Infant Morbidity and Infant Death among Two Linguistically Cognate Tribes of North-East India

Maitreyee Sharma

Author Affiliation: Assistant Professor, Department of Anthropology, Dibrugarh University, Dibrugarh, Assam-786004.

Reprint Request: Maitreyee Sharma, Assistant Professor, Department of Anthropology, Dibrugarh University, Dibrugarh, Assam-786004.

E-mail: Maitreyeesharma@Dibru.ac.in

Abstract

India is a developing country struggling hard to reduce the rate of infant mortality but yet to gain success because it is a country of numerous tribal and non-tribal groups with unique cultures and world-views which affect the prenatal, antenatal and post natal developments differentially. The study attempts to highlight the infant morbidity that lead to infant mortality in two linguistically cognate tribes, namely, the Mising of Assam and Minyong of Arunachal Pradesh. Many scholars state that the Mising tribe of Assam have migrated from the hills of Arunachal Pradesh and originally inhabited the same ecology as that of the present Minyongs. At present; Misings are concentrated in the Brahmaputra riverine areas of Assam and these areas are perennially affected by floods; which is a new stress for them after migration from the hilly terrains. The decadal growth rates have proved that the Mising population has increased and at present they are the second most populated scheduled tribe (plains) of Assam. The number of survivors upto the reproductive age is an important indicator of biological adaptation as well as the outcome of natural selection in the particular stress (flood) and the indices of selection intensity show that the number of survivors is quite more among the Misings than that of the Minyongs. In this point, the number of surviving and healthy infants plays a significant role and its an urgent need to highlight the morbid conditions of these two tribes.

Keyworsd: Infant Morbidity; Linguistically Cognate Tribes; Prenatal; Antenatal.

Introduction

The infant form an important and considerable portion of a population. The perpetuation and expansion of a population is completely dependent on the surviving infants and their viability upto the reproductive age. It is, therefore, extremely important and essential to study this considerable and delicate proportion of the population. It is an outcome and hence it directly measures the results of distribution and use of resources. India is a developing country struggling hard to reduce the rate of infant mortality but yet to gain success. This is because India is a country of numerous tribal and non-tribal groups with unique cultures and world-views which affect the prenatal, antenatal and post natal developments

differentially. The North-East part of the country is inhabited by many tribal groups which still lead simple ways of life and not easily accessible to the health care facilities. Though, the government has set up public health centres wherever possible but they rarely seem to approach those due to geographical non-accessibility or due to more preference of cultural and traditional values and practices.

The study attempts to highlight the infant morbidity that lead to infant mortality in these two linguistically cognate tribes. The health of the infants and infant mortality influence greatly the structure and shape of a particular population at a point of time. The North-East part of the country is inhabited by many tribal groups who are mainly endogamous

© Red Flower Publication Pvt. Ltd.

and socio-culturally unique. Of the North-East Indian states, Assam and Arunachal Pradesh are neighbours, but geographically, Assam is mostly a valley of the mighty river Brahmaputra and Arunachal Pradesh is a hilly state. The present Arunachal Pradesh, from the point of geography and the Constitution of India, a part of undivided Assam, was treated as a separate area for the purpose of the 1961 census. Many of the tribes of Assam of today have migrated from the hilly terrains of the present day Arunachal Pradesh. The Mising tribe of Assam is one of such tribes (Bhandari 1992, Pegu 2005). The area of Arunachal Pradesh from which the Misings migrated is inhabited by a group of tribes known as the broader term-Adi since time immemorial. At present; Misings are concentrated in the Brahmaputra riverine areas of Assam, with the state boundary with Arunachal Pradesh. The riverine areas in the northern banks of the Brahmaputra stretching from the old site of Sadiya in the East, down to the confluence of the Jiabhoroli in the west, lying approximately between Longitude 93p /E and 97p /E and Latitude 27p /N and 28p /N can be loosely considered as the Mising area (Pegu 2005) and these areas are perennially affected by floods; which is a new stress for them after migration. The decadal growth studies after every census enumeration have proved that the Mising population has increased and at present they are the second most populated scheduled tribe (plains) of Assam (Census Report 2011). The Minyong is a tribe that belongs to the broader group of Adi of Arunachal Pradesh and shows socio-cultural and linguistic affinity to the Misings of Assam. Many scholars believe that the Mising tribe originally inhabited the same ecology as that of the Minyongs. However, the reason of Mising tribe migration to the down from the hill is still hoary. Taid states, 'the unmistakable cultural and linguistic affinity of the Misings of the Brahmaputra valley and several ethnic groups of Arunachal Pradesh, especially the cluster called Adi, points to their having been the same group of people in the distant past' (Taid 2012:228). The number of survivors upto the reproductive age is an important indicator of biological adaptation as well as the outcome of natural selection in the particular stress (flood) and the indices of selection intensity show that the number of survivors is quite more among the Misings than that of the Minyongs. In this point, the number of surviving and healthy infants plays a significant role.

