selected districts (N=900)**

Age at marriage (in years)	Districts	Number of females	Total number of females	%	No & % of 1 <sup>st</sup> year pregnancy thru age groups	No & % out of 163 malnourished children	% of Malnourished children out of total mothers in the age group
< 15	Gad.	171	279	31.0	193(69%)	78 (48%)	28%
	Nand.	68					
	Thane	40					
15-17	Gad.	96	441	49.0	353(80%)	66(40%)	15%
	Nand.	126					
	Thane	219					
18-20	Gad.	24	126	14.0	103(82%)	15(9%)	12%
	Nand.	67					
	Thane	35					
21-25	Gad.	6	45	5.0	30(67%)	4(3%)	8%
	Nand.	36					
	Thane	3					
25+	Gad.	3	9	1.0	6(70%)	0	0%
	Nand.	3					
	Thane	3					
Total			900	100%	685(76%)	163(100%)	100%



the expectant mothers are advised to take lesser amount of food by the 6<sup>th</sup> month of the pregnancy in order to reduce the size of the baby to avoid the problem of delivery. Moreover, the expectant mother is not allowed to eat certain food that generates, according to them, heat in the body.

Another influencing factor is the gap between two consecutive pregnancies. It has been clearly revealed that birth control by means of artificial device has not hitherto been conceived by the tribal people in the selected villages. Children in larger number still are seen as assets for them. A male child can earn working in agricultural field or sugar factories whereas the female child, while at parental home can earn and while gets married can flush in some amount of bride price for the parents. Table 7 gives an idea of gap between two pregnancies among the tribal people in the studied villages. For this investigation 600 eligible mothers were selected from the studied villages.

The table shows that as many as 31 percent of the tribal mother gave birth two babies in an interval of 1 year or less. A whopping 48 percent of the tribal mother keeps a gap of under 2 years between two children. The table clearly shows that a small number of tribal women adopt birth control measures to keep a longer gap between two births. The total number of such mothers is 48 giving a percentage of 8 percent among the all mothers. The next part of the table relates the distribution of reported malnourished children to the mothers in each category. This reveals that

as many as 53 percent of underweight children born to mothers who have gap of one year and 38 percent of underweight children are assigned for mothers having two years gap. Among all children 35 percent malnourished attached to mother having one year gap. The table shows that there is sharp decline in the percentage of malnourished children as the gap period increases.

### 3.3 Health care Practices During Pregnancy and Childbirth

The tribal people depend upon spiritual security they receive from their traditional healers, termed as *Bhogot, Ojha, Vaidya, sadhu* etc in our country. Usually the traditional medicine man is the spiritual healer in most of the cases. The usual trend among the tribal people of the studied villages is that the ailing person would first visit or invite the traditional healer to cure the disease. Modern health care is the second choice for these people. It has, however, been observed that a good many tribal people visit health centers accessible to them at different point of time. A brief survey of people's perception about certain diseases and their remedial measures was conducted among the studied people. Table 8 shows the details.

On the basis of these data table 9 has been prepared converting the highest percentage of people's perceptions as general trend. This also includes people's remedial action to cure the diseases.

**Table 7: Range of gap between two child births among the tribal mothers**

S. No.	Gap between two children (Average)	Mothers having natural gaps	Mothers adopting birth control methods	% of mothers in that range of gap	No of underweight children ( % out of 123)	% thru gap period
1	Within 1 yr	186	0	31.0	65 (53%)	35%
2	Within 2 yrs	285	3	48.0	47 (38%)	16%
3	Within 3 yrs	66	12	13.0	7 (6%)	9%
4	More than 3 yrs	15	33	8.0	4 (3%)	8%
	Total	552	48	100.0	123	21%
	Percentage	92.0	8.0	100.0	100	

**Table 8: Perception on causes of diseases**

Diseases	Causes of diseases				
	Due to evil eye of someone	Due to wrong deeds done	Influence of evil spirit	Bad weather	Bad food
Loose motion and Vomiting	72%	8%	10%	6%	4%
Fever with unknown cause	9%	68%	18%	5%	0%
Problems in pregnancy and Child Birth	15%	9%	76%	0%	0%

