

## **AN ANTHROPOLOGICAL LOOK INTO THE DEMOGRAPHY AND PRACTICES RELATED TO MATERNAL AND CHILD HEALTH AMONG THE JAUNSARESE OF UTTARAKHAND, INDIA**

**Rahul Patel**

### **ABSTRACT**

The United Nations Population Fund (UNFPA) estimated that 2, 89,000 women died of pregnancy or child birth related causes in 2013. The mother's death results in vulnerable families and vulnerable infants. Under such precarious circumstances, even if the infants are able to survive somehow, most of the time they succumb and fail to attain age of one year. While in 1990, worldwide, 12.7 million children under age five died; in 2013 this number fell to 6.3 million children. (UNICEF, 2015). Due to growing awareness for family planning, skilled birth attendance and emergency obstetric care the global maternal mortality ratio (MMR) has fallen from 380 maternal deaths per 1,00,000 live births in 1990 to 210 in 2013. While there has been a decline recorded worldwide in maternal as well as child mortality and morbidity rates, much more has to be done. In order to reduce the maternal and child mortality as well as morbidity, the domain of maternal and child health becomes very important. In this backdrop, the present study was undertaken, applying anthropological field work methods, to have a look into the demography and practices related to maternal and child health (MCH) among the Jaunsarese of Uttarakhand (India). The study reveals a moderate status of MCH that requires more attention to aspects such as institutionalized births, intake of iron and folic acid as well as maternal and child immunization, etc.

**Key words:** Jaunsarese, Jaunsar-Bawar, MCH, MMR, ante-natal care, immunization, post-natal care.

### **INTRODUCTION**

The major aim of reproductive and child health programme (RCH) is to improve the survival status of mothers and children of a community and nation. Maternal and child health which is an important aspect of RCH includes all those domains which incorporate the health of women during pregnancy, child birth, the post partum period, prenatal and post natal care as well as health care of infants and

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children. WHO (2005) in its report says that poor maternal conditions account for the fourth leading cause of death for women worldwide, after HIV / AIDS, malaria and tuberculosis. Most maternal deaths are caused by biological processes which can be prevented with human efforts and scientific endeavors. The fourth Millennium Development Goal (MDG-4 and 5) has underlined commitment to improve the health of mothers, infants and children, as many countries have pledged to reduce MMR and IMR by the year 2015 from the baseline as set in the year 1990. Unfortunately, this goal cannot be met simply until maternal and infant mortality rate is not reduced to targeted goals as maternal and child mortality is still soaring high in most developing countries. Although the world has begun to see significant improvements in child survival, even then the fear of mortality in the first year of child's life remains virtually unchanged. In the past two decades, there has been an inclusion in Global Child Survival and Safe Motherhood Program (CSSM), Reproductive and Child Health Program (RCH) and Integrated Management of Neonatal Childhood Illness program (IMNCI). However, irrespective of these developments the situation related to infant's health remains a major global concern and a daunting challenge (WHO, 2005). High infant mortality in India accounts to the high child mortality rate (WHO, 2005). The neonatal mortality accounts for nearly half of all deaths of infant mortality (Marsh *et al.* 2003). McDonald *et al.* in their study in 2005 observed that high level of infant mortality leads women to have more children to compensate their loss. This type of situation has drastic effect on the mother's health, which ultimately becomes a causative factor for accelerating the rate of maternal mortality. This type of crisis threatens progress related to improvements in maternal and child health in most of the developing and under developed countries. In India also, similar factors are hindering it to attain millennium development goals (MDGs) where the country is supposed to reduce child mortality rate to two third by 2015 (WHO, 2005). The leading causes of infant mortality such as, pneumonia, diarrhea, preterm birth and low birth weight are associated with health status of the mother. In India, background characteristics such as mother's literacy, urban/rural residence and household economic status are also have significant affect on the child survival. (Hobcraft *et al.*, 1984). The key proximate determinants are low coverage of antenatal, natal postnatal and neonatal coverage in India. According to majority assertions poverty, position of women in the societies and over control by medical professionals in health sectors also makes infant health problem more difficult and complex. Pregnant and lactating mothers and pre-school children are found to be the most vulnerable groups and need maximum attention. India, with a population of over 1.21 billion, accounts for the highest number of maternal (estimated to be 56,000 in 2010) (WHO, 2012) and under-five deaths (estimated to be 1,655,000 in 2011) (UNICEF, 2012) in the world. The Millennium Declaration that was endorsed by the leaders from 189 countries in New York, USA, in 2000 also acknowledged the importance of regular monitoring and investigation in the progress and other dimensions of maternal and child health care through the fourth (reduce under-five mortality by two thirds between 1990 and 2015) and the fifth (reduce maternal mortality ratio by three quarters between