Method

The data for the present study are collected from two tribes, namely, the Misings of Assam and the Minyongs of Arunachal Pradesh. The population of Mising is chosen from the village Kumarbari in Majuli Island situated in Jorhat district of Assam. Kumarbari village is situated in Jengraimukh subdivision, which is predominantly populated by the Misings only and about 25 kilometers away from the Kamalabari township of Majuli. Moreover, Majuli being a river island is to a significant extent isolated from the mainstream of Assam and unlike the other parts is comparatively less accessible and more or less isolated. Thus, the Kumarbari village can be regarded as more or less isolated geographically and socio-culturally from other tribal and caste populations and is homogenous. However, the village is heavily flooded during every summer, sometimes twice or thrice a year. The Minyongs are largely concentrated in the East, South-East and West Siang district of Arunachal Pradesh. The village-Mori-selected for the study of the Minyong tribe is located in the West Siang district about 11 kilometers away from Aalo Head-Quarters of Arunachal Pradesh. The village is also a homogeneous one and situated in the hill slope of Arunachal Pradesh and faces the south bank of the river Siang. A total of 330 Minyong households and 394 Mising households are observed. Of these Mising households, 201 households occupy the Kumarbari village in Majuli. The evermarried mothers from each of the village with atleast one living are interviewed for the purpose of fertility and infant mortality. The infant mortality rate is calculated by taking the number of infant death in the past one year.

Result

Sex-wise distribution of infant death in various age groups of women is presented in tables 1 A, B. It is evident that the overall percentage of infant death is quite higher among the Minyong women (16.20%) than that of the Mising women (12.18%). Moreover, the incidence of male infant death is higher than that of the female infant deaths in both the populations. The percentages of infant deaths tend to increase with the increasing age groups of the mothers in both the populations with certain minor fluctuations inbetween. It is important to note here that the Minyong mothers of aged 15-19 years show comparatively higher percentage of male infant death (12.50%) than the mothers of higher age categories. It is interesting that the Mising and the Minyong mothers of agegroups 20-24 years and 25-29 years show preponderance of female deaths over male deaths.

Distribution of infant mortality rate among the Misings and the Minyongs are presented in Table 2.

The tables show that the infant mortality rates are quite higher among the Minyongs as well as among the Misings. However, the Minyongs (105.77) show comparatively higher infant mortality rate than that of the Misings (78.53). In addition to this, the neonatal and post neonatal mortality rates are also evidently higher among the Minyongs than that of the Misings. In both the populations, post-neonatal mortality contributes more towards the total infant mortality rate, which signifies that exogenous factors are more responsible for the higher infant mortality rate in these populations.

Infant mortality according to birth order is presented in Table 3.

