

A Study on Mortality Among Saharia – A Primitive Tribe of Madhya Pradesh

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INTRODUCTION

At present 623 tribal groups with their sub-groups are inhabiting hilly and plain forest regions in almost all over India (Sachchidananda and Prasad, 1996). These tribal groups constitute 8.08 percent of total population of the country. The highest number of tribal population comprising 22.73 percent have been concentrated in Madhya Pradesh whereas Andaman and Nicobar and Lakshadweep contain the lowest tribal population comprising below one percent, out of total tribal population of India. In other side, no tribal population is found in Haryana, Punjab, Delhi and Pondicherry. In India the highest and lowest tribal population, out of total have been found in Mizoram (94.75 percent) and Andaman & Nicobar Islands (5 percent to 10 percent) respectively (Census, 1991). Due to small size of community, pre-agricultural stage of economy, high extent of isolation, low level of literacy, etc., 74 tribes among all tribal groups of India have been scheduled as primitive tribes (in Fifth Five Year Plan).

Madhya Pradesh is considered as the tribal heart of India where 46 scheduled tribes and their sub-groups have been identified throughout the region. Out of total population in the state, the percentage of tribal population has been measured as 22.27 percent. Approximately, this measurement is covered one-fourth of the total tribal population of the nation. Population size of these tribal groups are varied considerably. Gond and Bhil tribal groups are the typical example and their population size have been exceeding 35 lakhs and 15 lakhs respectively. The other tribal groups – Andh, Bharia, etc. have almost a significant number whereas less than one thousand population have also been found in Birhor and Kalam tribal groups. In Madhya Pradesh, seven tribal groups have been declared as primitive tribes. Among these primitive tribal groups, Saharia is an important tribe and its total population is 417171 implying 2.70 percent out of total tribal population of the state (Census, 1991). The sporadic concentration of Saharia are not only

limited by political boundary in Madhya Pradesh, but also their dispersals are located in Rajasthan, Andhra Pradesh, Orissa, Bihar and rarely in West Bengal and their total population have been estimated as 7,95,134.

In central India, Saharia primitive tribal groups are acquainted as the very widespread 'Kolarian' tribe (Thakur and Thakur, 1994). The early history of origination of Saharia is not exactly clear till now. Etymological point of view expresses that the word 'Sahria' is the combination of two independent words like 'Sa' (companion) and 'Haria' (tiger) which mean companion of tiger (Tiwari, 1984). Saharia are the members who belong to traditional society. All the settlement patterns of the tribe are found on the middle top of the hill. In every dispersed Saharia village, hamlet or 'Phalaya' is regarded as the first ecological unit. Most of the Saharia are depended on ecology which plays an important role in forming their economic structure (Mandal, 1998). The post economic history implies that they traditionally practised shifting cultivation, hunting, gathering, pastoralism, etc. and sometimes also adopted nomadic life (Prabhu, 1983). But in the present time, most of the Saharia have become daily wage earner instead of their traditional way of occupation (Singh, 1994). Most of them are landless and poverty stricken. Bread is considered as their staple food. But sometimes, due to unavailability of wheat, they consume roots, tubers, leaves, etc. which are collected from the nearest forest. They are very much addicted to drink local wine. They usually face the shortage of water. Even their useable water of well and sometimes tube-well is neither cleaned nor purified. Most of the Saharia are dominated by nuclear families. Saharia are strictly clan exogamous and tribal endogamous. They generally practise negotiation and monogamy form of marriage at very early age. Influencing with their low socio-cultural pattern, most of the Saharia prefer to the frequent birth of male child. Modern family planning contraceptive methods are rarely adopted among them. Literacy rate of Saharia is 23.2 percent

(very low) whereas 28.2 percent and 17.7 percent are for male and female respectively (Biswas and Kapoor, 2003).

