CHAPTER - V
DISCUSSION

In the preceding chapters, we have presented our findings on the overall fertility performance, effect of various biological as well as social factors including adoption of family planning measures and ABO blood groups incompatibility on fertility performance of the Sonowal Kacharis of Dibrugarh district of Assam. In this chapter, we shall briefly discuss our findings and also compared the same with the available and accessible allied data on some other neighboring populations of the Northeast India to have a comparative and comprehensive idea of the fertility and mortality pattern as well as the effect of ABO blood group incompatibility in the population under investigation.

**Fertility performance**

The fertility performance of the Sonowal Kachari women of Dibrugarh district, Assam has been discussed in the Chapter-IV. A total of 1230 ever married women ranging from 16 to 65 years have been studied. Out of them the highest number of women are equally found in both the age groups of 31-35 and 36-40 years respectively, the percentage of which is 16.58%; it is followed by 15.20% of women who are of under the age group 26-30 years.

The age at menarche is an important parameter of fertility studies. Among the Sonowal Kacharis, the age at menarche ranges from 8 to 17 years. The mean
age at menarche among them is 11.88±0.043. It has been reported as 12.77 years, by Deka (1976) and 12.54±0.08 by Baruah (2007) among them. The mean menarcheal age as reported by Das et. al. (1980) among the Chutiya, Deori and Mishing population of Assam is 12.54 years, 13.06 years and 12.68 years respectively. Ahmed Das and Saikia (1999) reported 12.55 years of mean menarcheal age among the Garo population of Assam. Baruah (2007) and Das (2009) reported mean menarcheal age among the Mishing of Assam as 12.97±0.08 and 13.51±0.09years respectively. Among the Ahoms, mean age at menarche was found to be 12.24±0.09years by Baruah (2007). Therefore, the mean menarcheal age among the Sonowal Kacharis of Dibrugarh district is lower than those of the above mentioned populations of the region as well as from the same population groups studied earlier by different workers in different time.

The age at marriage is also one of the major parameters for differential fertility. It has an impact on childbearing because women who get married earlier have a longer period of exposure to pregnancy and greater number of childbirth. The mean age at marriage in the present population is 24.30±0.142 years. The age at marriage ranges from 13 years to 42 years among them. However, the highest number of women got married in between 18 to 22 years which is followed by 23 to 27 years of age; the frequencies of which is 34.80% and 34.31% respectively. Among the Ahom, Chutiya, Deori, Mishing and Lalung of Assam it is 17.98, 18.06, 18.47, 18.43 and 14.59 years respectively as reported by Das et al (1980). The mean age at marriage among the Mishings of Assam has been reported by
Baruah (2007) and Das (2009) as 20.98±0.27 and 19.88±0.26 years respectively. Among the Sonowal Kacharis mean age at marriage was reported as 20.17±0.24 years by Baruah (2007). Thus, the group of women under discussion has got married at a later age as compared to the ones reported in the earlier studies. The greater mean age at marriage among them is perhaps due to the influence of formal education.

The age at first child birth ranges from 14 years to 43 years. The highest frequency of women (41.79%) shows their age at first child birth in between 24 to 28 years. The mean age at first child birth among them is 25.89±0.130.

As the older women get more exposure for pregnancy, they show highest number of live births than that of the younger ones. The women of different age group of present population show 1-9 live births. The highest number (15.61%) of women in the age group of 16-30 years show 1 live birth, whereas the lowest (0.08%) of women above 61 years also show 1 live birth. The frequency of women having 2 live births is 38.46% out of which the highest 23.90% of women fall in the age group of 31-45 years. The lowest number (0.41%) of women above 61 years shows 2 live births. The highest 11.30% of women show 3 live births and they fall in the age group of 31-45 years, whereas the highest number (4.55%) of women in the age group of 46-60 years shows 4 live births. The highest number of (2.52%) women having 5 live births is found in the age group of 46-60 years. Only 0.08% of women above 61 years of age show 9 live births. However the highest 1.06% of women above 61 years shows 5 live births.
The mean number of live birth in the present population is 2.37 per woman. The mean live birth was reported as 5.34 per women by Das et al (1980) among the Mishings of Assam. Among the Tangsas of Assam it was 3.51 per woman as reported by Saikia and Dutta Das (2006). Devi, et al (2006) observed 3.63 live births among the Ithings of Manipur. Baruah (2007) observed 3.32±0.14, 3.98±0.18 and 3.12±0.12 live births per woman among the Ahom, Mishing and Sonowal Kacharis respectively. The Khamiyang of Margherita shows 3.01 mean number of live births as it was reported by Ahmed Das, et al (2008). Das (2009) reported mean live birth among the Mishigs of Assam as 3.36±0.16 and among the Khasis as 3.63±0.18 per mother. The over all mean live births among the population groups of Northeast India was reported as 3.07±2.04 by Dey and Goswami (2009). Therefore it can be said that the mean live birth in the present population is lower than that of the other population groups of Northeast India those have been studied by different scholars at different points of time.