It is evident from the table that the highest birth order among the Minyongs as well as among the Misings is found to be nine (09). The percentages of infant death are found to increase, particularly from the 2nd birth order to higher birth order in both the populations. In the 1st birth order, the incidence of infant death is quite higher among the Minyongs (22.25%) than that of the Misings (5.00%). However, thereafter, the percentages decrease in the 2nd birth order and a further decrease is noticed in the 3rd and the 4th birth order among the Minyongs. The lowest percentage of infant death is observed in the 2nd birth order (1.87%), followed by the 3rd birth order (4.91%) among the Misings, whereas, among the Minyongs, the lowest percentage of infant death is observed in the 3rd birth order (2.99%), followed by the 4th birth order (3.79%). The incidences of infant deaths suddenly increase from the 5th birth order in the Misings as well as among the Minyongs. The 9th birth order show the highest percentage of infant death among the Minyongs (25.16%) and the 8th birth order show the highest percentage of infant death among the Misings (17.74%).

Symptoms and Causes of Infant Death

Various symptoms and causes of infant deaths among the Minyongs and the Misings are shown in Table 4.

The various causes and symptoms of infant death have been categorized as shown below. Verbal autopsy is considered the most feasible and visible method for assignment of cause of death among infants. The causes as described by the couples are as follows-

- Stomach problem/troubles: Diarrhoea, stomach pain, lose of appetite, food poisoning (loose motion with vomiting).
- Acute Respiratory Infections (ARI): Not able to

- breathe after birth, unable to cry after birth, whooping cough and not able to suckle normally after birth.
- Jaundice: Yellow colour of the skin and whites of the eyes.
- Cough and fever: Cough, fever, pneumonia (two
 of the following symptoms are describedstopped suckling, fever or cold to touch, vomiting,
 convulsions, chest in-drawing fast breathing),
 measles and typhoid.
- Preterm birth: Birth that took place before due time and baby is very small or smaller than the usual at birth.
- Other infections and birth injury: Infections due to unhygienic removal of the umbilical cord by using unsterilized weapons like bamboo splinter, old blades, knife and even sharp edge of the stone.
- Birth injury refers to signs of injury at birth, which leads to death within 7 days of birth.
- Causes not identified Informants who were unable to express the causes/ symptoms of the death cases.

Table 4 shows that the prime cause of infant death is stomach ailments, mainly diarrhoea both among the Misings (37.77%) and also among the Minyongs (34.91%). The respondents described loose motion, vomiting and loss of appetite as the symptoms of such death. However, it is also noticed that ARI also form an important cause of infant death among the Misings (18.45%) and the Minyongs (19.23%). These infants died after a few hours of birth and were unable to suckle. The percentage of infant death due to jaundice is also much higher among the Misings (10.73%) than among the Minyongs (3.25%). The incidence of preterm death is more common among the Minyongs (14.21%) and it is almost five times higher than that of the Misings (3.00%). The pre-term births occurred before the 32 weeks of gestation both among the Misings as well as among the Minyongs. These infants seemed to suffer from jaundice and were unable to suckle, death occurred within the first week of life. Preterm birth, acute respiratory diseases and birth injury along with other infections form the prime causes of neonatal infant death in both the populations. Causes of about 5.15 per cent of Mising and 2.66 per cent of Minyong infant deaths could not be identified as the parents did not wish to mention the symptoms.

Table 5 present the per cent distribution of live births according to the place of delivery. It is quite apparent that highest percentage of deliveries took place at home among the Minyongs (98.51%) as well as among the Misings (95.56%). The Minyongs do not show a single case of delivery at Private Nursing home whereas 0.21 per cent (delivery of two live births of two mothers) of deliveries of the Mising mothers took place at a Private Nursing home. The Minyongs strongly prefer a home delivery than going to health centres.

Relationship between fertility and infant mortality among the Misings and the Minyongs are shown in tables 6 A, B.

It is observed from the tables that the 1st parity mothers do not show any cases of infant death and the percentages of infant death increases with the increasing parity of the mothers. The 9th parity Mising mothers and the 8th parity Minyong mothers experience the highest incidence of infant death whereas the 2nd parity Mising mothers and the 3rd parity Minyong mothers experience the lowest

incidence of infant death.

