

Child Mortality in Three Tribal Populations of Shillong

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INTRODUCTION

The United Nations celebrated the International Year of Child in 1979. Since then the scientists all over the world, particularly the demographers and social scientists, have taken interest to find out the causes and patterns of child mortality. However, it is well known that infant and child mortality are good index to understand the general health status of a population.

Mahadevan et al. (1985) have suggested that to develop any effective family planning programme and nutrition, medical and public health policies one needs to have data on various aspects of mortality particularly infant and child mortality.

Causes of death is one of the important aspects of mortality study. A clear and broad picture drawn on mortality on the basis of data on causes of death helps in understanding various aspects of mortality. The distribution of various causes of death among various ethnic groups provide an indication of their awareness as regards their health practices as well as the activities of the concerned public health authorities which when properly analysed may be useful for planning medical measures (Bhende and Kanitkar, 1991).

Unfortunately a very few anthropological studies have so far been carried out on child mortality in the North-Eastern part of this country (Das and Das, 1982; Das, 1958; Das and Das, 1973 and Chowdhury et al., 1994), more so no one has undertaken any such study in any urban area. This paper attempts to study various aspects of early childhood mortality in an urban area, namely Shillong, among the three prominent scheduled tribe groups namely the Khasi, Garo and Mizo.

AREA AND PEOPLE

The present study was conducted among the Khasi, Garo and Mizo tribes, residing in Shillong town, which is the capital of Meghalaya and also

the headquarter of East Khasi Hills District of the State. All these three communities ethnically belong to the Mongoloid race like most of the tribes of North-East India. The Khasi speak a dialect of the Mon-Khmer linguistic group which forms a part of the Austro-Asiatic language family. They have the matrilineal family structure. The Garo are also the matrilineal people like the Khasi. They speak a dialect which belongs to the Tibeto-Burman family. The Mizo, like the Garo speak a dialect of Tibeto-Burman family. Unlike the Khasi and Garo the Mizo are patrilineal people.

The Khasi are supposed to be the original inhabitant of East and West Khasi Hills District of Meghalaya, whereas the Garo are supposed to be the original inhabitant of East and West Garo Hills District of Meghalaya. The homeland of the Mizo is Mizoram. Besides Mizoram a sizeable number of Mizo families are inhabiting in Shillong. Like the Mizo a sizeable number of Garo families are also inhabiting in Shillong.

MATERIALS AND METHODS

The present study was conducted in two phases during the year 1989-'91. In the first phase we collected data on causes of childhood deaths (restricting our observations on 0-4 years of age group) for the decade 1980-'89 from different death registers, available with the hospitals, churches and municipality in Shillong. The sample consists of 660 child deaths (Khasi=371, Garo=151 and Mizo=138). In order to analyse these data the whole decade i.e. 1980-'89, was divided into three different time periods, viz., period I : 1980-'82, period II: 1983-'85 and period III : 1986-'89. The data on causes of death, collected from the records, were classified following the classification, proposed by the World Health Organization (1967).

In the second phase a door to door survey was conducted using interview schedules, which included information on general demographic and socio-economic variables. The households

were selected without following any specific sampling technique, but care was taken that each of them contained at least one evermarried individual. Altogether 636 households were covered. The sample consists of 359 Khasi, 136 Garo and 141 Mizo households.

RESULTS AND DISCUSSION

Causes of Child Mortality

Table 1 shows the major causes of child mortality in the Khasi, Garo and Mizo for the periods 1980-'82, 1983-'85 and 1986-'89, and for the decade 1980-'89 as a whole. It is true that there are several causes for child mortality in these three populations but 8 causes namely prematurity, asphyxia, fever, dysentery, diarrhoea, gastroenteritis, jaundice and respiratory troubles are the leading ones. It is seen that 3% of all child mortality in the Khasi and Garo and nearly 6% of all child mortality in the Mizo no specific cause has been assigned. Besides the above mentioned eight leading causes the other kind of diseases like pneumonia, meningitis, bronchitis etc. caused child mortality in 11.05% among the Khasi, 9.93% among the Garo and 10.87% among the Mizo and they have been clubbed together under the category 'others'.

