Chapter 6

HEALTH STATUS OF THE MISHING

Health is a multi-dimensional concept that is usually measured in terms of (i) absence of physical pain, physical disability, or a condition that is likely to cause death, (ii) emotional well-being, and (iii) satisfactory social functioning. Some have advocated inclusion of the quality of an individual's physical environment in the definition of health, but this dimension is not at present included in the most widely used measures of health. There is no single-standard measurement of health status for individuals or population groups. Individual health status may be measured by an observer (e.g., a physician), who performs an examination and rates the individual along any one of several dimensions, including presence or absence of life-threatening illness, risk factors for premature death, severity of disease, and overall health. Individual health status may also be assessed by asking the person to report his/ her health perceptions in the domains of interest, such as physical functioning, emotional well-being, pain or discomfort, and overall perception of health. Although it is theoretically attractive to argue that the measurement of health should consist of the combination of both an objective component plus the individual's subjective impressions, no such measure has been developed. On the other hand, the health of an entire population is determined by aggregating data collected on individuals. The health of an individual is easier to define than the health of a population. Once the definition of optimum health for the individual is agreed upon, health status can be placed along a continuum from perfect health to death. In the absence of comprehensive or absolute measures of the health of a population, the average lifespan, the prevalence of preventable diseases or deaths, and availability of health services serve as indicators of health status. Judgments regarding the level of health of a particular population are usually made by comparing one population to another, or by studying the trends in a health indicator within a population over time. Lack of personal hygiene, poor sanitation, poor mother-child health services, poor health services management and care, benefits covered under a health contract,

health education and lack of national preventive programmes are responsible for the poor health of the Mishings as well as the other tribal communities. Problems like un-sanitary food supplies, water contamination, and poor food in-take reflect the health status of tribals. The tropical diseases like malaria and diarrhea are still widespread in their areas. Hence, better nutrition and good environmental health are the important aspects of the tribal health services. This chapter discusses the health status of the Mishing, using some of the commonly used measures population health.

Death Rate

Death rate is an indicator of health status. Death rate is the ratio of total deaths to total population in a specified community or area over a specified period of time. It is often expressed as the number of death per 1000 of the population per year. It is generally observed that the number of deaths per 1000 people can be higher for developed nations than for the less-developed despite life expectancy being higher in developed nations due to standard of health being better. This happens because developed countries typically have a completely different population age distribution, with a much higher proportion of older people due to both lower birth rate and lower mortality rate. To calculate crude death rate we need to know the number of deaths in a given population during a specific time period, and the size of the population in which the deaths occurred. For this purpose the researcher has collected the data on the number of deaths occurred from 1st May, 2010 to 31st April, 2011. With the help of the following formula the death rate is calculated for the three units of the study.

$$\text{Death Rate} = \frac{\text{Number of deaths in the population during a specified time period}}{\text{The number of persons in the population during the specified time period}} \times 1000$$

The following table shows the number of death cases from 1st May 2010 to 31st April 2011 in the two villages and Golaghat town:

Table 6.1
No. of Death Cases in Namtemera, Baghedhara & Golaghat Town
(Percentage in Parentheses)

No. of Patients									Total		
Namtemera			Baghedhara			Golaghat town					
Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
3 (60 00)	2 (40 00)	5 (100)	2 (66 67)	1 (33 33)	3 (100)	3 (75 00)	1 (25 00)	4 (100)	8 (66 67)	4 (33 33)	12 (100)

Source: Field survey conducted during 2nd May – 30th September 2011

The table shows that 12 death cases occurred from 1st May 2010 to 31st April 2011 in both the villages and Golaghat town of which 8 cases are of males and 4 of females. On the other hand, out of the three different areas the village Namtemera has the highest death cases (5) followed by Golaghat town (4) and Baghedhara (3). So the death rate for the three units of study is (12/ 2032 x 1000) 5.91. On the other hand, the death rate for the village Namtemera, Baghedhara and Golaghat town is 4.57, 5.50 and 10.18 respectively.

The following table shows the causes of death:

Table 6.2
Causes of Death in Namtemera, Baghedhara & Golaghat Town
(Percentage in Parentheses)

Type of Cause	No. of Persons									Total		
	Namtemera			Baghedhara			Golaghat town					
	M	F	Total	M	F	Total	M	F	Total	M	F	Total
Old age	-	1 (50.00)	1 (20.00)	1 (50.00)	-	1 (33.33)	2 (66.67)	-	2 (50.00)	3 (37.50)	1 (25.00)	4 (33.33)
Diarrhea	2 (66.67)	-	2 (40.00)	-	-	-	-	-	-	2 (25.00)	-	2 (16.66)
Malaria	-	-	-	1 (50.00)	-	1 (33.33)	1 (33.33)	-	1 (25.00)	2 (25.00)	-	2 (16.66)
Maternity	-	1 (50.00)	1 (20.00)	-	1 (100)	1 (33.33)	-	-	-	-	2 (50.00)	2 (16.66)
Death at birth	1 (33.33)	-	1 (20.00)	-	-	-	-	1 (100)	1 (25.00)	1 (12.50)	1 (25.00)	2 (16.66)
Total	3 (100)	2 (100)	5 (100)	2 (100)	1 (100)	3 (100)	3 (100)	1 (100)	4 (100)	8 (100)	4 (100)	12 (100)

Source: Field survey conducted during 2nd May – 30th September 2011

The table shows that out of the total death cases from 1st May 2010 to 31st April 2011 maximum death cases (33.33%) occurred due to the old age. The table also shows that malaria is also an important cause of death as out of the total death cases (16.66%) occurred due to it. Similarly, maternal mortality and death at birth are also high as out of the total death cases, 16.66% death cases each occurred due these causes respectively. The table also reveals that the number of death cases occurring due to old age is higher in Golaghat town. On the other hand, no death case due to diarrhea is found in Baghedhara and Golaghat town. Of course, there is no case of death due to malaria in Namtemera, whereas it is an important cause of death in Baghedhara and Golaghat town. This is because of the fact that the village Namtemera is malaria and diarrhea prone village. So, the concerned governmental authority takes some programmes such as distribution of DDT among the families, organization of free health camps in the village, etc. Besides, the district health department also distributes medicated net to the households of Namtemera. But these types of activities are not taken for the village Baghedhara and Golaghat town. On the other hand, maternity and death at birth are two considerable causes for Namtemera and Golaghat town.