Out of a total of 2086 live births among the Minyong mothers, 83.79 per cent survived beyond infanthood and the rest 16.68 per cent resulted into infant death. However, the Mising mothers show comparatively lower percentage of infant death (12.18%) than that of the Minyong mothers (16.68%) and thus, the percentage of survivors is comparatively higher among the Misings (87.82%) than that of the Minyongs (83.79%). On the other hand, it is noticed that the percentage of survivors increase from the higher to the lower parity of mothers both among the Misings as well as among the Minyongs.

Thus, the study indicates a direct relationship between the fertility level of a mother and the incidence of infant death. Higher the parity, higher is the percentage of infant death noticed in the populations and an inverse relationship is noticed with the parity and the percentage of living children.

Table 1 a: Sex-wise distribution of infant deaths in various age groups of Minyong women

Present Age Group of Women (Years)	No. of Women		ı	Male		Infant Deaths Female		Total	
			No.	0/0	No.	%	No.	0/0	
15-19	10	8	1	12.50	-	-	1	12.50	
20-24	42	75	5	6.67	6	8.00	11	14.67	
25-29	46	131	8	6.11	11	8.40	19	14.50	
30-34	48	209	14	6.70	13	6.22	27	12.92	
35-39	44	252	18	6.87	15	5.95	33	13.10	
40-44	43	276	20	7.14	18	6.52	38	13.77	
45-49	40	248	23	9.27	16	6.45	39	15.73	
50-54	36	252	25	9.92	21	8.33	46	18.25	
55-59	25	173	18	10.40	13	7.51	31	17.92	
60-64	22	151	19	12.58	18	11.92	37	24.50	
65+	44	311	30	9.67	26	8.36	56	18.01	
Total	400	2086	181	8.68	157	7.53	338	16.20	

Table 1 b: Sex-wise distribution of infant deaths in various age groups of Mising women

Present Age Group	No. of	No. of Live	ve Infant Deaths					
of Women (Years)	Women	Births	Mal	le	Fer	nale	T	otal
			No.	0/0	No.	0/0	No.	0/0
20-24	28	38	-	-	1		1	2.63
25-29	62	124	1	0.81	3	2.42	4	3.23
30-34	49	158	3	1.89	5	3.16	8	5.06
35-39	58	239	9	3.76	8	3.35	17	7.11
40-44	34	193	12	6.22	8	4.15	20	10.37
45-49	34	217	16	7.37	11	5.07	27	12.44
50-54	30	199	19	9.55	16	8.04	35	17.59
55-59	28	194	16	8.25	12	6.18	28	14.43
60-64	34	241	21	8.71	17	7.05	38	15.76
65+	43	310	31	10.00	24	7.74	55	17.74
Total	400	1913	128	6.69	105	5.49	233	12.18

Table 2: Distribution of infant mortality rate of the misings and the Minyongs

Populations	Number of Live Births	Infant Mortality Rates			
		Neo-Natal	Post Neo-Natal	Total	
Minyongs	208	10 (48.07)	12 (57.69)	105.77	
Misings	191	6 (31.41)	9 (43.27)	78.53	

Table 3: Infant deaths according to birth order

Birth		Misings			Minyongs	
Order	No. of Live	Infant Death		No. of Live	Infant Death	
	Birth	No.	0/0	Birth	No.	0/0
1	400	20	5.00	400	89	22.25
2	375	7	1.87	387	33	8.52
3	326	16	4.91	367	11	2.99
4	280	30	10.71	343	13	3.79
5	234	59	25.21	263	40	15.21
6	154	46	29.87	159	53	33.33
7	90	30	33.33	97	54	55.67
8	38	20	52.63	49	28	57.14
9	16	6	37.50	21	17	80.95
Total	1913	233	12.17	2086	338	16.20