Age at menopause is directly related to fertility as it is the sign of the end of reproductive life of a woman. It varies from population to population. The age at menopause among the Sonowal Kacharis of Dibrugarh district ranges from 36 to 55 years. The mean age at menopause is found to be 45.81±0.219 years. Among the Ahom population of Assam the mean age at menopause is 48.44 years as reported by Gogoi (1972), it is 45.85 years among the Garos as reported by Ahmed Das and Saikia (1999). The mean age at menopause among the Tangsas of Upper Assam has been found to be 40.98 years (Saikia and Dutta Das 2006). Baruah
(2007) reported 46.80, 48.40 and 47.12 years of mean age at menopause among the Ahom, Mishing and Sonowal Kacharis of Asssam respectively. Among the Khamiyang of Assam it was found to be 44.60±0.49 by Ahmed Das, et al (2008). Saikia and Baruah (2009) observed the age at menopause among the Kaibarttas as 45.27±0.98 years. Thus in the present population, mean age at menopause is higher than those of the Tangsa and Khamiyangs; it is comparable with that of the Garos and Kaibarttas; whereas it is lower than those of the Ahom, Mishing and even than that of the same population groups as reported by some the former scholars mentioned above.

The group of women with completed fertility shows a slightly higher mean number of live births than that is shown by the sample population as a whole; it is 3.51 per woman in the former while it is 2.37 in the later. The completed fertility size among the Sems of Assam is found to be 7.52 live births per mother (Limbu, 1996). Gogoi (2008) reports that the fertility sizes among the Idu Mishimi, Digaru Mishimi and Miju Mishimi of Arunachal Pradesh are 4.86, 6.12 and 6.48 respectively (Khongsai, 2012). Among the Khamiyang, completed fertility size has been found to be 4.65 by Ahmed Das et al. (2008); it has been observed to be 4.75, 6.18 and 4.32 among the Ahom, Mishing and Sonowal Kacharis respectively by Baruah and Sengupta (2009). Saikia and Baruah (2009) have reported that 6.33 is the completed fertility size among the Kaibarttas. Among the Khunsai Kukis, the completed fertility size is reported as 5.48 by Khongsai (2012). Comparing the above mentioned populations, the completed fertility size among the Sonowal
Kacharis of Dibrugarh district, Assam is found to be lower than some other population groups of Northeast India, who have been studied earlier.