Morbidity Rate

Health is defined not only by the length of life but also its quality. How many years a person lives, and how many years of life have been lost, carry different meaning depending on the texture and context of one's life: physical and mental well-being and suffering, productivity, hopes and plans, and the family and social environment. Therefore, morbidity is also analysed along with mortality in the people. Morbidity is a diseased state, disability, or poor health due to any cause. The term may be used to refer to the existence of any form of disease, or to the degree that the health condition affects the patient. Morbidity is an incidence of ill health. It is measured in various ways, often by the probability that a randomly selected individual in a population at some date and location would become seriously ill in some period of time. The following table shows the number of persons suffering from different diseases during the period from 1st May 2010 to 31st April 2011in the two villages and Golaghat town:

Table 6.3
No. of Persons Suffering from Disease in Namtemera, Baghedhara & Golaghat Town
(Percentage in Parentheses)

Status	No. of Persons									Total		
	Namtemera			Baghedhara			Golaghat town					
	M	F	Total	M	F	Total	M	F	Total	M	F	Total
Suffered	31 (5.23)	42 (8.38)	73 (6.67)	11 (3.99)	13 (4.83)	24 (4.40)	17 (7.76)	19 (10.92)	36 (9.16)	59 (5.42)	74 (7.84)	133 (6.55)
Not suffered	562 (94.77)	459 (91.62),	1021 (93.33)	265 (96.01)	256 (95.17)	521 (95.60)	202 (92.24)	155 (89.08)	357 (90.84)	1029 (94.58)	870 (92.16)	1899 (93.45)
Total	593 (100)	501 (100)	1094 (100)	276 (100)	269 (100)	545 (100)	219 (100)	174 (100)	393 (100)	1088 (100)	944 (100)	2032 (100)

Source: Field survey conducted during 2nd May – 30th September 2011

The table shows that out of the total population (2032) in both the villages and Golaghat town, 6.55%* persons were found to have suffered from various diseases. It also reveals that the number of female sufferers was more than the male. Further, the number of persons suffered from various diseases is more in Namtemera (73), whereas only 24 and 36 persons suffered from different diseases in Baghedhara and Golaghat town respectively. Likewise, the number of female suffered from various diseases in Namtemera, Baghedhara and Golaghat town is more than the number of males. It shows the vulnerability of women to diseases.

The following table shows the number of persons suffering from various diseases in the two villages and the Golaghat town:

Table 6.4
Type of Disease in Namtemera, Baghedhara & Golaghat Town
(Percentage in Parentheses)

Type of Disease	No. of Persons									Total		
	Namtemera			Baghedhara			Golaghat town					
	M	F	Total	M	F	Total	M	F	Total	M	F	Total
Malaria	2 (6.45)	-	2 (2.74)	1 (9.09)	-	1 (4.17)	-	-	-	3 (5.09)	-	3 (2.26)
Diarrhea	5 (16.13)	6 (14.29)	11 (15.06)	-	-	-	-	-	-	5 (8.48)	6 (8.11)	11 (8.27)
General fever	9 (29.03)	10 (23.81)	19 (26.03)	3 (27.27)	5 (38.46)	8 (33.33)	3 (17.65)	5 (26.31)	8 (22.22)	15 (25.42)	20 (27.03)	35 (26.32)
Body ache	2 (6.45)	5 (11.90)	7 (9.59)	4 (36.36)	3 (23.08)	7 (29.17)	7 (41.18)	8 (42.10)	15 (41.67)	13 (22.03)	16 (21.62)	29 (21.80)
Cough	6 (19.36)	7 16.67)	13 (17.81)	1 (9.09)	1 (7.69)	2 (8.33)	1 (5.88)	2 (10.53)	3 (8.33)	8 (13.56)	10 (13.51)	18 (13.53)
Dysentery	2 (6.45)	2 (4.76)	4 (5.48)	-	-	-	-	-	-	2 (3.39)	2 (2.70)	4 (3.01)
High Blood Pressure	4 (12.90)	10 (23.81)	14 (19.18)	1 (9.09)	2 (15.38)	3 (12.50)	4 (23.53)	2 (10.53)	6 (16.67)	9 (15.25)	14 (18.92)	23 (17.29)
Stomach trouble	1 (3.23)	2 (4.76)	3 (4.11)	1 (9.09)	2 (15.39)	3 (12.50)	2 (11.76)	2 (10.53)	4 (11.11)	4 (6.78)	6 (8.11)	10 (7.52)
Total	31 (100)	42 (100)	73 (100)	11 (100)	13 (100)	24 (100)	17 (100)	19 (100)	36 (100)	59 (100)	74 (100)	133 (100)