**Table 9: General trend of tribal perception and response towards ailments and diseases**

<i>Diseases</i>	<i>People's perception about cause</i>	<i>Immediate response</i>	<i>Second option</i>	<i>Third and last option</i>
Loose motion and Vomiting	Due to evil eye of someone	Home remedy with tiny magico-religious practices	Visit a traditional healer to deter evil eye with magical hymn and medicines	If not cured visit a primary health center for advise from attending ANM or Doctor
Fever with unknown cause (no cold and cough)	Influenced by some benevolent deity due to some wrong done to him	Try to appease the deity by promising a offering when the person is cured	Seek advice from a traditional fortune teller to know the cause and way to appease the deity.	If not recovered taking imaginary permission from the deity visit the health center at hand for further treatment.
Hardship in pregnancy and delivering baby	Influence of evil demons living in forest and rivers.	Seek help from guardian deity of the family by offering oblation to it.	Immediately call the traditional healer, perform black magic to reduce the influence.	Wait till the last stage, if situation deteriorated, by the permission of guardian deity visit health centre.

The table clearly shows how tribal people's world of disease and treatment are intimately related to their socio-cultural perceptions and consequent actions. The psychosocial and spiritual security they avail through their traditional practices has immense influence on the nature and extent of acceptance of modern health care methods and facilities made available to them.

It is, however, worth mentioning that this is a general trend. Awareness towards the proven benefits of modern health-care facilities and education, which serve as catalizer to cut short traditional inhibition among tribal people, help change this trend to a great extent. Thus the study has also found in some cases a balanced blend of health care practices among the tribal population where the tradition and modernity mix together in a meaningful way.

### 3.4 Ante-natal Care and Childbirth

It has been found that pregnancy among women does not associate with reduction of workload at home as well as outside. At least, at physical level, pregnancy does not mean any hindrance to work. Visit to PHC for regular health check-up is a rare event unless any complication occurs. In such a situation, the village health workers and ANMs are the only service providers to the expectant mother, provided the needy are available at home. The IFAs supplied by the attending health workers are many a time not used

at all. Rather, the women feel protected from all odds by tying a sacred thread provided by the *Bhogot* or the traditional healers. Particular metallic wear, hooks, chilies and lemons etc. are used to deter evil spirits from the pregnant women. It is found that among 300 selected mothers only 13 percent have delivered their babies in Hospitals. Among them only 4 percent mothers have to hospital as a convenient place for child birth whereas 9 percent of them have to hospital due to complicity they encountered in course of time. This implies that one should inquire why the expectant mothers do not attend PHC though the service is relatively free of cost.

There are several reasons forwarded by the people under study. These are socio-cultural, economic and physical environmental as well. The reported information is presented in table 10 along with the percentage of respondents who forwarded these causes.

### 3.5 Food Habit of Tribal Children and Sustainability of Agro-product From Own Land

The study shows that the tribal women do not follow a strict diet schedule for their children. In the early morning they are given milk if available along with *bhakhri roti* and *Jagari*. Lunch time diet is also in the same line. They are often given *roti* with *dal* and a little bit of cooked vegetables. There is no regular timetable for afternoon food. Children are given food on