Among the population under investigation, the index of total selection intensity (I) is found to be 0.1824 according to the Crow’s (1958) formula and 0.2635 according to Johnston and Kensinger’s (1971) formula. The index of selection due to prenatal mortality (I_{pre}), due to child mortality (I_{child}) and index of selection due to fertility (I_{fert}) among the present studied population are 0.0686, 0.0703 and 0.1047 respectively. According to Reddy and Chopra (1990), the index of selection intensity (I) among Indian population ranges between 0.24 and 2.25 (according to the Crow’s and Johnston and Kensinger’s); ‘I_{pre}’ in between 0.01 and 0.81; and ‘I_{fert}’ is in between 0.17 and 0.83. Thus, the calculated values for the present population indicate that ‘I’ is within the range of Indian populations. It is the same in case of both the indices of selection due to fertility (I_{fert}) and the mortality components (I_{m}). The indices of selection due to prenatal and postnatal mortalities are lesser than that due to fertility. Thus the findings reveal that selection operates primarily through differential fertility rather than the differential mortality. The index of selection due to fertility seems play a major role in the total selection intensity of the Sonowal Kacharis of Dibrugarh district, Assam. In some of the former studies, scholars (Sengupta and Kalita, 1996; Baruah, 2007; and Dutta Das and Sarma, 2013) have reported similar types of findings among the Sonowal Kacharis living in different areas of Assam. However, the index of total selection intensity (I) found in these studies were slightly higher than that of the
present study. Among the Bodo Kacharis of Assam, Dutta Das and Sarma (2013) reported index of total selection intensity (I) as 0.0597 and 0.1413 (by Crow’s formula and by Johnston and Kensinger’s formula respectively). Dutta Das (2012) reported index of total selection intensity (I) as 0.1291 and 0.1859 among the Hajong of Assam. Total selection intensity reported by Baruah (2007) among the Ahom were 0.1875 and 0.3116 and among the Mishing were 0.2451 and 0.3673. Thus the present population shows relatively higher index of total selection intensity than that of the Bodo Kacharis whereas it is lower than that of the Ahom and Mishing populations of the region.

The rate of fecundity of a woman is not uniform all over her reproductive life; it begins with puberty and increases to its highest level at a particular age and then again gradually decreases and finally ends at a particular age. In the present population the age specific fertility rate reaches its peak in the age group 24 to 28 years; they show 1.282 live births per woman. Khongsai (2012) reported the highest age specific live birth in the age group of 25 to 29 years (1.44 per woman) among the Khongsai Kuki of Manipur. The total marital fertility rate among the Sonowal Kacharis of Dibrugarh district is found to be 3.69, which was recorded as 6.94 among the Assamese Sikh by Kaur (2010). The rate was studied among the Khongsai Kukis of Manipur living in town and rural areas, by Khongsai (2012) and was reported as 3.71 and 4.849 respectively. The Sample Registration Survey of India 2012 reported 4.4 (per woman) total marital fertility rate for the over all population of the country.
The Crude primary sex ratio (910.09) as well as the Secondary sex ratio (921.61) of the offsprings of the population is lower, i.e. the numbers of female are lesser than males. It reveals the existence of some selective force for sexual selection within the population.

**Fertility Wastages**

The frequency of fertility wastage (abortion and still birth) or prenatal mortality in the present population is higher (27.27%) among the women of age group 16-20 years. It is followed by the women of age group 36-40 years with a frequency of 10.33% per 100 conceptions. The lesser frequency of wastage is found among the women of age group 51-55 years. Thus the younger women of the population show relatively higher fertility wastage than that in the older groups.

The findings of the present study show that the frequency of fertility wastage or prenatal mortality in the Sonowal Kacharis of Dibrugarh district Assam is 6.83% which is lower than the Hajong (15.60%) of Meghalaya (Barua 1982), Non-Christian War Khasi (8.09%) of Meghalaya (Khomgsidier, 1995), the Ahom (9.46%) and Mishings (8.93%) of Assam (Baruah, 2007), Mishings of Assam (Das, 2009) and Khongsai Kuki (8.76%) of Manipur (Khongsai, 2012). But the same is higher than those reported among the Semsa (5.90%) of Assam (Limbu, 1996) and Nepalese (5.92%) of Manipur (Singh, 2006). However, from the above findings, we can conclude that the frequency of fertility wastage among the Sonowal Kachari women is low in comparison to the some other population groups of Northeast India.
**Postnatal Mortality**

The frequency of postnatal mortality (neonate +infant +child) among the studied population is found to be higher among the women of above 61 years. They show 20.00% of total postnatal mortality per 100 live births which is followed by the women of age group 16-20 years with a frequency of 18.75%. The women of age group 26-30 years show only 2.07% of mortality. The findings of the present study show 5.83% of total postnatal mortality among the Sonowal Kacharis of Dibrugarh district Assam which is lower than those of the Christian (10.20%) and Non Christian War Khasi (12.45%) of Meghalaya (Khongsdier, 2002), the Semsa (31.60%) of Assam (Limbu, 1996), Mishing (8.29%), Ahom (5.93%) and Sonowal Kacharis (7.86%) of Assam (Baruah, 2007). But it is higher than the Khongsai Kuki (3.32%) of Manipur (Khongsai, 2012). Thus, from the above findings, we can conclude that the frequency of postnatal mortality among the Sonowal Kachari women is low in comparison to some other population groups of Northeast India.