1990 and 2015) Millennium Development Goals (MDGs). Realizing the importance of maternal and child health services, the Ministry of Health, Government of India had taken steps to strengthen mother and child health services in the first and second five year plans (1951-56 and 1956-61). Further family planning services were integrated with maternal and child health and nutrition services when the Minimum Needs Programme (MNP) was initiated during the fifth five year plan (1974-79). The Government of India from time to time initiated various other schemes and programme on immunization in 1978, Universal Immunization Programme (UIP) in 1985-86. The Expanded Programme on Immunization (EPI) started in 1978 by making free vaccination to all eligible children in order to reduce morbidity, mortality and disabilities due to the six serious but preventable diseases viz. tuberculosis, diphtheria, pertussis tetanus, polio and measles. The Universal Immunization Programme (UIP) started in 1985-86 was a special programme to provide impetus to the immunization scheme. Various other health programmes were taken up so as to reach 'Health for all' by 2000 A.D. India has been instrumental in devising new policies and programmes regularly as a response to unfavourable health outcomes, particularly in areas of maternal and child health care. However, despite the ambitious work-plan of several national level programmatic efforts such as the National Population Policy (2000), the National Health Policy (2002), and the National Rural Health Mission (2005), the progress in reducing maternal and child mortality is not satisfactory. Although a few regions or states of the country have shown considerable improvements and are on track to achieve the fourth and fifth MDG targets, the progress has been uneven and inequitable at several social, economic, and regional fronts. The increasing coverage of maternal, newborn, and child health care services is intrinsically associated with the expected improvements in the maternal and child health.

The United Nations Population Fund (UNFPA) estimated that 2, 89,000 women died of pregnancy or child birth related causes in 2013. The mother's death results in vulnerable families and vulnerable infants. Even if they are able to survive somehow, are more likely to die before their second birth date. While in 1990, worldwide, 12.7 million children under age five died; in 2013 this number fell to 6.3 million children (UNICEF, 2015). Due to growing awareness for family planning, skilled birth attendance and emergency obstetric care the global maternal mortality ratio (MMR) has fallen from 380 maternal deaths per 1,00,000 live births in 1990 to 210 in 2013. While there has been a decline recorded worldwide in maternal as well as child mortality and morbidity rates, much more has to be done. In order to reduce the maternal and child mortality as well as morbidity, the domain of maternal and child health becomes very important. As per NFHS-3 survey, 78% of the population of Uttarakhand lives in rural area and rest 22% lives in urban area. According to NFHS - 3, IMR is 42 per thousand live births, which is slightly higher from the NFHS-2 estimates of 38. About 60% of females received ANC care, two thirds of women delivered their child at home, and 36% of pregnant women used health facilities. According to NFHS-3, complete immunization is 60% in

Uttarakhand, which is 20% higher than the NFHS-2. In this backdrop, the present study was undertaken applying anthropological field work methods to have a look into the demography and practices related to maternal and child health among the Jaunsarese tribe residing in Jaunsar-Bawar area in the state of Uttarakhand in India.

### STUDY AREA AND THE JAUNSARESE

The study area, popularly known as Jaunsar-Bawar, is situated in Chakrata tehsil of Dehradun district, which lies between 77°45' and 78°7'20" East to 30°31' and 31°3'3" North. It is most rugged hill tract with gorges. The total geographical area of region is 1002.07 km<sup>2</sup> constituting nearly 32.5 per cent of Dehradun district. Jaunsar and Bawar which were originally two separate Paraganas, were merged later as single Paragana, now forms the Chakrata Tahsil, with the cantonment town of Chakrata as its headquarters. Generally the people living in Jaunsar-Bawar area in Chakrata tehsil are known as 'Jaunsaris' and they call themselves as 'Khasa'. Total population of the Jaunsaris is 1,27,721 (Census 2001). But the Khasas do not constitute the entire population of this region. The Khasas are Rajputs. Closely akin to them are the Brahmans and marriage between the two is possible and quite common. Intermediate castes include Bajgi, Lohar etc. In the lower scale of their social stratification are the Koltas.