Table 4: Symptoms and causes of infant death

Symptoms/causes of	Number and percentage of infant death					
infant death	Mis	sings	Min	yongs		
	No.	0/0	No.	0/0		
Stomach trouble/diarrhoea	88	37.77	118	34.91		
Acute respiratory infections	43	18.45	65	19.23		
Jaundice	25	10.73	11	3.25		
Fever/influenza	19	8.15	24	7.10		
Preterm birth	7	3.00	48	14.21		
Other infections/birth injury	39	16.74	63	18.64		
Causes not identified	12	5.15	9	2.66		
Total	233	100.00	338	100.00		

Table 5: Distribution of live births by place of delivery

Place of delivery		Live	births		
•	Min	yong	Mising		
	No.	0/0	No.	%	
Public Health Centre	31	1.49	83	4.34	
Private Nursing Home	-	-	2	0.10	
Home	2055	98.51	1828	95.56	
Total	2086	100.00	1913	100.00	

Table 6 a: Relationship between fertility and infant mortality among the Minyong women

Parity	No.	Total No.	Li	ving	Dead	
	of Women	Of Live Birth	No.	%	No.	0/0
1	13	13	13	100.00	-	-
2	20	40	36	90.00	4	10.00
3	24	132	126	95.48	6	8.33
4	50	260	234	90.00	26	13.00
5	104	520	431	82.88	89	17.12
6	62	372	308	82.79	64	18.55
7	48	336	273	81.25	63	20.24
8	28	224	175	78.13	49	21.87
9	21	189	152	80.42	37	19.58
Total	400	2086	1748	83.79	338	16.20

Table 6 b: Relationship between fertility and infant mortality among the Mising women

Parity	No.	No.	Living		De	ead
	of Women	of Live Birth	No.	0/0	No.	%
1	25	25	25	100.00	-	-
2	49	98	97	98.98	1	1.02
3	46	138	136	98.55	2	1.45
4	46	184	177	96.19	7	3.81
5	80	400	377	94.25	23	5.75
6	64	384	342	89.06	42	10.94
7	52	364	309	84.89	55	15.11
8	22	176	125	71.02	50	28.41
9	16	144	92	63.89	52	36.11
Total	400	1913	1680	87.82	233	12.18

Discussion

Infant mortality rate is a good indicator of health and well being of a population. India is still fighting hard to lower down the rate of infant mortality (47 per 1000 Live Births in 2010) which is quite higher than the developed countries. Being a country with numerous cultural groups, it becomes very difficult to set a particular policy norm for a desired directed demographical change. North-East India being an abode of many tribal groups with diverge sociocultural values tend to add differently in the national average of ant demographic component. It has been observed in the present study that both among the Minyongs as well as among the Misings, postneonatal mortality rates are higher than the neonatal mortality rates. The sample registration system (2012) figure for India, however, is in contrary to the present findings. According to SRS, neonatal mortality rate for India is higher than the post neonatal mortality rates. The neonatal mortality and post-neonatal mortality rates of the Minyongs as well as the Misings are higher than that of India. The reasons for high neonatal mortality rate might be due to the absence of proper medical care especially in the antenatal period to the expectant mothers and the health centres are quite far away from their villages; moreover, they traditionally prefer to deliver the child in the home rather than in the health centre. Another reason for high neonatal mortality in both the tribes is that the umbilical cord of infants after birth is cut with a sharpened bamboo strip or an unsterilized blade or knife either by the mother herself or by the mid-wife without any fear of infection. Moreover, the incidence of male infant death is higher than that of the female infant deaths in both the populations. It is also evident that due to the lack of education and awareness among the couples (more evident among the Minyongs), the infants are rarely immunized and the female infants are taken to health centre whenever suffer from severe illness. The Minyongs believe that immunization of mothers and the infants may cause harm to the infants. They prefer to take some indigenous medicines prepared by the local priest. Such kind of attitude is prevalent among both the Misings also. The percentages of male and female infant deaths tend to increase with the increasing age groups of the mothers in both the populations. Hobcraft et al. (1984) stated that children born to very young or to very old mothers experience more mortality compared to those born to mothers in the intermediate age groups. Ruzicka and Kane (1987) are of the opinion that the increased risk of infant death among the old mothers may be due to the maternal depletion syndrome