**Determinants of fertility**

Many previous studies have shown that biological as well as socio-cultural factors such as women’s age, age at marriage, age at menarche, age at first child birth, age at menopause, birth interval, education, economic status, adoption of family planning measure and others have an effect on fertility performance (Caldwell, 1979; Singh, 1996; Elamin and Bhuyan, 1999; Bhasin and Nag, 2002; Reddy et al, 2006).
Biological Factors

The highest numbers of Sonowal Kachari women of the present study belong to the age group 26-45 years (62.44%). Regarding age at marriage, the highest number of women got married at the age group of 20-25 years.

Of the biological factors, considered in the present study, higher age group of women, earlier age at menarche and marriage, higher age at menopause, lower birth intervals are found to be related with higher live births. The women of the studied population show a significant difference in the number of live births according to their age group, age at menarche, age at marriage and birth intervals. However, they show insignificant difference in the same according to the age at menopause.

The frequency of wastage is found to be higher (11.76%) among the younger mothers i.e. of ≤ 25 years. The frequency of fertility wastage is statistically insignificant in the present population according to the women’s age and age at menopause, but shows a negative correlation (r = -0.835, p>0.05) to the age of women, i.e. the rate of wastage decreases with the increase of women’s age. The frequency of fertility wastage is found to increase in the Sonowal Kachari women with the increase of women’s age at menarche, age at marriage and birth intervals. The differences in the frequencies according to the age at menarche, age at marriage and birth intervals have been found to be statistically significant.

The frequency of postnatal mortality (neonate+infant+child) in the population shows a significant association with the age group of women (r=0.965,
p<0.05). The women of higher age group show higher frequency of mortality (neonate 5.69%, infant 2.19% and child 4.16%) than that of the younger women. In this way, age at menopause, age at menarche and birth interval show significant impact on postnatal mortality of the population, but the same is insignificant according to the age at marriage of women.

Regression analysis on the effect of the biological and socio-cultural factors on the number of live births, number of conceptions, number of fertility wastage and the number of postnatal mortality show that the age at menarche has a positive significant effect on the first three, but it has a negative significant effect on the postnatal mortality. Thus it reveals that with the increase of the age at menarche, the number of life birth, number of conceptions and number of fertility wastage increase, but the frequency of postnatal mortality decreases in the population. However, the regression analyses for age at marriage of women and age at menopause show a completely opposite results; with association of various other factors, the age at marriage show a negative effect on live birth, number of conceptions and fertility wastage, but it shows a positive effect on postnatal mortality indicating the association of lower fertility but higher mortality with higher age at marriage of women among the people. A similar result is also observed on the effect of age at menopause on them. The present findings show a similarity with those reported by Choudhury (1984), Bhasin and Nag (2002; 2007), Khongsdier (2002), Dey and Goswami (2009), Kaur (2010) etc. on the influence of maternal age at marriage on fertility performance.
Socio-cultural factors

As the family is a permanent institution in every society, its type and size are believed to have influences on the fertility behavior of a population. In the present population there are 55.85% of women who are from nuclear families and 44.15% from joint families. The highest (44.88%) numbers of women belong to small size family. Of the various socio-cultural factors considered in the present study, the family type and rural/urban residential set up show insignificant effect on live birth details, whereas the factors like education and occupation of both husband and wife, household income and adoption of family planning measures etc. show significant differences in the number of live births in the studied population. However, all of these factors considered in the present study show a statistically significant influence on the fertility wastage of the population. The factors like occupation of women, family size and residential set up show no significant difference in postnatal mortality, while all other factors, taken into consideration, show a statistically significant effect on postnatal mortality.