In the period 1980-'82 nearly 25%, 10.17% and 7.84% of all child mortality in the Khasi, Garo and Mizo respectively were due to fever. Since the death registers never mentioned the specific type of fever, we cannot make any use of this information. It is further seen that in 1980-'82 the major cause for child mortality among the Khasi was dysentery (17.31%) followed by diarrhoea (9.62%), gastroenteritis (8.65%) and jaundice (8.65%). In the same period respiratory troubles (18.65%) was the major cause for child mortality among the Garo, followed by asphyxia (11.86%), diarrhoea (11.86%) and jaundice (10.17%). Whereas among the Mizo the major causes for the same were gastroenteritis (21.57%) and asphyxia (17.65%) followed by jaundice (9.80%). However, it is seen that in this period the main causes for child mortality were diarrhoea, gastroenteritis, jaundice and asphyxia in these three populations.

In the period 1983-'85 the major causes for child mortality among the Khasi were diarrhoea

(18.66%) and asphyxia (11.94%) followed by jaundice (9.70%) and respiratory troubles (8.21%), whereas among the Garo the major causes for the same were asphyxia (20.45%), dysentery (15.91%), gastroenteritis (13.64%) and respiratory troubles (13.64%). Among the Mizo the major causes for childhood deaths were gastroenteritis (20.46%), jaundice (15.91%), respiratory troubles (11.36%) and asphyxia (11.36%) in this period. However, it is seen that in all these three populations in this period asphyxia, gastroenteritis, jaundice and respiratory troubles were the main causes for child mortality.

In the period 1986-'89 among the Khasi it is seen that the major causes for child mortality were diarrhoea (19.55%) and jaundice (18.8%) followed by dysentery (9.02%). Among the Garo in the same period the major cause for child mortality was diarrhoea (18.75%) followed by the causes asphyxia (10.42%), dysentery (10.42%) and respiratory troubles (10.42%), whereas among the Mizo the major causes for the same were asphyxia (18.60%) and jaundice (13.95%) followed by the causes prematurity (11.63%) and respiratory troubles (11.63%). So in this period it is seen that diarrhoea and jaundice were the main causes for child mortality besides asphyxia and respiratory troubles.

When we pooled data for all these three periods it is seen that among the Khasi most of the children aged 0-4 years, died of diarrhoea, jaundice and dysentery, whereas in case of the Garo most of the child mortalities are due to respiratory troubles, asphyxia and diarrhoea. Among the Mizo it is seen that asphyxia, gastroenteritis, jaundice and respiratory troubles are the main causes for child mortality. So, it is seen that in this decade (i.e. 1980-'89) diarrhoea, respiratory troubles, asphyxia and jaundice were the main factors which mostly caused child mortality, though dysentery and gastroenteritis often brought deaths to the children. Figure 1 shows the distribution of child mortality according to various type of diseases in these three populations. This figure is self explanatory. However, when attempt was made to discern the increasing or decreasing trend of the causes of child death during different year groups no definite trend was noticed in respect of most of the