Mortality

Only three components are responsible to change the population structure. Among these components, mortality is considered as one whereas the others are being fertility and migration. It is postulated that human beings are mortal. They have to die once upon a time of their age after birth. In other words, after birth, permanent extinction of all signs of life from human body is taken place and it is meant as death. The United Nation and World Health Organization combinely defined (1970), "Death is the permanent disappearance of all evidence of life at any time after birth has taken place (post natal) cessation of vital functions without capacity of resuscitation". According to this definition, it is clearly understood that only after live birth, death is occurred. So, a close link is always performed between mortality and live birth. Hauser & Duncan (1959) defined death by saying, "Death prior to complete expulsion or extraction from its mother of a product of conception, irrespect of the duration of pregnancy, the death is indicated by the fact that after such separation the foetus does not breathe or show any other evidence of life, such as breathing of heat, pulsation of umbilical cord or definite movement of voluntary muscles". Normally a child stays in the womb of mother during 28 weeks. Keeping in view on this matter, the World Health Organization indicates that this remain 28 weeks should be registered as deaths (cf. Raj, 1982).

Mortality indicates the permanent extinction of all signs of life from living body and it is occurred at any time after birth. It is not performed without any cause. Biological as well as social factors are indebted for death. In other words, mortality is considered as a continuous force of attribution, tending to reduce populations – a major negative force in the balance of vital processes. It has been noticed that the tribal mortality is quite distressing, specially when seen in the context of Indian national population. The differences can be attributed to the prevailing socio-economic, cultural and health care practices. The poor food habits contribute the malnutrition specially among children and pregnant mothers which lead to increase

susceptibility to morbid conditions. Maternal care is largely neglected and the expectant mothers to a great extent are not inoculated against tetanus. From the inception of pregnancy to its termination, no specific nutritious diet is consumed by a women. The consumption of iron, calcium and vitamins during pregnancy is poor. Most of the deliveries are conducted at home attended by elderly ladies of the household. Vaccination and immunization of infant and children are inadequate. In addition, extremes of magico-religious beliefs and taboos tend to aggravate the problems which influence high mortality (Dandekar and Dandekar, 1953; Dandekar, 1959; Ghosh, 1970; Sharma, 1978; Sirajuddin and Basu, 1984; Murthy, 1987).

MATERIALS AND METHODS

The present study has been conducted among 333 households of six Saharia inhabitat villages under Barai block in Gird sub-division, Gwalior district of Madhya Pradesh. Barai is a multi-ethnic block but the inhabitation of Saharia has been found dominantly. Taking into consideration the distribution of Saharia in various areas, the Barai block was selected purposively. In the second stage of the study, the adjoining close distance and far villages under this block were also selected by the use of random sampling technique. Before going to the research operation, an imperative, efficient and suitable research design was made ready. Through this research design, various research related ideas were organised in a form for checking up the defects and inadequacies. Interview with the subject canvassing an interview schedule was prepared to arrange the basic tools for data collection. This well planned interview schedule consisted of both open ended and close ended questions which determined the attitude, cooperativeness, speed of answering of questions, answering performance, respondent's errors, socio-cultural barriers, acceptability, suitability, etc. of the respondents. Before finalizing the schedule, a pilot study was performed for pre-testing the initially prepared schedule and determining the field situation. The purpose of pre-testing the schedule was also to rectify the errors and to incorporate the modification so as to make it more useful one. Among various data collecting methods, literature survey, interview, observation, case study and rarely questionnaire were applied as objectives and logical and even

free from personal bias and prejudice. Following the manner of the respondents, some specific information were collected from the women corroborating with the presence of their husbands or other closest ladies in their community. Age at birth and death were carefully estimated by cross examining the statements of the respondents with their own age, present age, age at marriage, important social events, etc.

RESULTS AND DISCUSSION

Measures of Mortality

Population analysis necessitates study of mortality trends to understand the demographic structure of a population. Mortality along with fertility and migration is responsible for a population's demographic profile. It is a biological phenomenon and an inexorable force inducing population and social change. The levels of mortality define fitness, survival and growth of a population. Mortality is also an excellent indicator of economic, social status and well being of people of a region, or to be precise, a pointer of development. It is the process whereby deaths occur in a population. Differences in mortality are generally found among various sub-populations either at a particular time or between different cohorts. The various factors affecting differential mortality are far from being clearly understood; climate, diet and life style more generally are all subjects of current research. Moreover, there may be strong underlying interaction factors since the choice of residence, occupation and so on may be related to health in the first place, leading to selectivity among the sub-populations studied (Wilson, 1985). However, various measures of mortality and its related components of Saharia are stated in the following manner:

Crude Death Rate (CDR)

Crude death rate (CDR) is the most common and widely used measure of mortality, describing the frequency with which death occurs in a population at a specified time/period. Heer & Smith (1968) has said that "Crude death rate (CDR) may be defined as the ratio of the number of deaths which occur within a given population during a specified year, to the size of death population at mid year". Obviously, it is simplest method of finding out death rate because what is required to be known is only the total population

and number of deaths which occur in particular period. Crude death rate reflects a population's age structure as well as the prevailing patterns of mortality. In the present study, crude death rate among Saharia has been found to be 25.77 (Table 1). Keeping in view the comparison, Saharia crude death rate has been found to be comparatively higher than Bhil (15.53 by Parsuram & Rajan, 1990), Gond (23.19 by Parsuram and Rajan, 1990), Abujhmaria (14.90 by Pandey & Goel, 1999) and others. It has been observed that among Saharia, the reported high crude death rate may be attributed as the reasons of paucity of modern clinical facility, high extent of illiteracy, financial problems, negligency to immunization, unfavourable environmental factors, lack of nutritional foods, insanitation, low socio-cultural status, careless to maternal and child health care, early age at marriage, insecure life of aged persons, etc.

Age Specific Mortality Rate (ASMR)

Age specific mortality rate (ASMR) is another method of finding out death rate. The mortality risks faced by human beings vary sharply with age. Hence to understand the overall death rates, age specific death rates are also studied, as these can separate the component of mortality from the effect of age composition of a population. The age specific death rate is the broad 'U' pattern with the mortality high among the young and old age groups of Saharia. Mortality is high for the 0-4 age groups, after that it reduces for the following age groups with few exceptions and again picks up at around age fifty onwards. Mortality rate among children is usually high. Thereafter pressure of death decreases. But when old age comes, then the pressure of death again

Table 1: Various measures of mortality among Saharia

<i>S. No.</i>	<i>Mortality measures</i>
1.	Crude Death Rate (CDR) 25.77
2.	Max. Age Specific Death Rate > 4 & 55< 329.19
	Age Groups
	Min. Age Specific Death Rate in 10-34
	Age Groups 7.59
	No Age Specific Mortality Rate in
	25-29 & 45-49 Age Groups 0.00
3.	Still Birth Rate (SBR) 26.66
4.	Peri-natal Mortality Rate (PMR) 54.79
5.	Neo-natal Mortality Rate (NMR) 54.79
6.	Post Neo-natal Mortality Rate (PNMR) 68.49
7.	Infant Mortality Rate (IMR) 123.28
8.	Under Five Mortality Rate (UFMR) 82.35
9.	Child Mortality Rate (CMR) 62.82

increases. In comparison to the various population groups, the pattern of age specific mortality rates among Saharia have been found almost similar. High age specific mortality rate is mostly due to low level of socio-cultural factors, non-availability of medical facility, illiteracy, early marriage of girls, early and frequent child bearing couples with unskilled mid-wife, careless attitude on child, new born mothers and aged groups, etc. (Dandekar, 1975; Ware, 1981; Rosenweig and Schutlz, 1982; Dasgupta, 1990; Preston, 1990).

Still Birth Rate (SBR)

Still birth is a term which is accounted in reproductive wastage. Pearl (1939) defined that still birth 'in strict logic and definition means an infant born dead at or near term'. Still birth is usually regarded as the foetal death. Foetal death indicates the death which is occurred before the complete expulsion or extraction from the womb of mother. From 28 weeks of conception to the exact child bearing period, the embryonic loss is accounted as still birth or foetal death. Due to separation from gestation, the foetus is unable to practise breathing or show any other evidence of life such as beating of heart, pulsation of the umbilical cord or definite movement of voluntary muscles. In the present study among Saharia, still birth rate (SBR) has been found to be 26.66 (Table 1). Taking into consideration in a comparative account, it has been found that still birth rate among Saharia is comparatively higher than population of Madhya Pradesh (12.3 by NFHS, 1993), Kamar (25.91 by Biswas et al., 2001) and others. Low socio-economic status, high extent of illiteracy, negligence on maternal care specially during pregnancy period, malnutrition, unscientific delivery, etc. are the attributed reasons of their high still birth rate (Banerjee et al. 1976; Sharma and Sharma, 1999).