Though the difference in the number of live births in two types of families in the studied population is statistically insignificant, but a small variation is found in the mean number of live births; it is slightly higher among the women who belong to the nuclear family. In some of the earlier studies, it has been reported that women from nuclear families show a relatively higher fertility rate as compared to those from joint families. As an illustration mention may be made of the relevant studies, reported by Singh (1986), Ahmed Das and Saikia (1999),
In the present study, it has been observed that the women whose husbands are illiterate show 4.06±0.02 live births per woman which is almost twice the average live births shown by the population as a whole (2.37 per woman). In this way, the mean live birth among the illiterate women of the present population is 4.24±0.10 which decreases up to 1.83±0.36 per women, among the women who have attained Higher Secondary and above level of education (Table IV.24a). Both fertility wastage (14.10%) and postnatal mortality (14.49%) are found to be higher among the women whose husbands are illiterate which however, decreases with the increase of educational level of husbands. The similar trend is also observed in women’s education, the frequency of fertility wastage and postnatal mortality decrease with the increase of women’s education. The regression in association of other factors (included in the present study), husband’s education shows a positive but insignificant effect on live birth, conception, wastage and postnatal mortality among the people, whereas education of women shows a negative significant effect on all of these indicating the decrease in fertility, number of conception, fertility wastage and postnatal mortality. It may relevantly be noted here that the fact that women’s education has a positive impact on fertility reduction has been established by many other scholars (Ahmed Das and Saikia, 1999; Khakhar and Gulati, 2000; Sengupta and Sarmah, 2007). Dey and Goswami (2009) observed 3.68 and 1.85 mean live births among the illiterate and literate women of Northeast India.
respectively. It is thus apparent that in the present population, the illiterate women show a higher live birth than that is shown by the illiterate women of Northeast India as a whole.

As cultivation is the main occupation of the people, the highest 46.42% of husbands of the studied population belong to this category. The women of the population whose husbands are service holders’ show higher mean live birth (2.75±0.44) which is followed by those whose husbands are cultivators (2.27±0.44). The cultivator women (39.19%) of the population are associated with higher fertility (2.49±0.41) which is found to decrease (1.62±0.06) among the service holders. The findings of the present study reveal that the women engaged in cultivation and whose husbands are cultivators’, experience more fertility wastage and postnatal mortalities in comparison to others. The rate of fertility wastage is lowest among the women whose husbands are in business whereas the rate of postnatal mortality is lower among the women whose husbands are service holders. Thus the occupation of both husband and wife plays an important role in fertility performance among the people.

Fertility is also influenced by the household income. The rate of fertility may influence the total fertility performance by increasing or decreasing the live births as well as frequencies of mortality in a population. These are in fact directly or indirectly associated with the financial condition of a family. The fertility rate of the present population is higher among the women who belong to low income group (3.08±0.54) than those of the high income group (2.09±0.18) and
middle income group (1.75±0.28). But in case of wastage, the frequency is higher (8.92%) among the middle income group than the others; the frequency of wastage is found to be the lowest among the high income group. Regarding the postnatal mortality in the population, the highest frequency is observed in the low income group and then it decreases with the increase of household income. Regression analysis on the effect of household income shows a negatively significant effect on the live birth, conception, fertility wastage and postnatal mortality indicating the decrease of all these events with the increase of household income among the people.

The frequency of women who have adopted the family planning measures in the studied population is 41.95%, whereas the remaining 58.05% mothers are non-adopters. Ramesh et al in 1996 reported that the knowledge of contraception is almost universal in India, but only 41% are actually using the same (cited in Khongsai, 2012). Among the Sonowal Kacharis of Dibrugarh district, the mean number of live births among the non-adopter is higher (2.81± 0.69 per woman) than that in the adopters (1.77± 0.31 per woman). In the fertility wastage and postnatal mortality episodes, the non-adopter shows higher frequency than those among the women who are adopters. It may be because of the fact that most of the adopter women are literate and younger as compared to the non-adopters. Regression analysis on the effect of adoption of family planning measures shows a negative significant association with the live birth, conception, fertility wastage and postnatal mortality among the people.
Almost all the women who adopt family planning measure are literate (98.26%). Only a few illiterate (1.74%) ones have adopted the measure only after having their desired number of children and it may be the reason for having higher number of live birth among the illiterate adopters than that of their literate counterpart. The mean live birth shown by the literate women is 1.72±0.69, whereas it is 4.33±0.69 among the illiterate women. The difference in the number of live births among the literate and illiterate women is statistically found to be significant ($\chi^2=6.52$, p<0.05). The test of significance shows that the differences in the number of fertility wastage ($\chi^2=12.36$, p<0.05) and neonate and total postnatal mortalities are statistically significant among the literate and illiterate adopters of the studied population. Lack of proper awareness may be one of the basic reasons for the same.