### ETHNIC IDENTITY OF THE PEOPLE

The Khasas are Rajputs. Their physical features include usually a tall stature, fair complexion, possessing a long head, vertical forehead, fine or leptorrhine nose, hazel or light eyes, curly hair and regular proportioned and well defined features of the face. The highest altitudes of the region are inhabited by mongoloid features basically in south and south-west. Here, south-east has contributed to the 'yellow' infusion among the descendants of the *Indo-Aryan* or *Mediterranean* type. The aboriginal or autochthonous people i.e. the Koltas and other artisan castes, represent 'Austic' or 'pre-Dravidian'. The language spoken in *Jaunsar-Bawar* is of Aryan group, termed as '*Western Pahari*' by Grierson. However, the main dialect spoken by them is 'Jaunsari'. In the villages of Jaunsar-Bawar, family forms a domestic unit, with patrilocal residence, patrilineal descent, patronymic designation and patriarchal authority.

Polyandry is the common form of marriage in Jaunsar-Bawar. For this social feature the Khasas claim their origin from the Pandavas of Mahabharata. This situation was termed as 'Polygynandry' (Majumdar 1962). The Jaunsarese are basically an agricultural-cum-pastoral tribe and their economy is based on crude type of cultivation and animal husbandry. The *Khumri* and the *Sayanachari* or the institution of *Sayana*, have been two very old and important institutions which are responsible for regulating the village and social life in Jaunsar-Bawar. Religion of Jaunsaris is a curious blend of Hindu and tribal beliefs and practices. They believe in the doctrine of transmigration; they marry by taking a bow before the sacred fire; and they cremate their dead. Other than Hindu Gods and Goddesses they also worship *Mahasu*, whom they regard as the presiding Deity of *Jaunsar-Bawar*.

## MATERIALS AND METHODS

The present study was conducted keeping in mind the holistic approach and field work tradition. First hand information was collected directly from the field which included 15 villages, viz. Deriyo, Kolaha, Maipawata, Bahamoo, Shirwa, Mahrawana, Rawana, Pati, Tungrauli, Timara, Bandara, Bishdhaar (Bangaon Khat), Buraswa, Bagoti (Burasvas Khat) and Jogyo (Bislad Khat). Villages and samples were selected on the basis of multi-stratified random sampling. A detailed structured interview schedule was applied on 59 Jaunsari females (who have at least one live birth in last 12 months). The villages selected for the present study are located on and around Chakrata-Lakhamandal link road, in Bangaon, Burasvas and Bislad Khats (administrative units). These villages are generally situated on the spurs (projections from mountain or mountain range) running from the middle and lower level of the ridges, in the midst of cultivated terraced fields and mostly around water sources like Khadd (natural reservoirs).

## RESULTS

### Ante-natal Care (ANC)

Ante-natal care is an important aspect of maternal health and it refers to pregnancy related health care provided by a doctor or a health worker in a medical facility or at home or both. In order to control maternal morbidity and mortality, ante-natal care is a must and it is required and also recommended to follow at least three ante-natal check-ups during pregnancy (Park, 2013). In the present study, information on maternal and child health was collected from the mothers who had at least one live birth in past one year. It is observed from the Table 1 and Figure 1 that out of 59 mothers (who have at least one live birth in last 12 months), 57.62% went for ANC before delivery and 42.37% mothers didn't go for ANC.