Source: Field survey conducted during 2nd May – 30th September 2011

The above table reveals that of the 133 persons who suffered from various diseases, the largest number (26.32%) suffered from general fever, followed by body-ache (21.80%), high blood pressure (17.29%), cough (13.53%), diarrhea (8.27%), stomach trouble (7.52%) and dysentery (3.01%). Of the total persons (73) suffered from various diseases in Namtemera, the largest number suffered from general fever (26.03%), followed by high blood pressure (19.18%), cough (17.81%), diarrhea (15.06%). It also shows that the number of females is greater than the males among the sufferers in the village. On the other hand, out of the total persons (24) suffering from

various diseases in Baghedhara (33.33%) persons suffered from general fever, followed by body-ache (29.17%), high blood pressure and stomach trouble (12.5%) and malaria (4.17%). Like Namtemera, the number of the female sufferers is also greater than the males in Baghedhara also. Of the total persons suffering from diseases in Golaghat town (36), the largest number suffered from body ache (41.67%), followed by general fever (22.22%), high blood pressure (17.65%), stomach trouble (11.11%) and cough (8.33%). The number of the female sufferers is also high in Golaghat town than the males. The table also reveals that none suffered from diarrhea and dysentery in Baghedhara and Golaghat town. Only one person was found suffering from malaria in Baghedhara. This reveals that since the village Namtemera is surrounded by two rivers, inhabitants of the village are vulnerable to water borne diseases.

It is also observed in the study that the patients generally did not take necessary bed rest during illness and at the same time their work output reduced significantly. They took rest only when they were seriously ill. During their sickness period they tried to take certain precautions for the first two to three days such as keeping check on their diet and taking home based remedy. If the illness persisted after having taken home based remedy, they visited the local medical institutions.

The following table shows the number of patients who have taken treatment for their diseases. It also indicates the level of their health conciousness.

Table 6.5
Patients Treatment Status in Namtemera, Baghedhara & Golaghat Town
(Percentage in Parentheses)

Status	No. of Persons									Total		
	Namtemera			Baghedhara			Golaghat town					
	M	F	Total	M	F	Total	M	F	Total	M	F	Total
Treatment taken	20 (64.52)	29 (69.05)	49 (67.12)	7 (63.64)	10 (76.92)	17 (70.83)	11 (64.71)	10 (52.63)	21 (58.33)	38 (64.41)	49 (66.22)	87 (65.41)
Treatment not taken	11 (35.48)	13 (30.95)	24 (32.88)	4 (36.36)	3 (23.08)	7 (29.17)	6 (35.29)	9 (47.37)	15 (41.67)	21 (35.59)	25 (33.78)	46 (34.59)
Total	31 (100)	42 (100)	73 (100)	11 (100)	13 (100)	24 (100)	17 (100)	19 (100)	36 (100)	59 (100)	74 (100)	133 (100)

Source: Field survey conducted during 2nd May – 30th September 2011

The table reveals that out of the total persons (133) of both the gender suffering from various diseases, 65.41% patients have taken treatment and the rest (34.59%) patients have not taken treatment for their diseases. The number of females is more than that of the males who have taken treatment for their diseases. This may indicate that females are more conscious than the males in case of treatment of diseases. The number of the females who have taken treatment for their diseases is also grater (69.05%) than the males (64.52%) in Namtemera. Likewise, the number of females (70.83%) in Baghedhara is higher than the males. On the other hand, in case of Golaghat town the number of males (64.71%) who have taken treatment for their diseases is greater than the females (52.63%). Thus, we may say that the level of health consciousness among the females in both the villages is higher than that of the males in Golaghat town.

The following table shows the nature of treatment taken by the patients:

Table 6.6
Type of Treatment Taken by Patients in Namtemera, Baghedhara & Golaghat Town
(Percentage in Parentheses)

Type of Treatment	No. of Persons									Total		
	Namtemera			Baghedhara			Golaghat town					
	M	F	Total	M	F	Total	M	F	Total	M	F	Total
Allopathic	12 (60.00)	14 (48.28)	26 (53.06)	2 (28.57)	4 (40.00)	6 (35.30)	6 (54.55)	4 (40.00)	10 (47.62)	20 (52.64)	22 (44.90)	42 (48.28)
Homeopathy	1 (5.00)	3 (10.34)	4 (8.16)	-	3 (30.00)	3 (17.65)	2 (18.18)	2 (20.00)	4 (19.05)	3 (7.89)	8 (16.33)	11 (12.64)
Ayurvedic	4 (20.00)	5 (17.24)	9 (18.37)	2 (28.57)	-	2 (11.76)	2 (18.18)	1 (10.00)	3 (14.29)	8 (21.05)	6 (12.24)	14 (16.09)
Traditional	-	2 (6.90)	2 (4.08)	2 (28.57)	2 (20.00)	4 (23.53)	-	1 (10.00)	1 (4.76)	2 (5.26)	5 (10.20)	7 (8.05)
Herbal	3 (15.00)	5 (17.24)	8 (16.33)	1 (14.29)	1 (10.00)	2 (11.76)	1 (9.09)	2 (20.00)	3 (14.28)	5 (13.16)	8 (16.33)	13 (14.94)
Total	20 (100)	29 (100)	49 (100)	7 (100)	10 (100)	17 (100)	11 (100)	10 (100)	21 (100)	38 (100)	49 (100)	87 (100)

Source: Field survey conducted during 2nd May – 30th September 2011

The table shows that allopathic treatment is the most preferred type of treatment for the patients of Namtemera, Baghedhara and Golaghat town as out of the 87 patients 48.28% patients have taken allopathic treatment, followed by ayurvedic (16.09%), herbal (14.94%), homeopathic (12.64%) and traditional (8.05%). In Namtemera, Baghedhara and Golaghat town 53.06%, 54.55% and 47.62% patients have preferred allopathic treatment respectively. In Namtemera the second most preferred treatment is ayurvedic, as out of the total patients who have been treated, 18.37% have taken this type of treatment, followed by herbal (16.33%) and homeopathic (8.16%). But only 4.08% patients have taken traditional treatment. In Baghedhara, traditional treatment is the second most preferred treatment. Of the total patients who have taken treatment in Baghedhara, 23.53% patients have been treated by traditional method of treatment, followed by homeopathy (17.65%). On the other hand, in Golaghat town homeopathy and herbal treatments are equally (20% each) preferred by the patients after allopathic treatment. It indicates that the traditional tribal treatment is on decline among the Mishing.