The rural/urban place of residence may be a factor that may affect the fertility performance of a woman in particular and the population in general. Variation related to health care facilities, communication, educational level, occupational variation etc. may be associated with rural/urban residential setup. And these may cause differential fertility within the same population of different settlements. The mean number of live births among the rural women is slightly higher (2.51±0.54) than that in the women of town areas (2.22±0.45). The statistical analysis shows that the differences in the frequencies of fertility and postnatal mortality rate among the studied women are insignificant, while difference in fertility wastage is significant ($\chi^2=7.87$, p<0.05), according to their residential set up. Regression analysis shows positive but insignificant associations
with live birth, conception, wastage and postnatal mortality with the residential set-up of the people (Table IV.31a, Table IV.31b, Table IV.31c and Table IV.31d).

**Blood group Incompatibility**

In the present study, not a single case of incompatible mating for Rh (D) has been found. Out of 1230 couples only one male member has been found to be of Rh- negative blood group indicating the rarity of Rh-negative blood group among the Sonowal Kacharis of Dibrugarh district Assam. Thus, no conclusive evidence about the consequence of Rh (D) incompatibility could be ascertained from the present study.

The impact of ABO incompatibility on the fertility performance has been studied in the present population. The frequency of compatible couples (62.03%) is higher than that of the incompatible ones (37.97%). Among all the subgroups, the most common combination (12.44%) is OXO type (compatible), which is followed by (12.03%) A type husband and O type wife combination (incompatible). The lowest couple combination (1.71%) is that where both husband and wife are of AB type (compatible).

The findings of the present study show that among the Sonowal Kacharis of Dibrugarh district, Assam, the mean number of live births among the compatible (2.42±0.63) couples is slightly higher than that in the incompatible (2.28±0.36) couples. The difference in the number of live births among the compatible and incompatible couples of the population has been found to be statistically insignificant. The mean number of live birth among the different subgroups of
compatible mating is almost same but a slight higher rate (2.68±0.04) is seen among the couples where husbands are of B type and wives are of AB type (Table IV.35). Among the incompatible couples, most common combination is that whose husbands are of A type and wives are of O type. Like the compatible couples, only slight differences are found in the rate of live birth among the couples of different types of the incompatible combinations. The highest mean live birth (2.56±0.03) among the subgroups of the incompatible matings is observed in the couples where husbands are of AB type and wives are of A type; the lowest mean number is found among the couples where husbands are of B type and the wives are of O type (Table IV.36).

The incompatible couples show a slightly higher mean conception (2.60±0.39) than that of the compatible couples (2.52±0.61) (Table IV.37), however this is statistically insignificant ($\chi^2 =0.12$, p>0.05). The frequencies of conceptions among different couple combinations do not show any major difference irrespective of their being compatible or incompatible in nature (Table IV.38 and Table IV.39). However, in case of the fertility wastage (miscarriage and still birth), the incompatible couples experience more prenatal mortality (11.96%) than that by the compatible couples (3.60%). The frequency of spontaneous abortion or miscarriage among the incompatible couples is 10.07% while it is 2.92% among the compatible couples. BarBhuiya and Das (2013) also reported higher abortion among the incompatible couples in the Bengali Muslims of Cachar district of Assam.
The frequency of still births among the incompatible couples is found to be 1.90%, whereas it is 0.68% among the compatible ones (Table IV.40). The difference in fertility wastage among the couples is statistically significant according to their mating type ($\chi^2 = 70.38$, p<0.05). As a result of higher fertility wastage, despite having higher mean conceptions the incompatible couples of the population show lower live birth than that of the compatible couples. The two events may also be mutually inter-dependent, that the higher wastage may insist to have more conceptions among the incompatible couples of the population. Higher frequency of prenatal mortality among the incompatible couples of Meiteis of Manipur was reported by Singh and Devi (2008). Singh (2007) reported higher rate of foetal loss and neonatal loss among the incompatible couples of two population groups of Manipur.