**Table 10: Reasons for not attending PHC during pregnancy and childbirth**

<i>Causes reported</i>	<i>Detailed explanation</i>	<i>%</i>
The placenta has to be buried inside the household boundary	Almost all the tribal people have the tradition of burring the placenta after childbirth within the boundary of the house. This has important significance to the survival of the new born. Thus giving birth in place other than own house would invite inconvenience to follow this unavoidable tradition. This has been reported as the single most important reason for not going for birth at PHC.	95%
Has to observe some religious rites including burring placenta	Along with the above reason many of the respondent said that there are some other socio-religious rites one has to observe immediately after childbirth which is not possible to follow if the mother gives birth at Hospitals	83%
PHC situated far and not convenient to take expecting mother at 11 <sup>th</sup> hour	Distance from village to PHC and the lack of transport and motorable roads has been forwarded as another reason by some respondent that dissuade to take the expectant mother to the hospital at the time of delivery. It is also informed that they are not interested to be in hospital well in advance without any symptoms for childbirth to the mother.	43%
Visiting PHC regularly without any complicity amounts losses in household work as well as in wage earning	It was found that most of the tribal people are seasonal workers. During monsoon they work in their crop field for a brief period subject to the availability of arable land. After that they are out in search of job. Thus absent from job to attend PHC without reason (as they do not feel the necessity of check-up for pregnancy as long as they are fine) means a loss in earning affecting family life economically.	63%
Stay away from residence during pregnancy for contract job etc.	The study also reveals that a good number of tribal families go out in search of job to neighboring district as well as to neighboring states. They often go in a group under a contractor for a period of six month or so. Thus they can not keep regularity of check-up or cannot find any convenient PHC nearby work-place.	46%
The concept of a healthy and able womanhood	It is interesting to note that every tribal people have their own vision of healthy womanhood. For them a healthy and able woman is she who can give birth to as many children as god gives without any trouble – in good health and naturally. Seeking unauthorized (non-traditional) help during pregnancy and childbirth is a misfortune and unwanted for typical tribal women. This traditional bias along with other inhibition deters them from attending modern health facilities made available to them.	83%

demand in the afternoon. The night food is again *roti* dipped in *dal* or with vegetables; very often rice is also served. Consumption of eggs, meat and fish is very scanty. It has been observed that consumption of green vegetables, milk and juicy fruits are very occasional among the children. They take a lot of pulses and cereals products.

As the land-holding pattern of the tribal population is very low, a lot of tribal families cannot subsist whole year on food crops they produce on their land. This is because of lack of adequate amount of land and also lack of suitable land to their access. The gap between food grain requirement and food grain production has lot of implication on tribal people in the studied areas. To survive the lean season these people take money from money lenders for which they have to repay in kind (grain) at a higher ratio. The labour contractors also spread their fangs during this season and the clue less tribal people had to

accept the offer at the cost of their mismatch work-wage ratio. This remains as a vicious cycle in the poverty laden tribal areas indirectly affecting the health of mother and child as well. Table 11 shows that nearly a quarter of 600 families produce food grain for on which they subsist for less than 3 months, nearly one-third subsists upto 6 months from own production and 17 percent of the selected families produce food grains enough for the whole year. Table 11 also reveals a strong

**Table 11: Food grain Availability among the studied groups**

<i>Range of food-grain availability</i>	<i>Number of families (N=600)</i>	<i>Percent-age</i>	<i>Malnouri shed children</i>
< 3 months	144	24.0	61
3 – 6 months	216	36.0	43
7 – 10 months	138	23.0	15
Whole year	102	17.0	4
Total	600	100.0	123

relationship between occurrences of malnutrition and food availability.

### 3.6 Women's Work and Child Health

Tribal women have to collect fuel wood and fodder from forest on a regular basis. They also go for minor forest produce collection leaving behind their children with someone to take care of. The able-bodied male members usually go out for a day's work. Thus, the small children have to be kept at home under the supervision of young siblings or older grandparents. It has been observed that while the older people take relatively better care the young sibling hardly pays attention to the small children as they often engage in play outside. Many a time the baby is kneaded with own excretes, rattled with dust and dirt posing no small peril to it. The prolonged lack of care associated with hunger, thirst and dirtiness catalyse a child's progression towards malnutrition and infection in due course. Many a time the older people are unable to provide required amount of food on time either due to unavailability or due to their physical hardship. This ordeal of small children becomes even longer when the mother goes for a day's work to a distant place and come back late evening.

Some mothers also take their babies to workplace if it is nearby or if there is no one to

take care at home. When the people migrate for a period of time to other places for work under contractors they take their babies with them along with small children who cannot be left at home. While both the parents work the small children and the babies are exposed to all kinds of odds like heat, dust, insects and dirt. The babies are kept in makeshift hammocks briefly made of a cloth and small poles. The mother can hardly pay attention to its discomfort in its den as this will harm her work, and in many cases she even cannot hear her baby's cry, as she has to work in a distant position from her baby. Lactating babies are even more prone to difficulty as mother can come to feed her only once or so during her day's work. A strong relation between work involvement of women and child's health has been observed in the study. It is also important to note that contrary to the general belief that higher cash-inflow should positively related to better child health, one can see the prevalence of malnourished children more or less equally among the high earning groups. This is because the cash earning in most of the cases come from aggressive contract labour outside their traditional domain involving both partners. And for the reason mentioned above the small children are the sufferers.