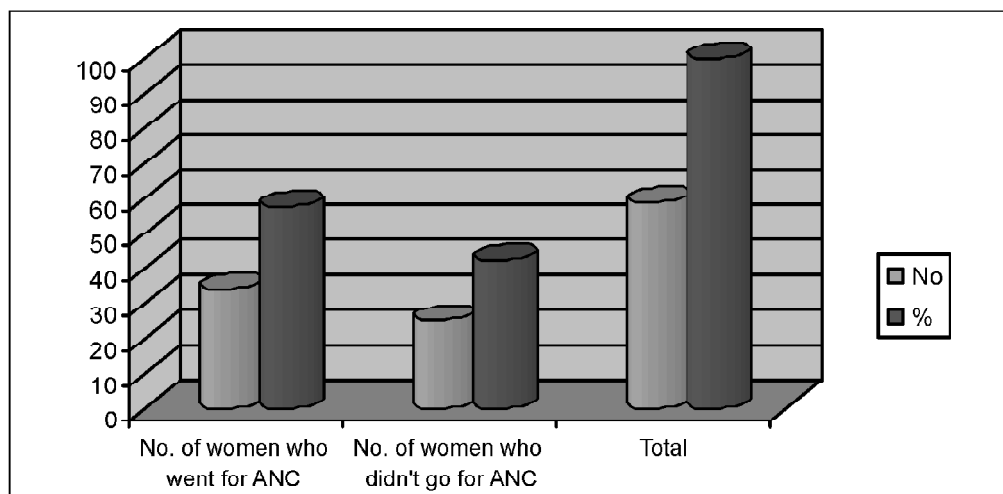


Figure 1: Distribution of Mothers who attended ANC

Table 2 explains that as compared to India, Jaunsarese has higher number of women who attended ante-natal checkup which shows higher awareness among Jaunsari females. Though the overall percentage of Jaunsarese is higher than that of Uttarakhand but demand some more awareness when compared to other Indian tribal populations.

### Illness during Pregnancy

Table 3 reveals that 61.01% mothers experienced weakness during span of pregnancy along with the sensation of giddiness and vomiting. 15.25% mothers suffered the problem of swelling of limbs mostly on their lower limbs. 10.16% women felt the problem of back-ache and abdominal pain. 5.08% women suffered blurred vision and 8.47% women felt no problem.

### Immunization of Pregnant Women

Tetanus also known as 'lockjaw' is an infection characterized by muscle spasms. Worldwide, tetanus kills an estimated 180 000 neonates (about 5% of all neonatal deaths (2002 data) and up to 30000 women (about 5% of all maternal deaths) each year (WHO, 2006; [www.who.int/making\\_pregnancy\\_safer/publications/en/](http://www.who.int/making_pregnancy_safer/publications/en/)). If the mother is not immunized with the correct number of doses of tetanus toxoid vaccine, neither she nor her newborn infant is protected against tetanus at delivery. Tetanus is caused by a toxin produced during the anaerobic growth of *Clostridium tetani*. Infection is acquired through environmental exposure of any broken skin or dead tissue- such as a wound or when the umbilical cord is cut- to the spores of the bacteria. These spores are universally present in the soil. Poverty, poor hygiene and limited access to health services increase the risk to such troubles. Tetanus toxoid (T.T.) is an important vaccine for immunization of pregnant women. Two

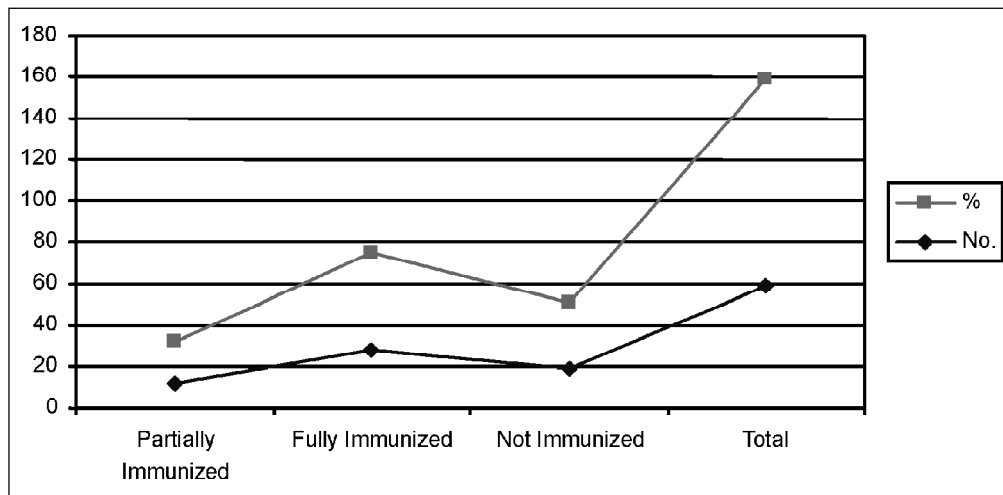


Figure 2: Distribution as per status of Immunization

doses of T.T. given to pregnant women month apart during early pregnancy are highly effective in preventing tetanus among new born. In this reference, Table 4 and Figure 2 show the distribution of pregnant Jaunsari women on the basis of status of immunization. It is found that 67.80% mothers have received T.T. Vaccine and 32.20% mothers were not protected against tetanus. However, among the immunized mothers, 47.46% were fully immunized and 20.34% were partially immunized against total disease. When non-immunized mothers were asked about reasons for not taking T.T. injections then most of them replied that they are afraid of injections and some also replied that they do not get time from their daily routine to visit centre and get the injection.