The following table shows the type of hospitals chosen by the patients who have taken treatment under allopathic treatment:

Table 6.7
Hospitals Chosen by the Patient in Namtemera, Baghedhara & Golaghat Town
(Percentage in Parentheses)

Type of Hospitals	No. of Persons									Total		
	Namtemera			Baghedhara			Golaghat town					
	M	F	Total	M	F	Total	M	F	Total	M	F	Total
Local hospital, Muhura-mukh	4 (33.33)	5 (35.71)	9 (34.62)	-	-	-	-	-	-	4 (20.00)	5 (22.73)	9 (21.43)
CHC, Merapani	-	-	-	-	1 (25.00)	1 (16.67)	-	-	-	-	1 (4.55)	1 (2.38)
CHC, Bokakhat	3 (25.00)	2 (14.29)	5 (19.23)	-	-	-	-	-	-	3 (15.00)	2 (9.09)	5 (11.90)
Dist. Hospital Golaghat	5 (41.67)	5 (35.71)	10 (38.46)	2 (100)	1 (25.00)	3 (50.00)	3 (50.00)	4 (100)	7 (70.00)	10 (50.00)	10 (45.45)	20 (47.62)
Private hospital, Golaghat	-	2 (14.29)	2 (7.69)	-	2 (50.00)	2 (33.33)	3 (50.00)	-	3 (30.00)	3 (15.00)	4 (18.18)	7 (16.67)
Total	12 (100)	14 (100)	26 (100)	2 (100)	4 (100)	6 (100)	6 (100)	4 (100)	10 (100)	20 (100)	22 (100)	42 (100)

Source: Field survey conducted during 2nd May – 30th September 2011

The above table shows that of the total patients, who have undergone allopathic treatment, 47.62% patients come to the district hospital at Golaghat from both the villages and the town. Similarly, 35.71% patients come to their local hospitals in nearby areas and the rest (16.67%) patients come to the private hospitals at the Golaghat town. On the other hand, in Namtemera, out of the total patients who have chosen allopathic treatment, 38.46% have chosen the district hospital followed by the local hospital at Muhuramukh (34.62%), the CHC at Bokakhat (19.23%) and the private hospitals at Golaghat town (7.69%). Similarly, in Baghedhara, 50% patients have come to district hospital for treatment followed by private hospital at Golaghat (33.33%) and local hospital at Merapani (16.67%). In Golaghat town 70% of the total patients have come to

the district hospital and the rest (30%) patients have come to the private nursing homes at Golaghat town.

According to the Mishing people of both the villages and Golaghat town there are some causes for choosing different hospitals. If the disease is not serious they come to their local hospitals. On the other hand, due to the higher qualification of doctors they come to the CHCs. Besides, these CHCs are situated in the nearby areas and some basic facilities are also available there. Most of the patients go to the district hospitals where specialists in different departments are available, apart from some modern facilities such as X-Ray, laboratory, free medicines. While they come to private nursing homes for better care and treatment.

Infant Mortality

The infant mortality rate correlates very strongly with the state of health and is among the best predictors of health. IMR is therefore much useful indicator of a country's level of health or development. Infant mortality rate (IMR) is the number of deaths of children less than one year of age per 1000 live births. The rate in a given region, therefore, is the total number of newborns dying under one year of age divided by the total number of live births during the year, multiplied by 1,000. There are various forms of infant mortality; viz., neonatal or newborn death is mortality occurring within 28 days postpartum. Neonatal death is often attributed to inadequate access to basic medical care during and after the mother delivers her newborn. It accounts for 40-60% of infant mortality in developing countries. Post-neonatal infant mortality occurs when the child is 29 days to less than one year old. Biggest contributors to post-neonatal deaths are malnutrition, infectious disease and home environment. Perinatal mortality occurs in the late fetal period, which typically occurs after 28 weeks' gestation and the first week postpartum (Reidpath and Allotey 2003).

It is found that out of the total infant (children less than one year of age), i.e., 110 in the two villages, Namtemera and Baghedhara, and the Golaghat town during the period from 1st May 2010 to 31st April 2011, 4 children were found dead at birth. So, the infant mortality rate for that period is (4/ 110 x 1000) 36.36. It reveals that the infant

mortality rate is high in the study areas. It indicates the lower status of people in their society.

Maternal Mortality

According to the World Health Organization, maternal death is defined as the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes" (CAHR 2008). Generally, there is a distinction between a direct maternal death, that is, the result of a complication of the pregnancy, delivery, or management of the two, and an indirect maternal death that is a pregnancy-related death in a patient with a pre-existing or newly developed health problem unrelated to pregnancy. Fatalities during but unrelated to a pregnancy are termed accidental, incidental, or non-obstetrical maternal deaths. It is found that 2 (two) women out of 40 live births have died due to pregnancy related causes from 1st May 2010 to 31st April 2011. So, it reveals that the maternal mortality rate is not so high in their society.