Table 12 shows the nature and extent of women's participation in wage labour and other activities where she has to leave behind her

**Table 12: Work involvement of women and child care**

<i>Nature of activities women involved in</i>	<i>Number of women</i>	<i>Malnourished children</i>		<i>% Out of total malnourished children (N=123)</i>
		<i>Number</i>	<i>% Through work</i>	
Women work at home and in own crop field	120	2	1.7	1.6
Women work at home and quite often go to forest to fetch essentials leaving behind children at home	147	9	6.1	7.3
Women do wage labour for short duration and irregularly	73	18	24.7	14.6
Women quite often go out for the day for wage labour leaving behind children at home	115	36	31.3	29.3
Women go out as migrant labour with husband and group under contractor taking the small children with them	145	58	40.0	47.2
<b>Total</b>	<b>600</b>	<b>123</b>	<b>100.0</b>	<b>100.0</b>

children the following data have been tabulated.

Table 12 also shows that there is a strong relation between women's work involvement and child's health status. It shows that while mothers are out in work for a longer duration leaving behind children at home the act reveals negative impact on health of children. But though the mothers take their children with them when they migrate to other place for a few months for work the health of children gets affected due to the reason stated elsewhere in this chapter.

### 3.7 Cash In-flow and Child Health

Table 13 shows the sources of cash in-flow among the selected households and the range of cash in-flow. Along with the table shows how the numbers of malnourished children are distributed across these various categories of household. On the basis of the data shown in the table presence of malnourished children in each of these categories have been tabulate. It is revealed that nearly 21 percent of total 600 selected children from the same number of household were found to be malnourished to different grades.

While we look at the table, it becomes evident that 87 percent of the malnourished children are found in the group of household whose annual cash in-flow is between 12 to 18 thousand rupees.

Towards lower income group the number of malnourished children decreases gradually. There is negligible number of malnourished in the income range higher than rupees 18 thousand per annum. This indicates that higher cash in-flow does not assure good health status for the children as there are other factors responsible for this issue.

While we combine the two factors, the income range and mode of income, we see that higher earning is not always associated with better health status of children and it is seen that while wage labour being the mode of their primary income source the number of malnourished shoots up. This trend somewhat comes down when wage earning is supplemented by earning from agro-products. This may be due to the fact that the involvement in wage earning is not so aggressive and total. The absence of one of the parents, preferably the mother from the wage earning might have influence the trend to scale down the malnourishment.

### 3.8 General Perception About Child's Health Among the Tribal People

From the study it is revealed that the tribal people in general have some sort of inherent perceptions about health and well-being of children. It has been found that these perceptions

**Table 13: Cash in-flow and Source of income among the tribal people**

S. No.	Source of cash-inflow		Number of families in following range of per annum cash in-flow (in rupees)						Total HH (%)	No. of malnourished children	% Total and through sources
	Primary	Secondary	<3600	<6000	<12000	<18000	<24000	>24000			
1	Wage-labour	Misce-llaneous	9 (5)	27 (15)	39 (21)	107 (58)	4 (2)	0	186 (31)	74	60.0 (40)
2	Wage-labour	Agro-products	13 (20)	21 (33)	11 (17)	19 (30)	0	0	64 (11)	15	12.0 (24)
3	Agro-products	Misce-llaneous	24 (36)	19 (28)	13 (19)	11 (16)	0	0	67 (11)	11	9.0 (16)
4	Agro-products	Business etc	17 (18)	28 (29)	26 (27)	16 (17)	9 (9)	0	96 (16)	9	7.0 (9)
5	Agro-products	Wage-labour	3 (4)	7 (10)	30 (41)	26 (36)	7 (10)	0	73 (12)	11	9.0 (15)
6	Service	-	0	0	7 (10)	17 (25)	35 (51)	10 (14)	69 (12)	3	2.0 (4)
7	Service	Agro-products	0	0	0	8 (18)	11 (24)	26 (58)	45 (8)	0	0.0 (0.0)
Total Household			66	102	126	204	66	36	600 (100)	-	-
Number of Malnourished Children <4yrs (N= 600)			4	9	21	87	1	1	-	123	21.0
Percentage through cash in-flow			6.0	9.0	17.0	43.0	2.0	3.0	-	21.0	

have a lot of bearing on the nature of care taken and concern having over children's health. Some of such perceptions are as follows:

- *Children are the gift of god, and god has written their faith which is unchangeable.*
- *The children have enough time left to come to eat and enjoy good things including food etc. Rather, it is the older people who should enjoy with good food.*
- *Children should grow-up with the nature — in mud and dust, in sun and rain etc, so that they develop the power to resist all odds to come.*
- *Children would grow-up with their own destiny and enjoy the life already set by the god who created them. Thus parents and no other can alter it. Therefore, one should not think much about their future.*
- *All seedlings may not grow into a good crop. Many of them may die in due course. Likewise not all children would survive with good health.*

It is quite clear that such inherent perceptions have direct negative impact on child's health. This is because the traditional belief system on health and diseases, the health-seeking behaviour of the tribal people and changing social and physical environment surrounding them together makes a gamut of situation where these perceptions gets a favourable conditions to proliferate effecting the health of children grossly.

#### 4. CONCLUSION

The study has shown that the concept of health and health-care is intertwined with several factors among tribal population. This is not different among the tribal people of Maharashtra too. Besides physical and economic constraints that tribal people face in their day-to-day life, it is the traditional ideologies that many a time act as determining factors in health and health seeking behaviour of the people.

Prevalence of malnutrition and consequent health hazards among tribal children has been universally accepted by now. But, till recently, malnutrition and related diseases were viewed separately ignoring the unavoidable cause-effect relationship among them. Media has played a vital role in bringing to forth the widespread cases of malnutrition in tribal dominated areas of the state. It is also worth noting that welfare measures in the form of grants in cash and kind are pouring

in, in the affected areas. Schemes like supply of supplementary nutritious food; cereals etc. have been distributed by different means. Financial assistance has been offered to the affected families as well as to the entire localities. But the problem recurs again and again. The most disturbing question thus springs up as to why these groups of people, who have their age-old experience of self-sufficiency and life-ways and independent social control system, have become dependent on non-traditional domain to save their children's life, and to push their life up? Why has the age-old traditional knowledge become a failure in their present situation? Who is to be blamed for such a condition?

It was found that in this region malnutrition death was not a phenomenon unknown to the tribal people before. But, as had been reported, such incidents were not known to be so wide-spread. Natural calamities followed by crop failure and lost of edible vegetation etc. preceded such incidents of child death due to malnutrition in the past.

The answer to the questions set above may lie in the following observation, which was made during the study.

The tribal people have lost their right to access to forest and eventually the access to the forest produces which was once their main source of natural nutrients – fruits, green shoots, tubers etc. Moreover, forest has been degraded due to several otherwise avoidable reasons for which it no longer remained the source of livelihood, as it was to be. The tribal societies could not change their life-ways as perfectly as required to adjust with the changing situations. Land resources could not be replicated as was happened to be in the past when tribal people were free to choose their plot of land in forest to grow food grains. Thus restriction to forestland and increasing population pressure brought the havoc in their dietary composition and also economic life. The study shows that the land holding pattern of tribal people is not promising at all. Nearly 66% of the tribal people have less than 2 acres of land to grow crops. Eventually this has forced them to go out for daily wages and even to migrate to distant places. Seasonal migration has shown a relation with health and nutritional status of the tribal children as suggested in the study. Decrease in land and forest resources compounding with the lack of entrepreneurial skills and capabilities, the tribal people, in most cases, turned into wage

earners, either as casual labour or seasonal migrant wage earners under labour contractors. The tribal people, who were once self-sufficient in every front of their life simply converted into an entity dependent of job providers and money lenders etc for their livelihood.