It is clearly evident from Table 5 that TT immunization is very less among Jaunsari women in comparison to that of Indian (Rural) and Uttarakhand's status of immunization and hence presents a dismal picture of immunization among Jaunsarese.

**Intake of Iron and Folic Acid**

Health and Family Welfare, GOI in 1994, provided that pregnant women should take 100 tablets of iron and folic acid (IFA) during pregnancy. Information was collected on whether the mothers have received IFA for at least 90days. It is revealed from Table 6 and Figure 3 that only 23.72% mothers took Folic Acid for 90 days and 76.27% women did not take it. This also shows that heavy efforts are required on the level of health workers to improve the status of IFA intake in these tribal villages.

Tables 7 reveals that IFA intake in Jaunsarese is higher than that of Uttarakhand and Indian (rural) level which is a good sign but much more efforts are required to raise the status of health of pregnant women in the region.

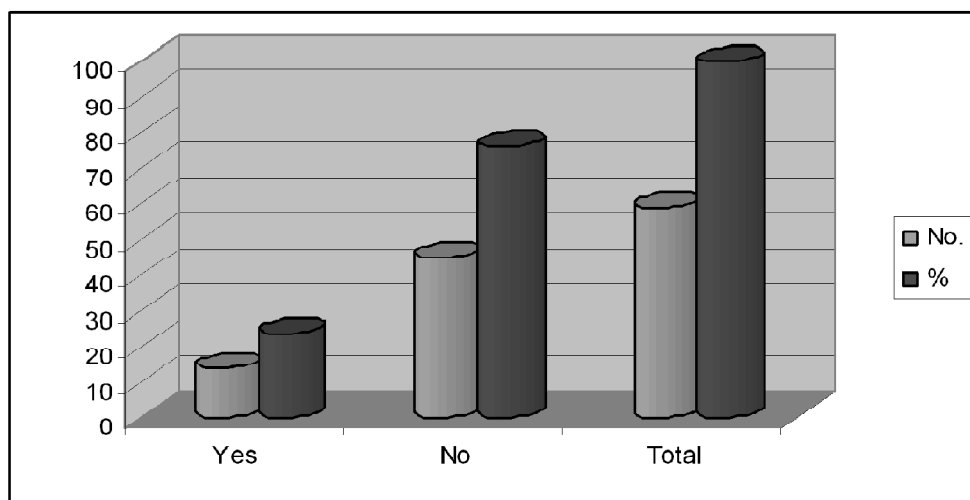


Figure 3: Distribution of Status of Iron & Folic Acid Intake

### Place of Delivery

Birth practices play very crucial role in reduction of neo-natal deaths as well as in the health of a delivering woman. Place of delivery and person who assisted or conducted the delivery is also an important indicator to depict the status of health of mothers and this has been a major thrust area of RCH programme in India. In case of the Jaunsarese, Table 8 shows that 22.05% deliveries are institutional and 77.95% deliveries are non-institutional, i.e. at home or at house of some relative. Among all, 22.05% institutional deliveries were assisted by qualified medical practitioner, ANM etc. and of all the non-institutional deliveries (77.95%), 40.67% were assisted by untrained 'dai' and 37.28% were assisted by relatives like mother-in-law or elderly women of the family.

### Immunization of Children under 6 years of Age

It is an important factor for child health to provide children with proper and full immunization before they complete their first year of age. Standard immunization schedule is necessary for maintenance of child health. In case of the Jaunsarese, out of total 786 children in the fifteen studied villages, 52.87% children were fully immunized/vaccinated (refers to those who received BCG, Measles and three dose each of DPT and polio vaccines excluding polio 0), 31.74% are partially immunized and 15.39% have not been given any immunization or vaccines.