Table 1: Child mortality in 1980-'89 for the Khasi, Garo and Mizo of Shillong

Period/ Population/ Sex	Prema- turity	Asphy- xia	Fever	Dysen- tery	Diarr- hoea	Gastro- enteritis	Jaun- dice	Respi- ratory troubles	Causes not known	Others
<i>Period-I: 1980-'82</i>										
Khasi										
Male	4.48	7.46	20.90	14.92	11.94	8.96	10.45	4.48	1.49	14.92
Female	5.40	5.40	32.43	21.62	5.40	8.11	5.40	8.11	2.71	5.40
Total	4.81	6.73	25.00	17.31	9.62	8.65	8.65	5.77	1.92	11.54
Garo										
Male	9.09	18.18	13.64	9.09	9.09	13.64	9.09	4.54	-	13.64
Female	5.41	8.11	8.11	2.70	13.51	2.70	10.81	27.03	2.70	18.92
Total	6.78	11.86	10.17	5.08	11.86	6.78	10.17	18.65	1.70	16.95
Mizo										
Male	6.90	17.24	6.90	3.45	6.90	27.58	10.34	3.45	10.34	6.90
Female	9.09	18.18	9.09	4.54	9.09	13.64	9.09	13.64	4.54	9.09
Total	7.84	17.65	7.84	3.92	7.84	21.57	9.80	7.84	7.84	7.84
<i>Period-II: 1983-'85</i>										
Khasi										
Male	4.22	14.09	16.90	7.04	23.94	5.63	12.68	8.46	1.41	5.63
Female	6.35	9.52	20.63	7.94	12.70	6.35	6.35	7.94	4.76	17.46
Total	5.22	11.94	18.66	7.46	18.66	5.97	9.70	8.21	2.98	11.19
Garo										
Male	4.17	20.84	8.33	12.50	8.33	12.50	8.33	12.50	-	12.50
Female	5.00	20.00	10.00	20.00	5.00	15.00	5.00	15.00	5.00	-
Total	4.54	20.45	9.09	15.91	6.82	13.64	6.82	13.64	2.27	6.82
Mizo										
Male	4.00	8.00	12.00	4.00	8.00	24.00	16.00	16.00	-	8.00
Female	5.26	15.79	15.79	5.26	5.26	15.79	15.79	5.26	5.26	10.53
Total	4.54	11.36	13.64	4.54	6.82	20.46	15.91	11.36	2.27	9.09
<i>Period-III: 1986-'89</i>										
Khasi										
Male	6.33	5.06	17.72	12.66	21.52	1.26	18.99	3.80	2.53	10.13
Female	5.55	1.85	22.22	3.70	16.67	7.41	18.52	5.56	7.41	11.11
Total	6.01	3.76	19.55	9.02	19.55	3.76	18.80	4.51	4.51	10.53
Garo										
Male	11.54	7.69	15.38	7.69	15.38	7.69	7.69	15.38	7.69	3.85
Female	4.54	13.64	13.64	13.64	22.73	9.09	9.09	4.54	4.54	4.54
Total	8.33	10.42	14.58	10.42	18.75	8.33	8.33	10.42	6.25	4.17
Mizo										
Male	13.04	17.39	4.35	4.35	8.69	4.35	17.39	8.69	8.69	13.04
Female	10.00	20.00	5.00	5.00	5.00	5.00	10.00	15.00	5.00	20.00
Total	11.63	18.60	4.65	4.65	6.98	4.65	13.95	11.63	6.98	16.28
<i>Decade: 1980-'89</i>										
Khasi										
Male	5.07	8.76	18.43	11.52	19.35	5.07	14.29	5.53	1.84	10.14
Female	5.84	5.84	24.03	9.74	12.34	7.14	10.39	7.14	5.20	12.34
Total	5.39	7.55	20.75	10.78	16.44	5.93	12.67	6.20	3.23	11.05
Garo										
Male	8.33	15.28	12.50	9.72	11.11	11.11	8.33	11.11	2.78	9.72
Female	5.06	12.66	10.13	10.13	13.92	7.59	8.86	17.72	3.80	10.13
Total	6.62	13.91	11.26	9.93	12.58	9.27	8.61	14.57	3.31	9.93
Mizo										
Male	7.79	14.29	7.79	3.90	7.79	19.48	14.28	9.09	6.49	9.09
Female	8.20	18.03	9.84	4.92	6.56	11.47	11.47	11.47	4.92	13.12
Total	7.97	15.94	8.70	4.35	7.25	15.94	13.04	10.14	5.80	10.87