Infant Health

Infancy is generally the period from birth until the age of two years. It is a time of a lot of growth and change for children and families. The cognitive and physical development of infants and children is influenced by the health, nutrition and behaviors of their mothers during pregnancy and early childhood. Breast milk is widely acknowledged to be the most complete form of nutrition for most infants, with a range of benefits for their health, growth, immunity, and development. Furthermore, children reared in safe and nurturing families and neighborhoods, free from maltreatment and other social adversities, are more likely to have better outcomes as adults.

Maternal and Child Health Care Practices

Child bearing imposes additional health needs and problems on women - physically, psychologically and socially. Maternal mortality was reported to be high among various tribal groups. The chief causes of maternal mortality were found to be unhygienic and primitive practices for parturition. From the inception of pregnancy to its termination, no specific nutritious diet is consumed by women. On the other hand, it is

found that some pregnant women, especially in Namtemera and Baghedhara villages, reduced their food intake because of simple fear of recurrent vomiting and also to ensure that the baby may remain small and the delivery may be easier. The consumption of iron, calcium and vitamins during pregnancy is poor. The habit of taking alcohol (*Apong*) during pregnancy has been found to be usual and almost all of them are to continue their regular activities, including hard labour during advanced pregnancy stage. More than 90 per cent of deliveries are conducted at home attended by elderly women of the household. No specific precautions are taken at the time of conducting deliveries which resulted in an increased susceptibility to various infections. Services of paramedical staff are sought only in difficult labour cases.

The following table shows the habit of taking nutritious food and other items by the pregnant women in both the villages and Golaghat town:

Table 6.8
Consumption of Nutritious Foods and Other Items by Pregnant Women
In Namtemera, Baghedhara & Golaghat Town
(Percentage in Parentheses)

Items	No. of Pregnant Women									Total		
	Namtemera			Baghedhara			Golaghat town					
	Yes	No	Total	Yes	No	Total	Yes	No	Total	Yes	No	Total
Nutritious food	19 (90.48)	2 (9.52)	21 (100)	11 (78.57)	3 (21.43)	14 (100)	7 (77.78)	2 (22.22)	9 (100)	37 (84.09)	7 (15.91)	44 (100)
Iron	9 (42.86)	12 (57.14)	21 (100)	5 (35.71)	9 (64.29)	14 (100)	6 (66.67)	3 (33.33)	9 (100)	20 (45.45)	24 (54.56)	44 (100)
Calcium	8 (38.10)	13 (61.90)	21 (100)	5 (35.71)	9 (64.29)	14 (100)	6 (66.67)	3 (33.33)	9 (100)	19 (43.18)	25 (56.82)	44 (100)
Vitamin	11 (52.38)	10 (47.62)	21 (100)	6 (42.86)	8 (57.14)	14 (100)	5 (55.56)	4 (44.44)	9 (100)	22 (50.00)	22 (50.00)	44 (100)

Source: Field survey conducted during 2nd May – 30th September 2011

The above table shows that out of 44 pregnant women of both the villages and the Golaghat town, 84.09% take nutritious food such as meat, fish and egg. Similarly, 50% of them take vitamin prescribed by doctors. On the other hand, only 45.45% and

43.18% women take iron and calcium respectively. In Namtemera, though most of pregnant women (90.48%) take above mentioned nutritious food, only 42.86% pregnant women take iron tablets and 38.10% of them take calcium. Of course, 52.38% of them take vitamin tablets. Similarly, the number of pregnant women taking nutritious foods in Baghedhara is also high, i.e., 78.57%. Of 14 pregnant women of this village only 35.71% take iron and calcium tablets and 42.86% women take vitamin tablets. On the other hand, the number of pregnant Mishing women taking nutritious foods, iron and calcium tablets is high in the Golaghat town. Of the 9 pregnant Mishing women in Golaghat town, 77.78% take nutritious food, 66.67% women take iron and calcium tablets and 55.56% of them take vitamin tablets prescribed by doctors. Thus, the above table reveals that the consciousness of pregnant women regarding taking nutritious food and other such items is much better in the town than that of the two other villages.

As far as child care is concerned, all the mothers adopt breast-feeding to their babies. But most of them adopt harmful practices like discarding of colostrums, giving prelacteal feeds, delayed initiation of breast-feeding and delayed introduction of complementary feeds. Vaccination and immunization of infants and children have been found inadequate. In addition to these, extremes of magico-religious beliefs and taboos tend to aggravate the problems.

The following table shows the data on immunization and vaccination of children of under 12 years:

Table 6.9
Vaccination of Children
(Percentage in Parentheses)