Table 9 and Figure 5 reveals that 52.87% children who are fully immunized have received vaccines of BCG, DPT and Polio but this is lower to that of Uttarakhand which is 60% as per NFHS III.

It is found during field work that health centres do not have proper facilities to store vaccines which lead to maximum expiration of vaccines. Inadequate staff and geography of the area also creates hindrance in achieving the targets regarding immunization and better health status.

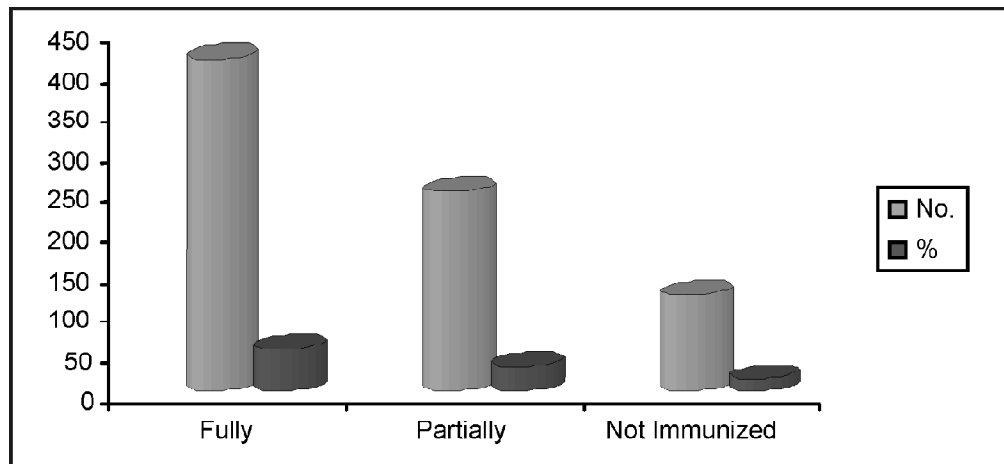


Figure 4: Distribution of Immunization Status among Children



### **Cohabitation**

Cohabitation is prohibited during menstrual phase among the Jaunsarese. The wife abstains intercourse and sleeps in a separate room. After the menstruation is over, Jaunsarese women take purification bath and after this they are free to cohabit with any of their husbands. During the course of pregnancy also the cohabitation is prohibited. After the delivery the cohabitation is prohibited for about 3-4 months.

### **Pregnancy**

Due to their socio-economic conditions the Jaunsari females are forced to perform all their daily routine activities and normal duties during the phase of pregnancy also. They continue all agricultural activities, fetching of water from '*Khadd*', cutting of wood and collection of timber from the forest. One of the reasons for the low sex ratio in Uttarakhand, can be the poor health of women in the state. The life and work patterns of women here have been grueling and take a heavy toll of them. With 76 percent women living in the rural side, their daily lives include heavy tasks of cultivation, fuel and fodder collection by trudging along the mountainous roads and hilly slopes for as much as 10 to 15 km a day, in search of necessities. The women walk daily 1-2 km of mountainous road to fetch drinking water. All these are in addition to the main work of cultivation in a subsistence economy. The never ending work starts early in the morning by about 5 am and stops only by about 10 pm. Unlike women in plain areas, the women here look after all the agricultural operations (except preparing the field for sowing) and trek large areas. The hard labour in hilly terrain in one way or another influence their reproductive health. Most of the time, this led to miscarriages and still births. One of the most common complaint women have is leucorrhoea, poor nutrition, anaemia and body ache.

Women suffer most in Uttarakhand due to the delivery practices. Though education, rising economic standard and social awareness have somewhat reduced them, many women who deliver babies are still subjected to isolation in unhealthy conditions, deprivation of proper nutritional food and other amenities due to false beliefs. No special diet except '*khindari*' and '*halwa*' is given to the pregnant women. The study reveals that about 86.12% females take same food during pregnancy. 9.65% females take more food but liquor is prohibited.

### **Intra-natal Practices**

The Jaunsarese consider delivery as a natural phenomenon. The room is cleaned in advance in which the delivery is to be conducted. For easy delivery the Jaunsarese use various ethno- medicinal plants.