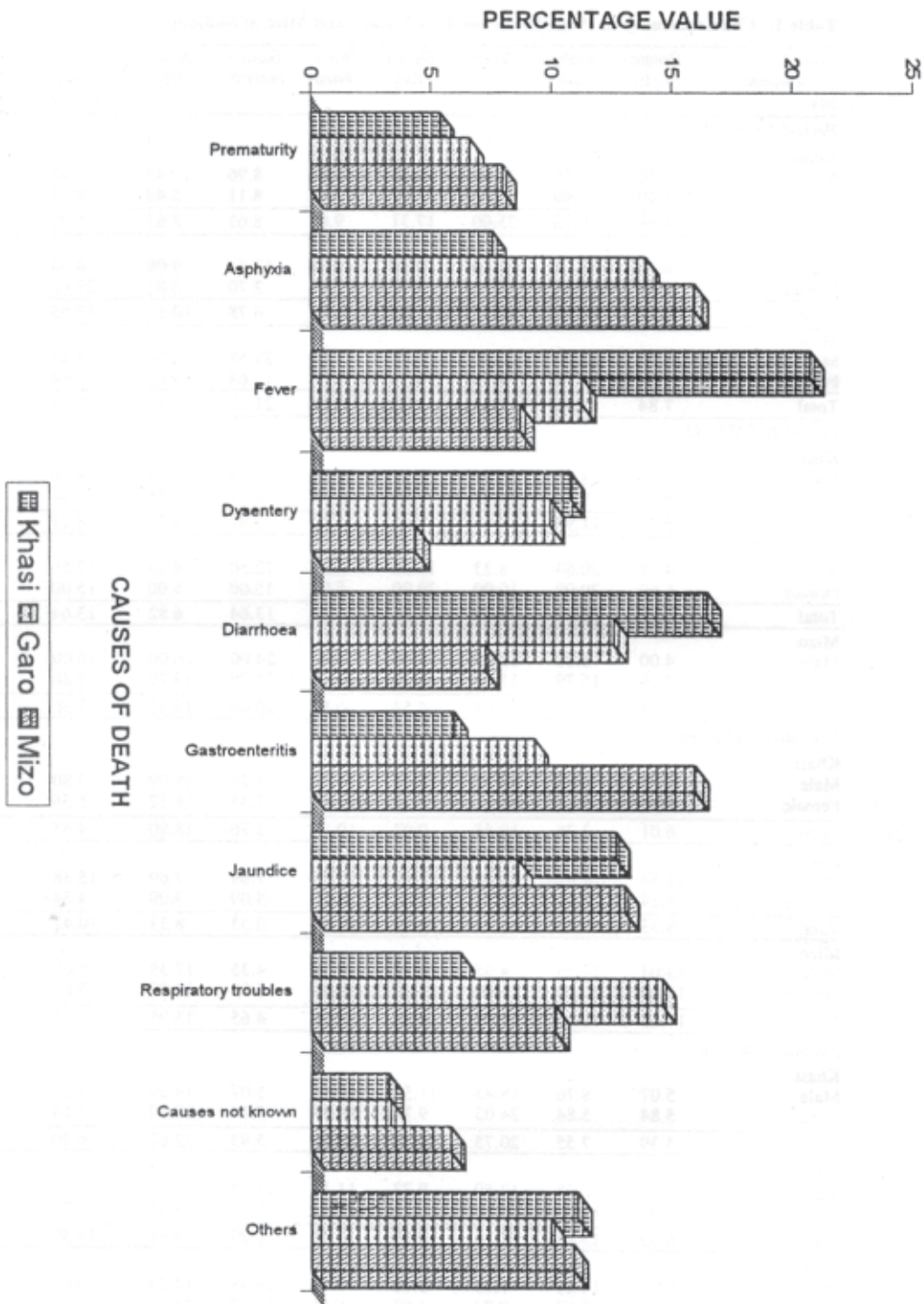


Fig. 1. Distribution of childhood mortality (0-4 years) in 1980-89

causes in all the three groups. The percentages fluctuate in different periods, sometimes rising and sometimes declining. It is also seen that most of these diseases affect both the sexes equally.

Mortality Rates

It may be noted that in order to find out the rates of mortality the data obtained from household survey were utilised. Table 2 shows the rates of different mortalities among the Khasi, Garo and Mizo. Of all these populations the rate of neonatal mortality (upto 30 days) is highest among the Garo (33.9), which is followed by the Khasi (17.2). It is interesting to note that this rate is very low among the Mizo (3.5). The post-neonatal mortality rates (within 1 month to 1 year) show a different trend. This rate is highest among the Khasi (24.8) and lowest among the Garo (18.1). The Mizo (19.5) show a slightly higher rate than that of the Garo in this regard. When we pooled data for both these mortalities it is found that the rate of infant mortality (upto 1 year) is highest among the Garo (52.0) and lowest among the Mizo (23.0), whereas the Khasi (42.0) occupy an intermediate position. It seems that infant mortality is on decline among the Mizo in comparison with that of India's urban population. Whereas, this rate is considerably lower among the Khasi and slightly higher among the Garo than India's urban rate (Table 2).