undernourishment, anaemia and general weakness associated with the biological demands of excessive reproduction. Various studies have proved that adolescent motherhood can be associated with a less sensitive parenting style and inadequate relationship between the mother and the infant. Moreover, in the present study it has been noticed that most of the infants to the adolescent mothers die due to occurrence of diarrhoea, preterm birth, inadequate delivery and post-delivery care and inexperienced parenting style. Kramer et al. (2000) showed that prematurity increases the risk for neonatal death due to birth asphyxia. It is pertinent to note that the incidence of preterm death is more common among the Minyongs and it is almost five times higher than that of the Misings. Moreover, among the Minyongs, during painful parturition or when childbirth does not take place easily, the family members sacrifice a dog or a fowl to appease the spirit (*uyu*) responsible, which is locally known as *nippong*. Sometimes a priest (*miri*), if on hand, is called upon to do the ritualistic sacrifice. Thus, rarely approach a medical practitioner. The Minyongs believe that the spirits of women who die during childbirth become a malevolent spirit (nippong uyu) and when needs propitiation induce troubles during the childbirth. Such a ritual is also evident among the Misings of the present study. Majority of the infants received colostrum according to our study and exclusively breastfed upto 4 to 5 months. Two infants of the Minyong tribe whose mothers died at the time of parturition were fed with sugarcane juice mixed with rice soup. One of these infants died during the neonatal period. It is now confirmed that exclusive breastfeeding upto six months from birth tend to decrease infant morbidity and mortality (Edmond et al. 2006).

Notes

The Mising Agom Kebang (Linguistic Society of the Mising) have accepted the name Mising instead of Mishing (as stated in government documents) in their linguistic society. So the investigator have chosen the endonym of the tribe.

References

- 1. Bhandari, J. S. (1992). Kinship Affinity and Domestic group: A Study among the–Mishing of the Brahmaputra Valley, Gyan Publishing House, New Delhi.
- 2. Census of India. (2011). Population data of India, Registrar general and census commission of India, Government of India, Ministry of Home Affairs.

- Edmond, K.M. et al., Delayed Breast Feeding Initiation Increases Risk of Neonatal Mortality. Pediatric. 2006; 117: 380-6.
- Hobcraft, J.J. J.W. McDonald and S.O. Rutstein, Socio-Economic Factors in Infant and Child Mortality: A Cross-National Comparison. *Population Studies*. 1984; 38(2): 193-223.
- Kramer, M.S. *et al.*, The Contribution of Mild and Moderate Preterm Birth to Infant Mortality. *JAMA*. 2000; 284: 843-9.
- 6. Pegu, N.C. (2005). *The Misings of the Brahmaputra Valley* (Revised), Dhemaji Assam.
- 7. Ruzicka, L.T. and P. Kane. (1987). 'Infant and Child Mortality: The Implications for Fertility Behaviour'. In *Dynamics of Population and Family Welfare* (Ed.) by K. Srinivasan and S. Mukherjee, Himalaya Publishing House, Bombay.
- 8. Sample Registration System Bulletin. (2012). Registrar General of India. Ministry of Home Affairs, New Delhi, 47(2).
- 9. Taid, T.R., The Misings and Their Speech. In *The Misings: Their History and Culture* (Ed.) by Dr. J.J.Kuli, Kaustubh Prakashan, Dibrugarh, 2012; 228-240.

Special Note!

Please note that our all Customers, Advertisers, Authors, Editorial Board Members and Editor-in-chief are advised to pay any type of charges against Article Processing, Editorial Board Membership Fees, Postage & Handling Charges of author copy, Purchase of Subscription, Single issue Purchase and Advertisement in any Journal directly to Red Flower Publication Pvt. Ltd.

Nobody is authorized to collect the payment on behalf of Red Flower Publication Pvt. Ltd. and company is not responsible of respective services ordered for.