### **Post-natal Practices**

Just after delivery, the Jaunsari woman and baby both are given a bath with warm water. The child is put in the smoke of Ajwain. The child is also given massage of

Chullu seed oil (*Prunus armeniaca* L.). The mother is given a drink of turmeric and milk and Kulath (*Dolichos unflorus* Lam.) to eat. After about 1 or 2 hours of delivery the child is breast fed. However, it is also revealed from the study that infants/ children suffered various ailments like fever, diarrhea, respiratory infections like cough, short and rapid breathing. In majority of cases (79.83%) the parents reported this to the medical officer at State Allopathic Dispensary (SAD) and to CHC and got their children treated. Remaining 20.17% parents resorted to indigenous treatments and ethno-medicinal remedies.

### Pre-natal Mortality

Pre-natal mortality including still births accounted for 15.93% deaths among Jaunsaris. Neo-natal mortality is found to be 3.2%. Diarrhoea /Dysentery, Fever/ Malaria, Tetanus, Chicken pox / Measles, Respiratory problems, Cholera, Tuberculosis, injuries and Evil spirits are certain causes for the offspring mortality as responded and revealed by majority of respondents.

## CONCLUSIONS

On the basis of findings of present study it could be concluded that the status of maternal and child health among the Jaunsarese tribe requires much more care and augmentation. Improvement in TT immunization, intake of Iron and Folic Acid, improvement in institutionalized deliveries as well as awareness regarding RCH is need of the day to achieve the MDGs and health for all. Sufficient efforts should be made to bring forth a standard measure to address cases of MCH and conduct the targeted interventions among the tribal populations, addressing obstacles in the utilization of health care services, irrespective of the state level average performance. It has been established that without addressing the marginalised sections of the society, particularly the poor in India and its states, the fourth and fifth targets of the MDGs cannot be achieved.

**Table 1: Distribution of Mothers who attended ANC**

Category	No	%
No. of women who went for ANC	34	57.62
No. of women who didn't go for ANC	25	42.37
Total	59	100

**Table 2: Comparison of mothers who attended ANC**

ANC	Jaunsarese	Uttarakhand*	India* (Rural)
	57.62%	50.7%	43.7%

\* Source NFHS-3

**Table 3: Illness among Mothers during Pregnancy**

<i>Illness</i>	<i>No.</i>	<i>%</i>
Weakness (with Giddiness and Vomiting)	36	61.01
Backache and Abdominal Pain	06	10.16
Swollen Limbs	09	15.25
Blurred Vision	03	5.08
No Problem	05	8.47
Total	59	100

**Table 4: Distribution as per status of Immunization**

<i>Status of Immunization</i>	<i>No.</i>	<i>%</i>
Partially Immunized	12	20.34
Fully Immunized	28	47.46
Not Immunized	19	32.20
Total	59	100

**Table 5: Comparison of T.T. Immunization**

<i>T.T. Immunization (Percentage)</i>	<i>Jaunsarese</i>	<i>Uttarakhand*</i>	<i>India* (Rural)</i>
	47.46	53.6	72.6

\* DLHS-3

**Table 6: Distribution of Status of Iron and Folic Acid Intake**

<i>Iron &amp; Folic Acid (IFA) intake</i>	<i>No.</i>	<i>%</i>
Yes	14	23.72
No	45	76.27
Total	59	100

**Table 7: Comparison of IFA intake**

<i>IFA intake</i>	<i>Jaunsarese</i>	<i>Uttarakhand (Rural)</i>	<i>India (Rural)</i>
	23.72%	20.8%	18.1%

**Table 8: Place of Delivery**

<i>Place of Delivery</i>	<i>Assisted by Doctor/ ANM</i>		<i>Assisted by Dai</i>		<i>Assisted by Relatives</i>		<i>Total</i>	<i>%</i>
	<i>%</i>	<i>%</i>	<i>%</i>	<i>%</i>	<i>%</i>	<i>%</i>		
Institutional (Hospital, CHC, ANM Centre)	13	22.05	00	00	00	00	13	22.05
Non-Institutional (At Home)	00	00	24	40.67	22	37.28	46	77.95
Total	13	22.05	24	40.67	22	37.28	59	100

**Table 9: Distribution of Immunization Status among Children**

<i>Status of Immunization</i>	<i>No.</i>	<i>%</i>
Fully	416	52.87
Partially	249	31.74
Not Immunized	121	15.39
Total	786	100

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