In case of toddler mortality (1 to 4 years) the Garo (27.1) show the highest rate like the infant mortality, which is followed by the Khasi (15.9). This rate is found to be the lowest among the Mizo (8.9). When we pooled data for these two mortalities it is found that the rate of under five mortality (upto 5 years) is highest among the Garo (79.01) and lowest among the Mizo (31.91), whereas the Khasi (57.96) occupy an intermediate position. Like infant mortality in case of under five mortality also it seems that the Mizo are showing a declining trend in comparison with that of India's urban population. Whereas, among the Garo this rate is slightly higher but among the Khasi is considerably lower than India's urban rate (Table 2). Thus it appears from the above findings that both infant and under five mortality are highest among the Garo and lowest among the Mizo and the

Table 2: Various mortality rates for the Khasi, Garo and Mizo of Shillong

Mortality rates*	Khasi	Garo	Mizo	India (Urban)
Neonatal mortality	17.2	33.9	3.5	-
Post-neonatal mortality	24.8	18.1	19.5	-
Infant mortality	42.0	52.0	23.0	50.0**
Toddler mortality	15.9	27.1	8.9	-
Under five mortality	57.96	79.01	31.91	76.0***

* Per thousand live births

** As per 1992 estimation (Srinivasan and Shariff, 1997)

*** As per 1990 estimation (Srinivasan and Shariff, 1997)

Khasi stand in between.

Medical Facilities

It is generally believed that the type of medical facilities availed by the people of a study area may have implication on the mortality statistics of that particular region. Because this aspect, brings out the awareness of the people, the availability of different types of facilities, and their response to a particular mode of treatment (Babu and Bhasin, 1990).

It appears from Table 3 that of all these three populations more than 50 percent mothers prefer to avail regular medical check-up during their pregnancy. This preference is considerably high among the Mizo. Half of the mothers immunized themselves during pregnancy. In respect of place of delivery it is seen that both the Khasi and Mizo have mostly opted for hospital or nursing home delivery, whereas the Garo mostly prefer delivery at home. The Mizo prefer treatment of child by medical doctors to quacks more in comparison with the Khasi and Garo, and in turn, the Khasi like to have treatment of child by medical doctors more than the Garo. In case of immunization it is seen that higher percentage of

Table 3: Medical facilities availed by the Khasi, Garo and Mizo of Shillong

Medical facilities availed	Percentage		
	Khasi	Garo	Mizo
Regular medical check-up of mother during pregnancy	52.67	51.75	63.01
Immunization of expectant mother during pregnancy	55.73	50.00	53.42
Hospital or nursing home delivery	74.81	39.47	83.56
Medical treatment of child	51.53	31.58	72.60
Immunization of child	52.67	40.35	60.27

Mizo children availed the facilities than the Khasi and Garo, the Khasi again show the higher percentage than the Garo in this regard.

Taking into consideration all these 5 factors it is found that the Mizo availed considerably higher medical facilities than the Khasi and Garo, and in turn, the Khasi availed more medical facilities than the Garo. Perhaps this is the reason why the infant and toddler mortality rates are lowest among the Mizo and highest among the Garo and the Khasi stand in between.

NOTE

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KEY WORDS Childhood Mortality Causes. Mortality Rates. Medical Facilities.

ABSTRACT The present paper deals with the early childhood mortality among the Khasi, Garo and Mizo tribe of Shillong in respect of causes of death, mortality rates and medical facilities. The study reveals that diarrhoea, respiratory troubles, asphyxia and jaundice are the main factors causing child mortality in these three populations. Infant and under five mortality both are found to be very low among the Mizo than India's urban rate, whereas among the Garo these rate are slightly higher but among the Khasi these rate are considerably lower in comparison with India's urban population. When the medical facilities availed by these communities are taken into consideration it is found that the Mizo availed considerably more facilities than the Khasi and Garo, and in turn, the Khasi availed more medical facilities than the Garo.

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