These categorical changes in their socio-economic front have made them vulnerable to different kind of harsh situation. A breakdown in traditional life-ways has exposed them to an alien situation. They are found to cope in a non-traditional domain with a traditional weapon (life-ways), which, very often, failed miserably amounting in health hazards and socio-economic disorganization in tribal societies.

Female literacy and subsequent awareness to several health and nutritional aspects of life is one of the key factors for healthy life-ways for all human societies. But it has been seen that the female literacy rate is very low in the selected tribal areas. Thus, health related awareness programmes have been unable to create expected environment among them.

Cultivation has been a major primary source of livelihood for the people under study. The people are seen lack of skill for other works. Lack of land resources have made them vulnerable towards poverty and its consequences. A good many of them, thus, converted into primarily waged labourer and seasonal cultivators as secondary source of livelihood. It was found that wage labour at distant places has direct bearing on child's health and nutritional status. It was found that in average nearly 33% of the tribal families migrate to different places in search of wage labour.

It has been accepted that early age marriage has direct bearing on child's health. Data show that tribal girls get married at a very young age. As many as 80% of the tribal girls got married within the age of 17 years. The percentile table shows a positive relation between age at marriage and number of malnourished children. Next, gap period between two births was remarkably narrow among the tribal women. Data show that 31% of women have only 1 year natural gap between two births and they have 53% of total malnourished children. In case of the 48% mothers having 2 years of natural gaps between two births, have 38% of total malnourished children.

As has been mentioned elsewhere in the report, the tribal people have their own views and perceptions about diseases and ailments.

Accordingly, they follow their own line of health care practices. Certain taboos during pregnancy and child-birth, preference of magico-religious treatment etc. have negative effect on health status of tribal mothers and children.

Food grain availability in the household from their own cultivation also shows some effect on child's nutritional status. Data show that only 17% of the selected families subsist on own produces for the whole year. Rest of the families had to depend on PDS for food grains. It has been revealed that as many as 61 children out of total 123 were found malnourished among the families who subsist on own produces for a maximum of 3 months time.

Mother's work role and child's health has been seen related to certain extent in the study. Women, who go out as migrant labourer and having children have negative impact on child's health. Nearly 48% of the malnourished children were seen in this category followed by those children whose mothers leave them behind at home for the day and go for wage earning. Again, contrary to the perception that higher cash inflow would assure child's good health, data show that in some higher income group number of malnourished children were high. This is because; involvement of both parents in wage labour increases the cash inflow at the cost of child's health. On the other hand, primary cultivators do not earn much cash, but can take care of their children resulting in good health of them.

On the basis of the study some probable and needful measures can be forwarded to make tribal people's life better. These are as follows:

EGS programme must be planned and implemented in tribal villages or localities in such a way that the end product of such work comes up as some meaningful (useful) infrastructure in those villages from where income can be generated in near future. Such work may include the plantation of plants having immediate economic value and having access to the people concerned.

Anganwadi centers may be made a responsibility of village welfare bodies with every woman in the village being its active member. The principal care-taker of the Anganwadi be the accountable person for the welfare of the entire village with certain authority and power to question all other entity involved in village welfare activities, including health aspects.

For short-term measures the labour contractors may be made responsible to provide proper

accommodation for migrating tribal labourers and their children with proper child care facilities and medical assistance. There must be a mechanism to monitor whether the said responsibilities are met or not, and in case of any defiance the person must be answerable to the court of law.

The village welfare body must have the power and authority to know the detailed of health status of the migrating people at the time of exit from the village and entry into the village.

The care taker of the village, or the head of the village, must be equipped with some preliminary knowledge about health and malnutrition issues and be responsible as whole to the health of entire children in the village. To make it so happen proper awareness campaign must be compulsory in every village with proper follow-up.

It may be made a point that instead of putting outsiders responsible for village welfare, the insiders, the tribal people, must be made responsible and capable to handle the crisis situation.

For a long run achievement planning should be chalked out to develop entrepreneurship among the tribal youth (people), make them capable to utilize and replicate the locally available resources for the better livelihood and thus preventing them to become vulnerable and prone to socio-economic and health hazards.

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