Age group	Vaccinated												Not Vaccinated											
	Namtemera			Baghedhara			Town			Total			Namtemera			Baghedhara			Town			Total		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Neonatal (0-30 days)	5 (10 42)	6 (12 00)	11 (11 22)	6 (23 08)	2 (11 76)	8 (18 60)	7 (29 17)	3 (15 00)	10 (22 73)	18 (18 37)	11 (12 64)	29 (15 68)	2 (3 23)	4 (8 70)	6 (5 56)	3 (12 00)	2 (8 70)	5 (10 42)	-	-	-	5 (5 00)	6 (7 59)	11 (6 15)
Infant (0-12 months)	11 (22 92)	9 (18 00)	20 (20 41)	7 (26 92)	3 (17 65)	10 (23 26)	8 (33 33)	5 (25 00)	13 (29 55)	26 (26 53)	17 (19 54)	43 (23 24)	7 (11 29)	6 (13 04)	13 (12 04)	6 (24 00)	4 (17 39)	10 (20 83)	3 (23 08)	1 (10 00)	4 (17 39)	16 (16 00)	11 (13 92)	27 (15 08)
Toddler (1-3 years)	19 (39 58)	21 (42 00)	40 (40 82)	7 (26 92)	5 (29 41)	12 (27 91)	5 (20 83)	7 (35 00)	12 (27 27)	31 (31 63)	33 (37 93)	64 (34 59)	13 (20 97)	18 (39 13)	31 (28 70)	8 (32 00)	7 (30 43)	15 (31 25)	3 (23 08)	3 (30 00)	6 (26 09)	24 (24 00)	28 (35 44)	52 (29 05)
Primary school age (4-12 years)	13 (27 08)	14 (28 00)	27 (27 55)	6 (23 08)	7 (41 18)	13 (30 23)	4 (16 67)	5 (25 00)	9 (20 45)	23 (23 47)	26 (29 89)	49 (26 49)	40 (64 52)	18 (39 13)	58 (53 70)	8 (32 00)	10 (43 48)	18 (37 5)	7 (53 85)	6 (60 00)	13 (56 52)	55 (55 00)	34 (43 04)	89 (49 72)
Total	48 (100)	50 (100)	98 (100)	26 (100)	17 (100)	43 (100)	24 (100)	20 (100)	44 (100)	98 (100)	87 (100)	185 (100)	62 (100)	46 (100)	108 (100)	25 (100)	25 (100)	48 (100)	13 (100)	10 (100)	23 (100)	100 (100)	79 (100)	179 (100)

Source: Field survey conducted during 2nd May – 30th September 2011

The above table shows that of the 364 children of under 12 years of age in both the villages and the Golaghat town, 185 children have been vaccinated and the rest 179 children have not been vaccinated by their parents or any other elder family member. In Namtemera 98 children have been vaccinated of which 48 are male and the rest (50) are female.

On the other hand, 108 children have not been vaccinated of which 62 are male and 46 are female.

In Baghedhara 43 children have been vaccinated out of which 26 are male and 17 are female. Of course, more than 50% children of under 12 years of age have not been vaccinated in Baghedhara. The table shows that of the total children of that category 48 children have not been vaccinated: 25 males and 23 females. This is because of the superstitions prevalent in their society. So, they believe it as an unhealthy practice. However, in the Golaghat town the number of vaccinated children is more in comparison to that in the two villages. Of the total children of that particular age group in the town, 44 children have been vaccinated: 24 males and 20 females. On the other hand, the number of children who have not been vaccinated in Golaghat town is 23: 13 males and 10 females.

Communicable Diseases

Communicable diseases are those that are transmissible from one person, or animal, to another. The disease may spread directly, via another species (vector) or via the environment. Illness will arise when the infectious agent invades the host, or sometimes as a result of toxics produced by bacteria in food. The spread of disease through a population is determined by environmental and social conditions which favour the infectious agent, and the relative immunity of the population. An outbreak of infection could endanger the operation and safety of the shipshape. An understanding of the disease and the measures necessary for its containment and management is therefore important. Communicable diseases remain a frequent cause of illness in the human population. Viruses, bacteria and fungi commonly pass from one person to another through direct contact or contamination of inanimate objects or food. Hand washing and

adequate personal hygiene practices can help prevent the spread of many communicable diseases.

The following table shows the data of measles occurred in the households of Mishing in both the villages and Golaghat town:

Table 6.10
Measles Occurred in Household in Namtemera, Baghedhara & Golaghat Town
(Percentage in Parentheses)

Status	No. of Households			Total
	Namtemera	Baghedhara	Golaghat town	
Yes	137 (90.73)	71 (89.87)	31 (55.36)	239 (83.57)
No	14 (9.27)	8 ((10.17)	25 (44.64)	47 (16.46)
Total	151 (100)	79 (100)	56 (100)	286 (100)

Source: Field survey conducted during 2nd May – 30th September 2011

The above table shows that of the total households, measles occurred in 239 (83.57%) households. The table also shows that out of the three different areas of study the village Namtemera has the highest rate of occurring measles (90.73%), followed by Baghedhara (89.87%) and Golaghat town (55.36%). This variation of data reveals that villages are more vulnerable to measles. This is because of the physical condition of the village Namtemera. The village Namtemera is surrounded by two rivers and flood is a regular incident for this village. On the other hand, they believe that measles occurred due to supernatural causes. The spirit responsible for this is known as *Aie* in their society. Therefore, traditional method of treatment is the only way to cure from it. Going to allopathic treatment is a sign of disrespect to the spirit and so, no household goes for this type of treatment when this particular disease occurs.

Sex Ratio

The sex ratio (or ratio of females per 1,000 males) is a simple indicator of gender equality and healthy society. The sex ratio of tribes is more in favour of the females than the general population. Sex ratio in Assam is higher than the national average both in terms of the absolute value and trends sex ratio. In 2001, the overall sex ratio in Assam was 935 against the national ratio 933. On the other hand, in 2011 it has increased to 954 and 940 for Assam and India respectively. The sex ratio among the major tribes was

higher than the State average. However, there is a small decline in the sex ratio among the Mishings of Namtemera and Golaghat town. Out of the total population (2032) Namtemera has a population of 1094 persons. The number of male is 593 and female is 501. Similarly, the village Baghedhara has a population of 545 persons out of which 276 are males and 269 are females. On the other hand, in the Golaghat town there are 393 persons, out of which 219 are males and 174 are females. The sex ratios are 845, 975 and 795 respectively for Namtemera, Baghedhara and Golaghat town as against 961 for Golaghat district and 954 for Assam (Census 2011). The following table shows the distribution population by gender as well as sex ratio:

Table 6.11
Sex Ratio of the Population in Namtemera, Baghedhara & Golaghat Town
(Percentage in Parentheses)

Gender	No. of Populations			Total
	Namtemera	Baghedhara	Golaghat town	
Male	593 (54.20)	276 (50.64)	219 (55.73)	1088 (53.54)
Female	501 (45.80)	269 (49.36)	174 (45.27)	944 (46.46)
Total	1094 (100)	545 (100)	393 (100)	2032 (100)
Sex Ratio	845	975	795	868

Source: Field survey conducted during 2nd May – 30th September 2011

The above table shows the distribution of population by gender. It shows that of the total population (2032), 53.54% are male and the rest (46.46%) are female. In Namtemera, out of its total population 54.20% are male and (45.80%) are female. In Baghedhara out of the total population, 50.64% are male and 49.36% are female. Similarly, in the town, out of the total Mishing population, 55.73% are male and 45.27% are female.

Thus, it reveals that the proportion of male-female distribution of the three areas is not equal. There is a vast gap in sex ratio as the number of females against per thousand males is 868 in general. The ratio is low in Namtemera, i.e., 845 and in the Golaghat town, i.e., 795 females per thousands male. This is because of patriarchal nature of the Mishing society where male members are given much importance. Of

course, the sex ratio in Baghedhara is 975. Thus, the table reveals that the sex ratio in Baghedhara is better than Namtemera and Golaghat town.

Hygienic Conditions of Living

The problem of unhygienic condition is very common in the rural as well as in tribal areas in general. Due to unhygienic conditions their children suffer from many diseases like measles, mumps, jaundice, tetanus, etc. Prevention of disease is an important part of medical care. Parents should make sure that their children receive immunization against diphtheria, German measles, measles, mumps, polio, tetanus, and whooping cough. But tribal parents are ignorant of these things. It is found that most of the households in Namtemera and Baghedhara have cattle sheds inside their houses which make their living conditions unhygienic. The following table shows the number of households which have cattle sheds inside their houses:

Table 6.12
Cattle Sheds inside the House in Namtemera, Baghedhara & Golaghat Town
(Percentage in Parentheses)

Status	No. of Households			Total
	Namtemera	Baghedhara	Golaghat town	
Yes	21 (13.91)	09 (11.39)	-	30 (10.49)
No	130 (86.09)	70 (88.61)	56 (100)	256 (89.51)
Total	151 (100)	79 (100)	56 (100)	286 (100)

Source: Field survey conducted during 2nd May – 30th September 2011

The above table shows the existence of cattle shed inside the house. The data reveal that, except Golaghat town, over 10% of the households have cattle sheds inside their houses in Namtemera and Baghedhara. It is found that of the total households of Namtemera, 13.91% households have cattle sheds inside their house whereas 11.39% households in Baghedhara have cattle shed inside their houses. Thus, it can be said that the Mishings of Golaghat town are more conscious of health and hygiene in comparison of the Mishings of Namtemera and Baghedhara.

Now major points of the discussion are recapitulated here:

1. Death rate is also a measure of the status of health. 12 death cases occurred from 1st May 2010 to 31st April 2011 in both the villages and the Golaghat town, out of which 8 cases are of males and 4 of females. On the other hand, out of the three different

areas the village Namtemera has the highest death cases (5), followed by Golaghat town (4) and Baghedhara (3). So the death rate for the three units of study is 5.91. On the other hand, the death rate for the village Namtemera, Baghedhara and Golaghat town is 4.57, 5.50 and 10.18 respectively.

2. Out of the total death cases from 1st May 2010 to 31st April 2011, maximum death cases (33.33%) occurred due to the old age. Malaria is also an important cause of death as out of the total death cases (16.66%) occurred due to it. Similarly, maternal mortality and death at birth are also high as out of the total death cases 16.66% and 16.66% death cases occurred due to these respectively. The number of death cases due to old age is found higher in Golaghat town. On the other hand, the number of death case due to diarrhea is absent in Baghedhara and Golaghat town. Of course, there is no any case of death due to malaria in Namtemera village, whereas it an important cause of death in Baghedhara and Golaghat town. Besides, maternity and death at birth are two considerable causes for Namtemera and Golaghat town.

3. Morbidity is also a measure of health status which refers to a diseased state, disability, or poor health due to any cause. The term may be used to refer to the existence of any form of disease, or to the degree that the health condition affects the patient. Morbidity is an incidence of ill health. During the period from 1st May 2010 to 31st April 2011 in the two villages and the Golaghat town, it is found that out of the total population (2032) only 6.55% persons suffered from various diseases. So, it can be said that the morbidity rate in both the villages as well as Golaghat town is not high.

On the other hand, the number of persons who suffered from various diseases is more in the village Namtemera (73), whereas only 24 and 36 persons suffered from different diseases in Baghedhara and Golaghat town respectively. Likewise, the number of female suffered from various diseases in Namtemera, Baghedhara and Golaghat town is more than the number of males. It shows the vulnerability of women to suffer from disease.