Peri-natal Mortality Rate (PMR)

Early neo-natal deaths (death of infant within first week of life), late foetal deaths (after 28 weeks of gestation) and still births together constitute peri-natal mortality. In simple words, it includes late foetal mortality and a position of infant mortality which indicates early neo-natal deaths. Peri-natal mortality rate (PMR) is also a sensitive index reflecting standards of mother and child health care prior to and during pregnancy

and child birth and during the first week after birth: as well as the availability and effectiveness of other social development measures (Devi, 1979). Peri-natal mortality rate among Saharia has been found to be 54.79 (Table 1) which presents comparatively higher than population of Madhya Pradesh (52.9 by SRS, 1993), Kamar (53.95 by Biswas et al., 2001) and others. Unsatisfactory maternal and child health care services, personal hygiene, traditional and unscientific delivery attendance in most of the births, delivery at home, careless on ante-natal and post natal checkup, early age at marriage and frequently child bearing, illiteracy, poverty, etc., are the attributed reasons which influence high peri-natal mortality rate.

Neo-natal Mortality Rate (NMR)

Infant mortality consists of neo-natal mortality (infant death upto 28 days of life). Neo-natal mortality refers to deaths which occurs under four weeks after birth of child. It is generally observed that deaths occurring during the neo-natal period are primarily caused by biological factors which indicate neo-natal mortality is attributed to endogenous or ante-natal causes. In the present study, 54.79 has been found as the neonatal mortality rate among Saharia (Table 1). In comparison with other studies, it has been found that neo-natal mortality rate among Saharia is comparatively higher than Juhar (40.0 by Chachra and Bhasin, 1998), Dharchula (50.0 by Chachra and Bhasin, 1998), Garo (33.9 by Adak, 2001) and others. Although the impact of antenatal and delivery care on survival during first month of the life is less than the effect on mortality risks at later stages, it is nonetheless very large. Children of mothers who receive no such care have a neo-natal mortality rate that is higher than the rate for children of mothers who receive both ante-natal and delivery care. This differential is all the more impressive because women who have pregnancy-related complications, their babies have a relatively high risk of death. High neo-natal mortality rate may be attributed as the reasons of unhygienic weaning practices, paucity of medical facility, unscientific delivery, negligence on maternal and child health care, illiteracy, low socio-economic status, etc.

Post Neo-natal Mortality Rate (PNMR)

Post neo-natal mortality refers to the deaths

which are occurred between four weeks and one year of child' age. The post neo-natal deaths are most sensitive to socio-economic factors as compared with biological factors. Post neo-natal mortality is also attributed to exogenous or environmental causes. The most of the infant deaths are accounted in post neo-natal mortality. In the present study, post neo-natal mortality rate (PNMR) among Saharia has been found to be 68.49 (Table 1) which presents high as compared to Kamar (53.51 by Biswas et al., 2001), Garo (18.1 by Adak, 2001), Khasi (24.8 by Adak, 2001) and others. Paucity of medical facility, early age at marriage and frequent child bearing, delivery at home by untrained 'Dai' (mid-wife), malnutrition, negative attitude on immunization, low socio-economic status, high extent of illiteracy, etc., are the attributed reasons of high post neonatal mortality rate.

Infant Mortality Rate (IMR)

Infant mortality rate (IMR) is one of the most important measure of mortality, as it estimates the mortality in that segment of the population, where it is usually extremely high. It is regarded as the good indicator of health status of a population and is one of the most vital demographic parameter which indicates the level of socio-economic development of a community or society. It is the mortality of live-born infants who have not reached their first birth day. Infant mortality is a major contributor to deaths in populations with high mortality but it is reduced almost to insignificant in many developed countries, making one of most striking aspects of mortality improvement (Wilson, 1985). The infant mortality rate is also an excellent indicator of the state of medical and public health facilities in an area; and altogether with literacy rate and life expectancy, it indicates the quality of development and human well being in a region. It also accounts for a large chunk of all deaths; and affect the attitude, behaviour of parents towards family size and structure. In the present study, infant mortality rate among Saharia has been noticed comparatively higher (123.28 in Table 1) than Jaunsaria (82.0 by Kshatriya et al., 1997), Juhar (120.0 by Chachra and Bhasin, 1998), Kamar (97.27 by Biswas et al., 2001) and others.