In the frequencies of abortion and still birth, couples with different combinations show variation; among the compatible matings, the couples where both husbands and wives are of AB type show higher frequency of abortion (7.41%), than that of others. The women with AB blood group show higher frequency of abortion and still birth when they get married to O type husbands.

Out of the various incompatible couples, the highest frequency of abortion is found among the couples whose husbands are of A blood group and wives are of B group (15.72%). It is followed by the couples where husbands are of B group and wives are of A group (15.13%). The frequency of abortion is also not less among the couples where husbands are of B type and wives are of O (12.80%) type. Singh (2007) reported higher foetal loss among the O mothers in two
population groups of Manipur. In the present population, the lowest frequency of abortion (3.30%) is found among the A type women when they marry AB type husbands. The higher frequency of still birth (4.08%) is associated with O type women when they marry AB type of husbands. They are followed by B type women marrying AB type husbands (2.65%). In the total fertility wastage, the highest frequency is observed among the couples of BXA (husband’s blood group placed first) mating type; they show 17.76% of wastage. It is followed by the couples of AXB mating type with 15.72% of wastage. The lowest frequency of wastage is found among the couples, the husbands of which are AB type and wives are of A type, they show 4.40% wastage (Table IV.41 and Table IV.42). Thus the findings show that women with B blood group shows higher wastage when they marry B type husband and women with A blood group shows higher wastage when they marry B type husband.

Regarding the postnatal mortality, the incompatible (10.03%) couple shows higher frequency than that of the compatible (3.41%) couples. Among the compatible couples mortality in all the three stages, i.e. neonate, infant and child is lesser than those among the incompatible couples (Table IV.43). The statistical analysis shows a significant difference in postnatal mortality in the population according to their ABO mating type ($\chi^2=47.37$, $p<0.05$).

Among the compatible couples, the women of AB type marrying husbands of O type show higher frequency in total postnatal mortality; the frequency is 5.88%. All the combinations of incompatible mating show higher frequencies of total postnatal mortality; the lowest is being 8.02% and the highest is 14.93%. The
couples whose husbands are of A type and wives are of B type (14.93%) are associated with highest frequency of total post natal mortality. It is followed by the couples where husbands are of AB type and wives are of A type blood (12.64%); they show highest frequency (10.34%) of neonatal mortality, but not a single case of infant mortality is observed in them. The frequencies of infant and child mortalities are higher among the B type women married with A type husbands.

In the present population it is observed that the rate of wastage varies according to birth order; among the compatible couples, it is higher in first order conception (4.18%) than that of the others, whereas among the incompatible couples the same is higher in the fourth order and the third order pregnancies respectively (Table IV.47 and Table IV.48). Among the compatible couples though the rate of infant and child mortalities are observed in almost all orders, the rate of neonatal is found only in first four orders. The highest frequency of total postnatal mortality (Neonate +infant +child) is found in fourth order pregnancy among the compatible couples; the same is found in fifth order pregnancy among the incompatible couples. The frequency of infant mortality among the incompatible couples is highest in the sixth and above orders (Table IV.49 and Table IV.50).

The difference between the numbers of surviving children among the compatible and incompatible mating is statistically significant in the population under investigation ($\chi^2 = 54.09, p<0.05$). The surviving children among the compatible couples is higher (96.59%) than that is the incompatible couples (89.97%); it is higher in all the subgroups of compatible mating than the same in
the subgroups of incompatible mating. The highest survival (98.21%) among the compatible is associated with the couples where wives are of B type and husbands are of O type, while the lowest survival (95.68%) of children is associated with A type wives married O type husbands. In the Meiteis of Manipur, Devi and Singh (2008) reported higher frequency of living children among the compatible couples than that of the incompatible ones.

Among the incompatible couples, the highest number of children (91.98%) surviving among the couples where wives are of O type and husband are of A type. Whereas the lowest children (85.07%) found among the couples whose wives are of B type and husbands are of A type.