4. Out of the total persons, i.e., 133 who suffered from various diseases the largest number 26.32% suffers from general fever, followed by body ache (21.80%), high blood pressure (17.29%), cough (13.53%), diarrhea (8.27%), stomach trouble

(7.52%) and dysentery (3.01%). Of the total persons (73) suffered from various diseases in Namtemera the largest number suffered from general fever (26.03%), followed by high blood pressure (19.18%), cough (17.81%), diarrhea (15.06%). Thus, the number of female sufferers is greater than the males in the village. Of the total (24) sufferers in Baghedhara, 33.33% persons suffered from general fever, followed by body ache (29.17%), high blood pressure and stomach trouble (12.5%) and malaria (4.17%). Like Namtemera the number of the female sufferers is also greater than the males in Baghedhara also. Of the total persons suffering from diseases in Golaghat town (36), the largest number suffered from body ache (41.67%), followed by general fever (22.22%), high blood pressure (17.65%), stomach trouble (11.11%) and cough (8.33%). The number of the female sufferers is also higher in Golaghat town than the males. Besides, there is no patient of diarrhea and dysentery in Baghedhara and in the Golaghat town.

5. Allopathic treatment is the most preferred type of treatment for the patients of Namtemera, Baghedhara and Golaghat town as out of the 87 patients, 48.28% patients have taken allopathic treatment, followed by ayurvedic (16.09%), herbal (14.94%), homeopathic (12.64%) and traditional (8.05%) treatment. In Namtemera, Baghedhara and Golaghat town 53.06%, 54.55% and 47.62% patients have preferred allopathic treatment respectively.

6. The infant mortality rate correlates very strongly with the state of health and is among the best predictors of health. IMR is therefore much useful indicator of a country's level of health or development. It is found that out of the total infant (children less than one year of age), i.e., 110 in the two villages, Namtemera and Baghedhara, and the Golaghat town during the period from 1st May 2010 to 31st April 2011, 4 children were found to be dead at birth. So, the infant mortality rate for that period is 36.36. It reveals that the infant mortality rate is high in the study areas. It indicates the lower health status of people in their society.

7. Maternal death is defined as the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy. It is also a measure of status of health of a certain population. It is found that 2 women out of 40 live births have died

due to pregnancy-related causes from 1st May 2010 to 31st April 2011. So, it reveals that the maternal mortality rate is not so high in their society.

8. Maternal and child health care practices are also an important measures of health status. Child bearing imposes additional health needs and problems on women - physically, psychologically and socially. It is found that some pregnant women, especially in Namtemera and Baghedhara, reduced their food intake because of simple fear of recurrent vomiting and also to ensure that the baby may remain small and the delivery may be easier. The consumption of iron, calcium and vitamins during pregnancy is poor. The habit of taking alcohol (*Apong*) during pregnancy has been found to be usual and almost all of them are observed to continue their regular activities, including hard labour during advanced pregnancy stage. More than 90 per cent of deliveries were conducted at home attended by elderly women of the household. No specific precautions are taken at the time of conducting deliveries which resulted in an increased susceptibility to various infections. Services of paramedical staff are sought only in difficult labour cases.

9. Out of 44 pregnant women of both the villages and the Golaghat town, 84.09% take nutritious food such as meat, fish and egg. Similarly, 50% of them take vitamin prescribed by doctors. On the other hand, only 45.45% and 43.18% women take iron and calcium respectively. In Namtemera, though most of pregnant women (90.48%) take above mentioned nutritious food, only 42.86% pregnant women take iron tablets and 38.10% of them take calcium. Of course, 52.38% of them take vitamin tablets. Similarly, the number of pregnant women taking nutritious foods in Baghedhara is also high, i.e., 78.57%. Of 14 pregnant women of this village only 35.71% take iron and calcium tablets and 42.86% women take vitamin tablets. On the other hand, the number of pregnant Mishing women taking nutritious foods, iron and calcium tablets is high in the Golaghat town. Of the 9 pregnant Mishing women in Golaghat town, 77.78% take nutritious food, 66.67% women take iron and calcium tablets and 55.56% of them take vitamin tablets prescribed by doctors. It is revealed that the consciousness of pregnant women regarding taking nutritious food and other such items is much better in the town than that of the two other villages.

10. As far as child care is concerned, all the mothers adopt breast feeding to their babies. But most of them adopt harmful practices like discarding of colostrums, giving prelacteal feeds, delayed initiation of breast-feeding and delayed introduction of complementary feeds. Vaccination and immunization of infants and children have been found inadequate. In addition, extremes of magico-religious beliefs and taboos tend to aggravate the problems. Of the 364 children of under 12 years of age in both the villages and the Golaghat town, 185 children have been vaccinated and the rest 179 children have not been vaccinated by their parents or any other elder family member.

11. Of the total households measles occurred in 239 (83.57%) households. Out of the three different areas of study the village Namtemera has the highest rate of occurring measles (90.73%), followed by Baghedhara (89.87%) and Golaghat town (55.36%). This variation of data reveals that villages are more vulnerable to measles.

12. The Mishings believe that measles occurred due to supernatural causes. The spirit responsible for this is known as *Aie* in their society. Therefore, traditional method of treatment is the only way to cure it. Going to allopathic treatment is a sign of disrespect to the spirit, so, that no household goes to this type of treatment for this disease.

13. The sex ratio is a simple indicator of gender equality and healthy society. Therefore high gap in sex ratio indicates the lower health status of females of a certain population. From this point of view we may say that the Mishing women of the study areas have lower health status than males since the sex ratio of the areas of study is 868 in general. The ratio is low in Namtemera, i.e., 845 and in the Golaghat town, i.e., 795 females per thousands male. This is because of patriarchal nature of the Mishing society where male members are given much importance. Of course, the sex ratio in Baghedhara is 975. Thus, the table reveals that the sex ratio in Baghedhara is better than Namtemera and Golaghat town.

In sum, the Mishings are affected by various social, economic and developmental constraints that potentially expose them to high rate of health hazards and health problems which are correlated with their lower health status.