High infant mortality is influenced by various factors. There are no maternal and child welfare centers in the vicinity of the area. People are not aware to immunization for the children in

early stage and ante-natal and post natal care for the mother. Due to nuclear family formation and non-availability of supporting persons at home, the infants and young children are carried away on their mother's back to the working places or just left behind alone at home. They are exposed to all types of infection and health hazards in the field and at other working places. Due to busy in economic requirement, mothers usually provide less attention to look after their children and their own health. Beside this, congenital mal-transformation, immature birth, illiteracy, low socio-economic status, discriminating care to female children, mal-nutrition, insanitation, poor infrastructures, non-availability of purified drinking water, etc., are the attributed reasons of high infant mortality rate.

Under-five Mortality Rate (U-5MR)

Under five mortality considers all deaths from 0 to under five years of age. In other words it is the addition of infant mortality rate and child mortality. Under five mortality can also be defined as the probability of dying before the fifth birth day. Under five mortality rate (U-5MR) is another important measure of mortality which is recently being promoted as the main pointer of the state of children, as well as human and economic progress in the region (UNICEF, 1991). More so, because in low-mortality populations, mortality risks between age 1 year and 5 years are also low, and the infant mortality rate can be used as a reasonable single index of child mortality but in populations with higher mortality, relatively high proportions of deaths occur between age 1 year and 5 years as well as and so the under five mortality rate is a more important index of overall child mortality, although the infant mortality rate remains a crucial measure (UN, 1992). It has been noticed that under five mortality rate among Saharia is high (82.35 in Table 1) as compared to Marcha (42.85 by Chachra and Bhasin, 1998), Khasi (57.96 by Adak, 2001), Garo (79.01 by Adak, 2001) and others. It may be mentioned that due to malnutrition, negligence to child health care, paucity of medical facility, low socio-economic status, etc., their under five mortality rate is high.

Child Mortality Rate (CMR)

Child mortality takes into consideration the children deaths from one year to less than five

years. It can be also defined as the probability of dying between the first and fifth birth day. Child mortality is not only limited to measure the dead children in a population but also it assesses the socio-economic imbalances, which are indebted for deaths. The United Nations celebrated the International Year of Child 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. In comparison to different population groups, it has been found that child mortality rate (CMR) among Saharia is higher (62.82 in Table 1) than Marcha (28.57 by Chachra and Bhasin, 1998), Khasi (15.9 by Adak, 2001), Garo (27.1 by Adak, 2001) and others. Low level of socio-economic status, high extent of illiteracy, malnutrition, negligence attitude to child care, weaning practice without proper balanced substitute foods, inadequacy of modern clinical facility, old communication system, lack of purified drinking water, etc. are the attributed causes of high child mortality rate.

Reasons of Death of Last one Year

Reasons 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 reasons of death helps in understanding various aspects 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 analyzed may be useful for planning medical measures (Bhende and Kanitkar, 1991). In all the countries of the world, most of the deaths take place due to diseases and all the diseases are depended on biological as well as socio-economic factors.

In the present study among Saharia, it has been found that the maximum deaths were occurred due to pneumonia (20.9 percent), malaria (13.8 percent), tuberculosis (11.6 percent), gastric (9.3 percent), diarrhoea (9.3 percent), etc. (Table 2). Low standard of living, poor quality of food habit, hard work, malnutrition, insanitation, lack of purified drinking water, low level of socio-cultural status, unfavourable environment, etc. are the attributed reasons of these diseases (Bhasin & Bhasin, 1990; Adak, 1994; Sharma and Sharma, 1999; Kshatriya, 2000). Due to poverty,

illiteracy, socio-cultural norms and regulations, inadequacy of Government health centre, etc., their traditional healers are initially given preference for the treatment of their diseases. But when the treatment of traditional healers is no more enough to control the diseases, then they generally come under the treatment of modern doctors. During long time continuous suffering, modern doctors sometimes not able to control their diseases by providing the proper treatment and then the ill persons loss their survival power.

Table 2: Reasons of death of last one year among Saharia

<i>S. No.</i>	<i>Reasons of Deaths</i>	<i>Percentage</i>
1	Pneumonia Disease	20.9
2	Malaria Disease	13.8
3	Typhoid Disease	7.0
4	Gastric Disease	9.3
5	Anemia Disease	4.7
6	Diarrhoea Disease	9.3
7	Tuberculosis Disease	11.6
8	Jaundice Disease	6.7
9	Diabetes Disease	4.7
10	Indigestive Disease	4.7
11	Accident Case	2.3
12	Disease not Identified	7.0
Total		100.0

SUMMARY AND CONCLUSION

From the foregoing discussion, it may be pointed out that Saharia is a primitive tribe and have a strong low socio-economic impact on their life style. Most of the Saharia are landless and they are to be engaged in primary sector as wage earners. Due to paucity of water resources, they usually drink uncleaned and impured water. As interior inhabitation, they lag behind in the field of education and have achieved very little literacy rate. In respecting to their traditional society approved rules and norms, they are to be come on marital alliance at very early age. The awareness of family planning contraceptive methods is almost nil. Therefore, early age at marriage and family planning non-acceptance are the two important reasons which impose them to conduct frequent child births. In such circumstances, the early aged mothers are generally prostrated containing very low health status. Immunization and medical check-up for ante-natal, natal and post-natal stages are mostly neglected among them. Even a major group of people are to be affected by various seasonal as well as nutritional

diseases. So, poor socio-economic status, malnutrition, impured drinking water, high extent of illiteracy, early age at marriage and frequent child births, non-acceptance of family planning methods, unawareness on immunization, paucity of modern medical facility, worst environment, etc. are the attributed reasons of sharing various diseases which influence frequent deaths. As a result, Saharia crude birth rate, age specific death rate, still birth rate, peri-natal, neo-natal and post neo-natal mortality rates, infant mortality rate, under five mortality rate and child mortality rate are quite distressing, specifically when compared to the context of most of the tribal and non-tribal population of India. Finally, it is suggested that urgently a long-time multi-stages development scheme should be implemented among this tribal inhabitat area. Under this scheme, first priority should be given to improve their financial condition, educational status, availability and quality of drinking water and medical facility. Implementing such development scheme, occasionally demographic, biological as well as socio-economic and medical investigation should also be conducted with a view to review and understand and then an expectation may be furnished about socio-economically as well as demographically advanced Saharia.

KEY WORDS Saharia. Socio-economic Status. Mortality Measures. Improvement

ABSTRACT In this paper, an attempt has been made to study the socio-economic aspects which are collectively related with high measures of mortality level among Saharia – a primitive tribe of Madhya Pradesh. This study also expresses that as primitive tribe, they are inhabiting in very interior area and most of them are landless. Daily labour is no more enough to improve their financial status and by which they are acquainted themselves as poverty stricken. A major group of Saharia are illiterate. In respecting to the socio-cultural orthodox, they are enforced to practise marriage at early age. They are not aware to adopt any family planning contraceptive methods. Early age at marriage and family planning non-adoption usually influence to perform frequent child birth. Side by side, due to non-immunization, inadequate medical ailments, etc., both mothers and children are affected by various diseases. Beside this, malnutrition, insanitation, low living standard, harsh environment, etc., may be mentioned as the reasons of their various diseases. Due to absence of proper treatment, most of the disease affected Saharia have been expired and these are greatly concerned with their various measures of high mortality rate. Lastly, the observations suggest to make assurance regarding their socio-economic upliftment, purified drinking water, educational facility, regular availability of the appropriate health and family welfare services, etc. under long time multi-stages development scheme. After that, an expectation may be made to their better socio-economic as well as demogra-

phic situation.

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